

ServerView Resource Orchestrator V3.0.0



Quick Start Guide

Windows/Linux

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Preface

Purpose of this document

This document explains the features of ServerView Resource Orchestrator Cloud Edition V3.0 (ROR).

Target readers

This document is intended for users wishing to quickly familiarize themselves with the basic features and functions of ROR.

Document structure

[Chapter 1 Introduction](#)

This chapter explains ROR and its relationship with cloud computing.

[Chapter 2 ROR Concepts](#)

This chapter explains the basic concepts of ROR.

[Chapter 3 Users and Roles](#)

This chapter explains the roles and operations of the various ROR users.

[Chapter 4 Getting Started](#)

This chapter explains the preparation, installation, and upgrade of ROR.

[Chapter 5 System Maintenance](#)

This chapter explains maintaining hardware devices.

[Chapter 6 Managing the Infrastructure](#)

This chapter explains Infrastructure Administrator management

[Chapter 7 Using the Dashboard](#)

This chapter explains using the 'Dashboard' to view the status of the L-Platform pool resources.

[Chapter 8 Working with System Images](#)

This chapter explains image management.

[Chapter 9 Working with Templates](#)

This chapter explains template management.

[Chapter 10 Tenant Administration](#)

This chapter explains managing tenant users, approval requests and tenant pools.

[Chapter 11 System Management](#)

This chapter explains user registration and managing L-Platforms.

[Chapter 12 System Operation](#)

This chapter explains power management, backup, attaching disks, configuration.

Document conventions

OS differences are indicated as follows:

[Windows]	Windows-related items (Hyper-V not used)
[Linux]	Linux-related items
[VMware]	VMware-related items
[Hyper-V]	Hyper-V-related items
[Xen]	Citrix Xen and RHEL5-Xen-related items
[KVM]	related items for KVM or Red Hat Enterprise Linux 6 Virtual Machine Function
[Oracle VM]	Oracle VM-related items
[Windows/Hyper-V]	Windows or Hyper-V-related items
[Windows/Linux]	Windows or Linux-related items
[Linux/VMware]	Linux or VMware-related items
[VMhost]	VMware or Hyper-V enabled Windows Server 2008-related items

Window, dialog, menu, tab, and button names are indicated using **bold** font.

Variables are indicated by using *italic* font.

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Chapter 1 Introduction

In relation to information and communications technology (ICT), the trend is for companies to shift toward system optimization, faster development by using IaaS/PaaS/SaaS, and greater networking. This has placed a lot of attention on the use and application of Cloud computing.

1.1 What is ServerView Resource Orchestrator (ROR)?

To implement Cloud computing within an enterprise or internet service provider (ISP), the following requirements must be met:

- **Resource pooling**
A mechanism for virtualizing resources and managing them as a resource pool
- **Rapid elasticity**
A mechanism for allowing resources to be combined and deployed as real resources, and for the flexible addition and deletion of resources according to requests
- **Scalability**
A mechanism to allow flexible addition and deletion of real resources according to any excess or insufficiency of the resource pool
- **On-demand self-service**
A mechanism for obtaining resources held in the resource pool according to user requests
- **Measured service**
A mechanism for measuring and evaluating the performance of the individual systems and also the overall performance
- **Broad network access**
A mechanism for allowing users to have access from various network clients
- **Role base access control**
A mechanism for controlling access according to the department the user belongs to or the user's role
- **Multi-tenancy**
A mechanism for separating organizations when two or more organizations share a Cloud

ServerView Resource Orchestrator (ROR) satisfies these Cloud requirements by making it possible to 'virtualize' the resources (servers, networks and storage) in individually created systems so that they can be pooled and automatically provided according to the requests of the respective departments.

ROR dynamically manages resources by pooling and standardizing resources of servers, storage and networks.

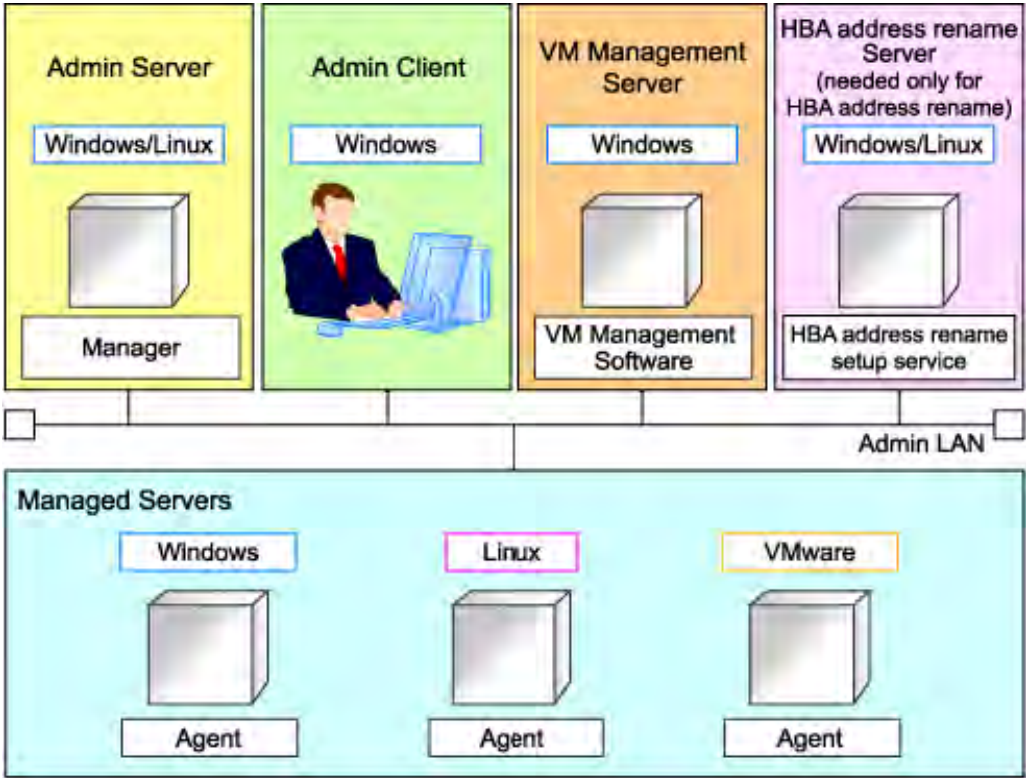
As individual systems recognized by users, the concept of a logical server (L-Platform/L-Server) is introduced. Generally, a server refers to a single piece of server hardware but here it means the entire system image to be distributed based on a configuration including storage, networks and OS images. That is, an L-Platform that contains L-Servers is the very system that is distributed to users. ROR distributes servers (VM guests), storage, networks and OS images from their respective pools to users in the form of an L-Platform. Resources that have become unnecessary by stopping an L-Server are returned to the original pools, and they are then available again for reuse (an L-Server can be either a physical server (native OS and hypervisors) or a VM guest).

In order to standardize the system configuration, templates containing patterns of resources are prepared for the L-Platform. ROR allows selecting a template when applying for resource allocation and this completes the selection of a system configuration.

The cloud operation management dashboard collects and displays the information required for operational management of the cloud environment. Infrastructure Administrators and Tenant Administrators can monitor the availability status of the resource pool from the dashboard.

ROR supports multiple tenants. When two or more tenants reside in a Cloud environment, it is necessary to create an environment in which they do not conflict with each other. This is achieved by the management of templates. This independence is ensured by defining settings that keep the scope of commands or information about other tenants hidden from the administrator role.

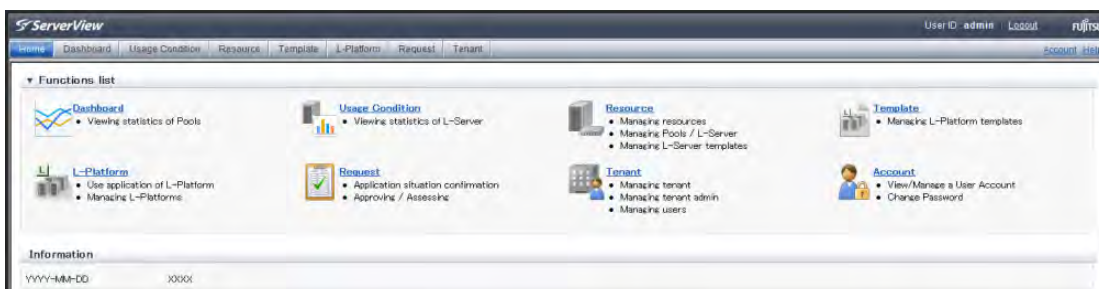
The figure below is an example of a Resource Orchestrator system configuration:



- **Admin Server (Manager)**
The admin server is a server used to manage several managed servers.
The admin server operates in a Windows or Linux environment.
The Resource Orchestrator manager should be installed on the admin server with some related software (e.g. ServerView Operations Manager (SVOM), ServerView Virtual-I/O Manager (VIOM), ETERNUS SF Storage Cruiser (ESC)).
- **Managed Server**
Managed servers are the servers used to run applications. They are managed by the admin server.
ROR Agent will be installed if it will be needed.
- **Admin Client**
Admin clients are terminals used to connect to the admin server, which can be used to monitor and control the configuration and status of the entire system. It is installed Web browsers to control the admin server (manager).
- **VM Management Server (option)**
A server on which VM management software (such as VMware vCenter Server) to integrate multiple server virtualization software products has been installed.
The VM management server can be standardized with the admin server.
- **HBA address rename Setup Service Server (option)**
A server on which the HBA address rename setup service operates.
This server is required to use server I/O virtualization by HBA address rename (not required when using only server I/O virtualization by VIOM).
- **Admin LAN**
The admin LAN is the LAN used by the admin server to control managed servers.
The admin LAN is set up separately from the public LAN used by applications on managed servers.

1.2 Quick System Overview

ROR is managed and operated via the 'ROR Console'. The ROR Console integrates cloud management functions accessed via tabs, as shown below.



Home: Displays the startup page directing users to each function, as well as user relevant notifications.

Dashboard: Collects and displays the information required for operational management of the cloud environment.

System Condition: Displays configuration and performance information.

Resource: Manages the resource pool. Displays relationship between resources and the L-Platform(s), as well as the L-Server(s).

Template: Manages L-Platform templates.

L-Platform: Manages the usage of L-Platform(s).

Request: As the Infrastructure administrator, acknowledges requests from the Tenant Administrator.

Tenant: Manages Tenants and Tenant Users.

Account: Manages the user account.

Help: Displays links to the product manuals.

The availability of each function is determined by the user role:

Tab	User role		
	Infrastructure Administrator	Tenant Administrator	Tenant User
Home	✓	✓	✓
Dashboard	✓	✓	✗
System Condition	✓	✓	✓
Resource	✓	✗	✗
Template	✓	✓	✗
L-Platform	✓	✓	✓
Request	✓	✓	✓
Tenant	✓	✓	✗
Account	✓	✓	✓
Help	✓	✓	✓

Refer to the "Chapter 3 Users and Roles" for details on users and roles.

Chapter 2 ROR Concepts

Resource

A general term that refers to the logical definition of hardware (servers, storage, and network devices) and software comprising a system.

Resource pool

A unit for management of groups of similar resources (servers, storage, and network devices).

Global pool

A resource pool that contains resources that can be used by multiple tenants.

The global pool is located in a different location from the tenants.

By configuring a global pool with the attributes of a tenant, it becomes possible for tenant administrators to use the pool.

Local pool

A resource pool that contains resources that can only be used by a specific tenant.

Local pools are located in tenants.

Tenant

A unit for the management and operation of resources based on organizations or operations.

Template

A template containing patterns of resources used by an L-Server in order to standardize a system configuration.

ROR allows the selection of a template when applying for resource allocation and this includes the selection of a system configuration.

L-Server

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

An L-Server can be either a physical server (native OS and hypervisors) or a VM guest.

An abbreviation of Logical Server.

L-Platform

A resource to operate and manage a whole system which consists of multiple L-Servers, storage devices and networks such as in a multi-tier system (Web/App/DB).

Cloning Image

A backup of a system disk, which does not contain server-specific information (system node name, IP address, etc.), made during cloning.

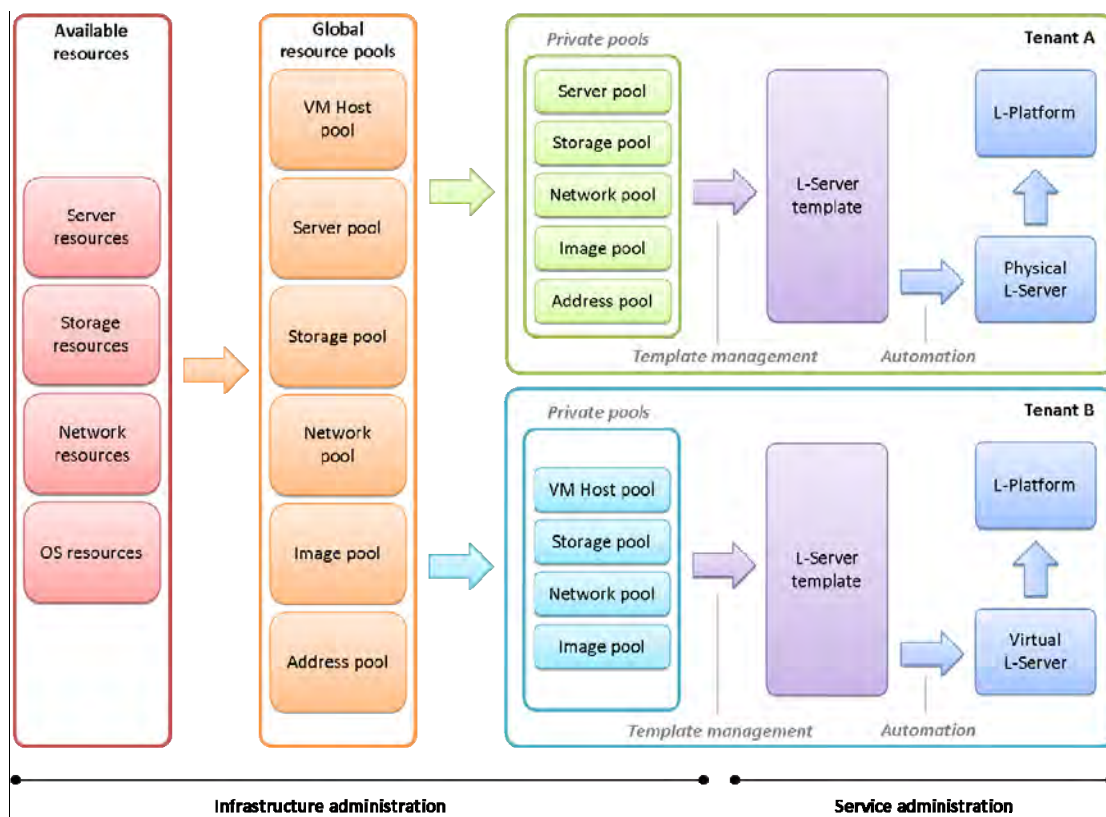
A resource that allows the duplication of a configured system for replication on other servers. System images can be easily applied to L-Servers, reducing the setup time. This is especially useful when creating large groups of servers.

System Image

A copy of the contents of a system disk made as a backup.

Different from a cloning image as changes are not made to the server-specific information contained on system disks.

The figure below shows the resource workflow.



Chapter 3 Users and Roles

Infrastructure Administrator (Infra-Ad)

A user who manages the resources comprising a data center, or a role with the same purpose.

'Infrastructure Administrators' utilize the 'ROR Console' to manage all of the resources comprising a resource pool (the global pool and local pools), provide 'Tenant Administrators' with resources, and review requests by 'Tenant Users' to use resources.

Tenant Administrator (Ten-Ad)

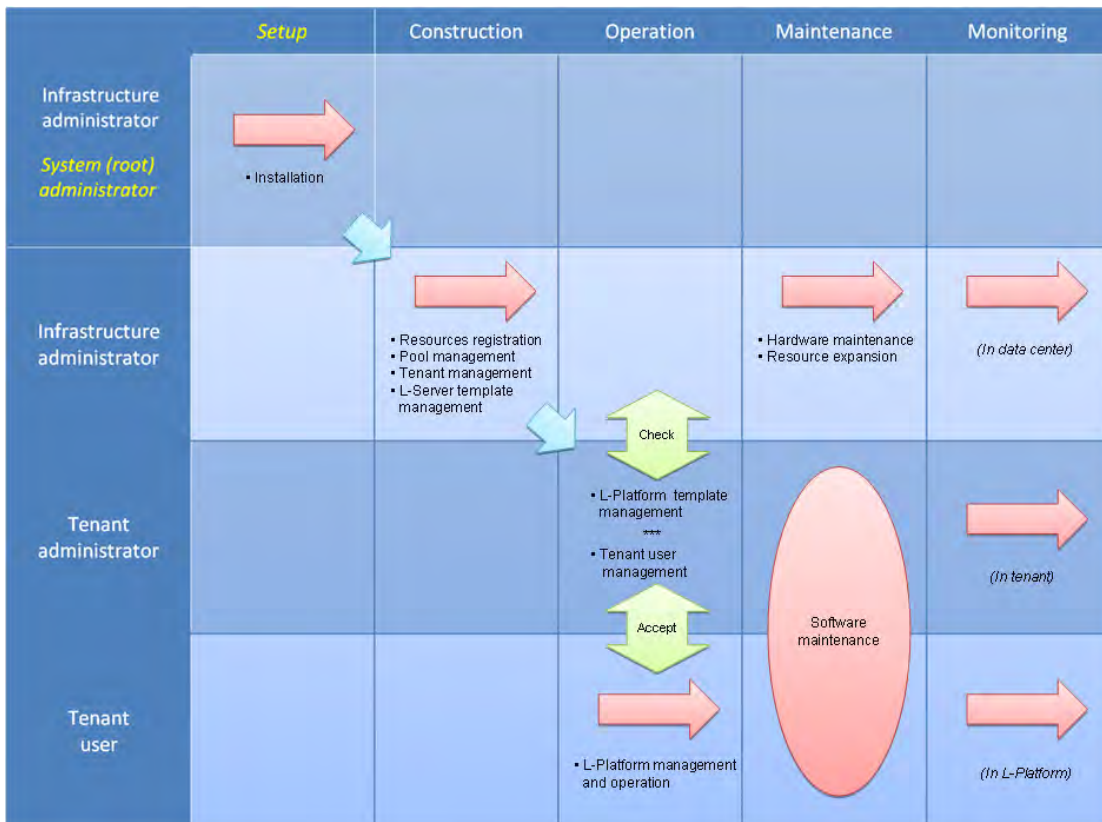
A user who manages the resources allocated to a tenant, or a role with the same purpose.

'Tenant Administrators' utilize the 'ROR Console' to manage the availability of resources in the local pools of tenants, and approve or reject requests by 'tenant users' to use resources.

Tenant User (Ten-User)

A user who uses the resources of a tenant, or creates and manages L-Platforms, or a role with the same purpose.

The figure below shows the user role workflow.



Roles and operations

The table below explains user access rights.

Target	Operation	Infrastructure administrator	Tenant administrator	Tenant user
L-Platform	Creation/Deletion/Modification	✗	✓	✓
	Monitoring	✓	✓	✓
	Power Operations	✗	✓	✓
	Snapshot	✗	✓	✓
	Backup	✗	✓	✓
	Changing of server usage	✗	✓	✓
L-Platform template	Creation	✓	✗	✗
	Replication/Modification	✓	✓	✗
Image	Creation(collect)/Deletion	✓	✓	✗
Pool	Creation/Deletion/Modification	✓	✗	✗
	Register/Unregister resource	✓	✗	✗
	Monitoring (Dashboard)	✓	✓	✗
Subscription	Accept	✗	✓	✗
	Assess	✓	✗	✗
	Check	✓	✓	✓
Tenant	Creation/Deletion/Modification	✓	✗	✗
Tenant Admin	Creation	✓	✗	✗
	Deletion/Modification	✓	✓	✗
Tenant User	Creation/Deletion/Modification	✓	✓	✗
User (oneself)	Changing one's password/additional information	✓	✓	✓

Chapter 4 Getting Started (Infra-Ad)

This chapter provides information on the preparation, installation, and upgrade of Resource Orchestrator. The installation is performed by the System Administrator, in most cases this would be the same person as the Infrastructure Administrator.

Operation

The following steps are required to installing the ROR manager:

- Setting up the environment (in Section 4.1)
 - Check required software
 - Check required hardware
 - Check software compatibility
 - Perform advanced preparation
 - Preparation for required software
- Collect required information (in Section 4.2)
- Manager Installation (in Section 4.3)

4.1 Setting up the Environment

The following steps are required to prepare the installation environment:

Action

The sections below give the reference points to find the information needed in order to perform the tasks listed above.

4.1.1 [Check Required Software]

Reference

Refer to "1.4 Software Environment" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide* for details on the software required to install Resource Orchestrator.

4.1.2 [Check Required Hardware]

Reference

Refer to "1.5 Hardware Environment" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide* for details on the hardware required to install Resource Orchestrator.

4.1.3 [Check Software Compatibility]

Software compatibility tool

Resource Orchestrator provides a 'Software Compatibility Tool' to assist with compatibility checks during installation. To access this function, from the installer window, click the **Tool** button. If the Software Compatibility Tool finds a problem, uninstall or disable any incompatible software.

4.1.4 [Advanced Preparation]

Advanced preparation is required for the 'Manager', 'Agent' and the 'HBA Address Rename Setting Service'. Checks for advanced preparation is required for the 'Manager', 'Agent' and 'HBA Address Rename Setting Service'.

Reference

Refer to "Chapter 1 Overview" and "Chapter 4 Pre-setup Preparations" in the *ServerView Resource Orchestrator V3.0 Setup Guide* for more information.

4.1.5 [Preparation for Required Software]

Reference

For the table of software required to install Resource Orchestrator please refer to "1.4 Software Environment" of the *ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide* for details.

4.2 Checklist (Required Information)

Operation

This section provides a checklist for information required to complete the installation process.

4.2.1 [Manager Installation Information]

The table below shows the information that is required for the installation process.

Input Item	Value
Installation Folder Directory	C:\Fujitsu\ROR (Default) Set as the NTFS storage type
Image Folder Directory	C:\Fujitsu\ROR\SVROR\ScwPro\depot
User Account Name	Enter 16 alphanumeric characters, hyphen (-), underscore (_) and period (.)
Password	Enter 16 alphanumeric characters and symbols

Input Item	Value
Management LAN	Confirm IP address of the management server LAN. Confirm NIC is enabled for management LAN. Select from the 'List box'
Authentication	<ul style="list-style-type: none"> - ServerView Single sign-on (SSO) - The directory service - The system authentication process
Directory Server Information for single-sign on (SSO)	<p>IP address: The Internet Protocol address of the connected directory server.</p> <p>Port number: The port number of the connected directory server. Refer to "2.1 Manager Installation" in the ServerView Resource Orchestrator Cloud Edition V3.0 Installation Guide for details.</p> <p>Domain name: Domain Name of the connected directory server.</p> <p>Password: Password of the connected directory server.</p> <p>SSL: Confirm when using SSL communication for the directory server.</p> <p>Authentication: Specify the certificate.</p>
Port Number Settings	Interstage management console: 12000 (default) Web server (Interstage HTTP Server): 80 (default) Cobra Service: 8002 (default) NetApp (when used): 443 EMC CLARiX storage (when used): 443 or 2163 EMC Symmetrix DMX (when used): 2707 L-Server console (when used): 2179
Database Storage Directory	This is the installation directory of the CMDB manager for this product.
Management Server	FQDN of authentication server, set as FQDN for the management server.

4.2.2 [Agent Installation Information]

This section provides information required for Resource Orchestrator Agent installation.

Resource Orchestrator provides the following types of the agent:

- Agent (Cloud Edition)
- Agent (Cloud Edition for dashboard)

To monitor detailed information on resources using the dashboard, install "Agent (Cloud Edition for dashboard)".

For details, refer to "2.3 Agent (Cloud Edition for dashboard) installation" in the "Installation Guide CE".

The table below shows the information that is required for the installation process.

Input Item	Value
Installation Folder Directory	Set the installation directory. Check the storage capacity beforehand to ensure adequate storage space. Refer to "2.2 Agent Installation" in the <i>ServerView Resource Orchestrator V3.0 Installation Guide</i> for more details.
Port Number	This is set automatically. If there is a conflict with another application, select an alternative port number. Refer to "2.2 Agent Installation" in the <i>ServerView Resource Orchestrator Cloud Edition V3.0 Installation Guide</i> for more details.
Management LAN	Confirm IP address of the management server LAN. Confirm NIC is enabled for management LAN. Select from the 'List box' [Linux/Xen/KVM] Ensure the numeric part of the network interface name (ethX) starts from "0" (zero).
Disk Image	Refer to "Collecting and Checking Required Information" in the <i>ServerView Resource Orchestrator V3.0 Cloud Edition Installation Guide</i> for details.
Windows Volume license	Confirm whether volume license of the Windows OS is being used. Volume license is required when the following functions are used: <ul style="list-style-type: none"> - Server switching (HBA address name/VIOM server switching) - Cloning - Restoring after server swapping - Server swapping using HBA address name <p>Also, when cloning is being used the following information is required:</p> <p>[Windows Server 2003]</p> <ul style="list-style-type: none"> - Product key <p>[Windows Server 2008]</p> <ul style="list-style-type: none"> - Activation information - Proxy server information - Administrator password <p>Refer to "2.1.5 License Setup" in the <i>ServerView Resource Orchestrator Cloud Edition V3.0 Installation Guide</i> for more details.</p>

4.2.3 [HBA Address Rename Setting Service Installation Information]

The table below shows the information that is required for the installation process.

Input Item	Value
Installation Folder Directory	Set the installation directory. Check the storage capacity beforehand to ensure adequate storage space. Refer to "2.3 HBA address rename setup service Installation" in the <i>ServerView Resource Orchestrator Cloud Edition V3.0 Installation Guide</i> for more details.

4.3 Installation

The following points need to be performed to install ROR V3.0:

- Check software compatibility using the 'Software compatibility tool'
- Install the 'Manager'
- Install the 'Agent'
- Install the 'HBA Address Rename Setting Service' (Optional)
- Install VIOM (Virtual-IO Manager)
- Install SVOM (ServerView Operations Manager)

ROR V3.0 utilizes an installer wizard to perform the installation of the product.

Note:

The Cloud Edition (CE) uses the same installer as the Virtual Edition (VE). Refer to *ServerView Resource Orchestrator Cloud Edition V3.0 Installation Guide* for more details.

Reference

Refer to "Chapter 2 Installation" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Installation Guide* for details on installing this product.

Refer to the *ServerView Virtual-IO Manager for Windows* guide for more details on installing VIOM.

Refer to the *ServerView Operations Manager for Windows* guide for more details on installing SVOM.

4.4 Uninstallation

For information on uninstalling this product refer to the manual reference point below.

Reference

Refer to "Chapter 3 Uninstallation" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Installation Guide* for details on uninstalling this product.

4.5 Upgrade

This section explains the upgrade process.

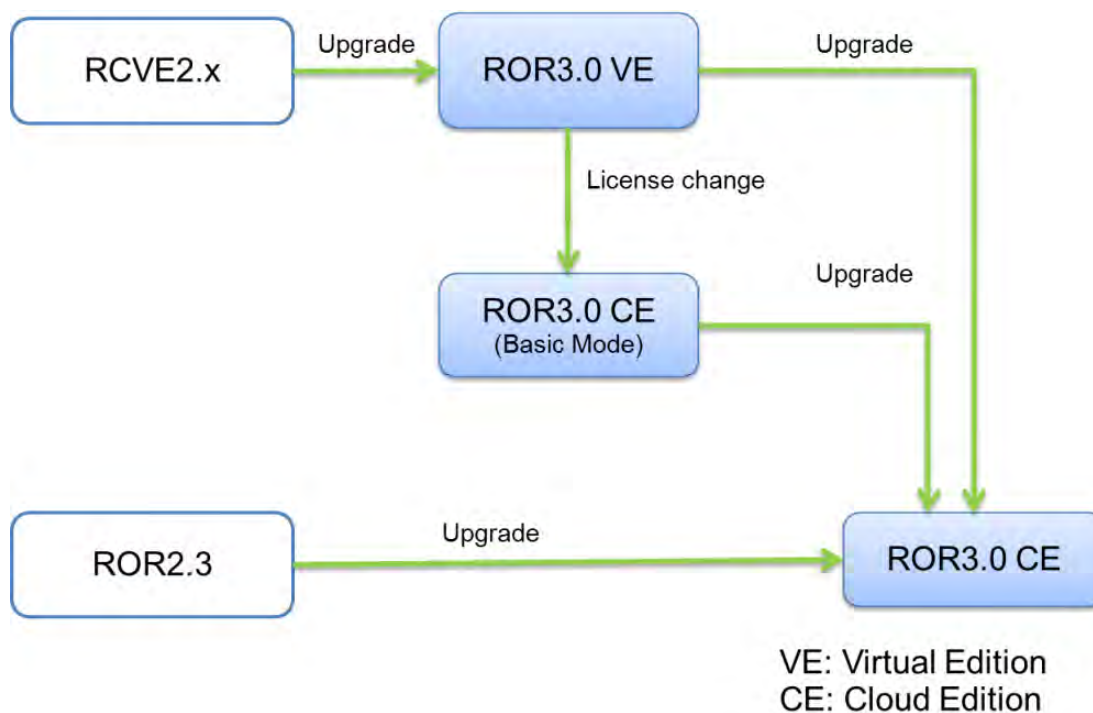
Upgrade

The upgrade installer is used to automatically install the additional components and license.

License change

There are no additional components to install. It is only necessary to change the license file.

The diagram below explains the upgrade options that are available.



Reference

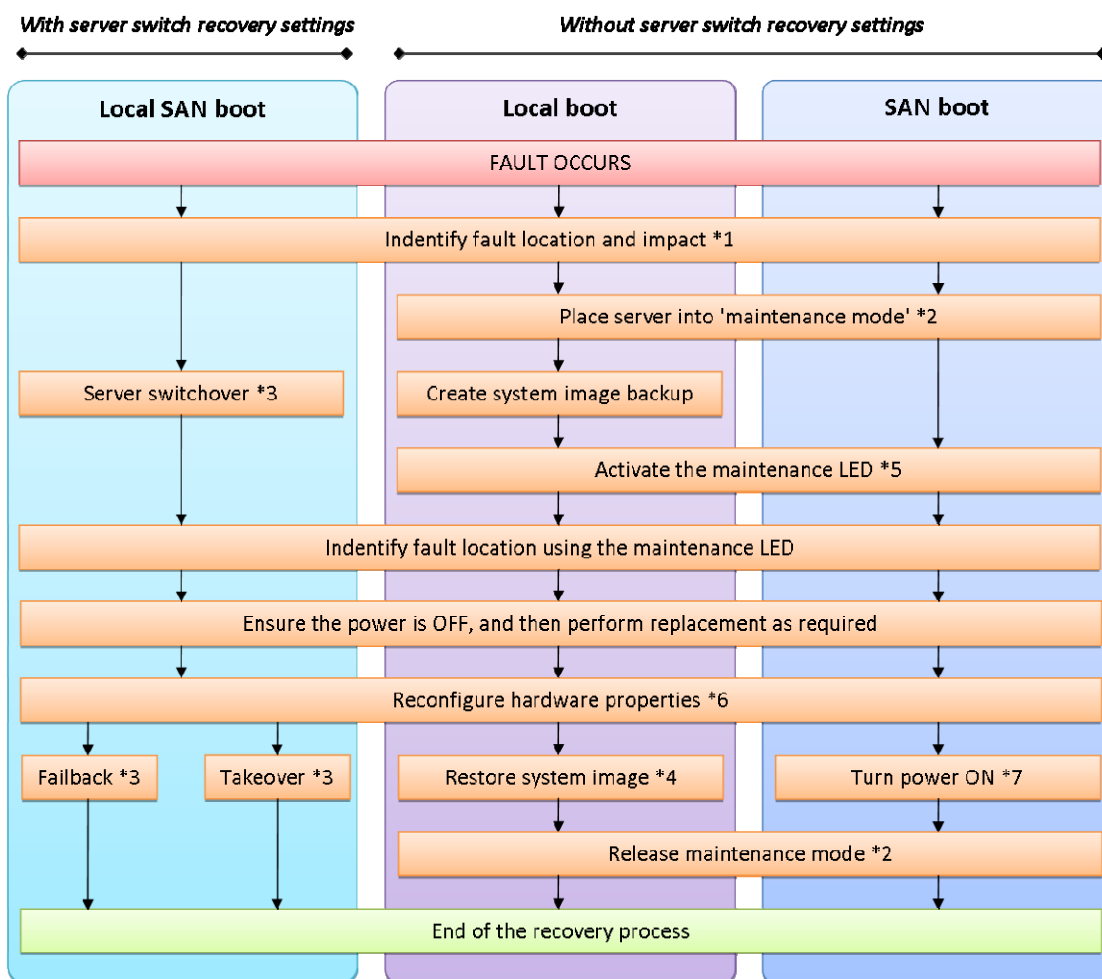
Refer to "Chapter 4 Upgrading from Earlier Versions" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Installation Guide* for more details on upgrading this product.

Chapter 5 System Maintenance (Infra-Ad and Ten-Ad)

This chapter provides information on maintaining hardware devices managed by Resource Orchestrator 3.0.

5.1 Overview Diagram

The figure below explains the hardware replacement flow.



Reference

*1 Refer to "Chapter 5 Monitoring" in the ServerView Resource Orchestrator Virtual Edition V3.0 Operation Guide for Infrastructure Administrators for more details.

Refer to "Chapter 3 Dashboard" in the ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide for Infrastructure Administrators for more details.

*2 Refer to the *ServerView Resource Orchestrator V3.0 Setup Guide* for more details on the maintenance mode.

*3 Refer to "Chapter 9 Hardware Maintenance" and "Chapter 8 Backup and Restore" in the *ServerView Resource Orchestrator Virtual Edition V3.0 Operation Guide* for Infrastructure Administrators for more details.

Refer to "Chapter 8 Backup and Restoration of Admin Servers" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide* for Infrastructure Administrators for more details.

*4 Refer to "Chapter 8 Backup and Restoration of Admin Servers": in the *ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide* for Infrastructure Administrators for more details.

*5 Refer to the *ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide* for Infrastructure Administrators for more details (PRIMERGY BX servers only).

*6 Refer to "Chapter 6 Configuration after Installation" and "Appendix C Hardware Configuration" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide* for more details.

*7 Refer to the *ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide* for Infrastructure Administrators for more details.

5.2 Replacing Hardware

Operation

This section provides instructions for replacing server hardware.

Action

5.2.1 [Replacing Servers]

For PRIMERGY BX Servers

Replacing a server assigned with spare servers

- 1) Perform server switchover.
- 2) Replace the server.
- 3) Perform post-switchover operations.

Note:

Follow the same procedures when replacing servers where VM host are running.

Replacing a server with no spare server as signed

- 1) Place the server into maintenance mode.
- 2) Create a system image backup.
- 3) Activate the maintenance LED.
- 4) Replace the server.
- 5) Re-configure hardware properties.

- 6) Restore the boot disk.
 - Local boot
 - SAN boot
- 7) Release maintenance mode.

Servers with no agent registered

- 1) Activate the maintenance LED.
- 2) Replace the server.
- 3) Re-configure hardware properties.

For Rack Mount and Tower Servers

Replacing a server assigned with spare servers

- 1) Perform server switchover.
- 2) Replace the server.
- 3) Re-configure hardware properties.
- 4) Perform post-switchover operations.

Replacing a server with no spare server assigned

Place the server into maintenance mode.

- 1) Create a system image backup.
- 2) Shut down the server.
- 3) Replace the server.
- 4) Re-configure hardware properties.
- 5) Restore the boot disk.
 - Local boot
 - SAN boot
- 6) Release maintenance mode.

Servers with no agent registered

- 1) Shut down the server.
- 2) Replace the server.
- 3) Re-configure hardware properties.

For PRIMEQUEST Partition Model Servers

Replacing a server assigned with spare servers

- 1) Perform server switchover. The server is automatically powered off after switchover.
- 2) Replace the server. Use the Maintenance Wizard of the Management Board Web-UI to perform replacement.
- 3) Re-configure the BIOS settings of the replacement server to match the operating environment. Shut down the server after completing BIOS settings.
- 4) Re-configure hardware properties. Re-configure Resource Orchestrator with the latest hardware properties.
- 5) Perform post-switchover operations.

Replacing a server with no spare server assigned

- 1) Place the primary server into maintenance mode.
- 2) Create a system image backup. For local boot servers, create a system image backup when possible.

Note:

In SAN boot environments, the boot disk can be restored without having to back up and restore a system image.

- 3) Shut down the server.
- 4) Replace the server. Use the Maintenance Wizard of the Management Board Web-UI to perform replacement.
- 5) Re-configure the BIOS settings of the replacement server to match the operating environment. Shut down the server after completing BIOS settings.
- 6) Re-configure Resource Orchestrator with the latest hardware properties.
- 7) Restore the boot disk.
 - Local boot
There is no need to restore the boot disk if the original disk is installed on the replaced server. Simply power on the replacement server.
If the boot disk was replaced and a system image backup was collected, restore that backup. After the system image is restored, the server will be automatically powered on.
If there is no backup of the system image, run the installation program again.
 - SAN boot
As the server can be easily configured to access the original boot disk using HBA address rename there is no need to restore the boot disk. Simply power on the replacement server.
- 8) Release maintenance mode.

Servers with no agent registered

- 1) Shut down the server
- 2) Replace the server. Use the Maintenance Wizard of the Management Board Web-UI to perform the replacement.
- 3) Configure the BIOS settings of the replacement server to match the operating environment. Shut down the server after completing BIOS settings.
- 4) Re-configure Resource Orchestrator with the latest hardware properties.

Reference

Refer to "Part 2 Operation by Infrastructure Administrators" in the *ServerView Resource Orchestrator V3.0 Operation Guide* for details on:

- Hardware maintenance
- Re-configuring hardware properties
- Server switchover function
- Post-Switchover Operations
- System image backup and restore
- Activating maintenance LEDs
- Power control (shutting down servers)

Refer to "Chapter 4 Pre-setup Preparations" and "4.1.2 Configuring the Server Environment" the *ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide* for details on:

- Maintenance mode
- BIOS settings
- Configuring the server environment (OBP settings)

Refer to the *PRIMERGY Partition Model* manual for details on the Maintenance Wizard of the Management Board Web-UI.

5.2.2 [Replacing Server Components]

Replacing hardware components (such as a NIC, HBA, or hard disk) of a registered server:

Component	Action
Network Interfaces *1	<p>Red Hat Enterprise Linux 5 or Citrix XenServer Log in with administrative privileges and run the following command: <code># /usr/local/sbin/macbindconfig update <ENTER></code></p> <p>Red Hat Enterprise Linux 5 Virtualization (Xen-Based) 1. Execute the following command to temporarily disable automatic startup of the xend daemon: <code># chkconfig xend off <ENTER></code> 2. Restart the managed server and execute the following commands: <code># /usr/local/sbin/macbindconfig update <ENTER></code> <code># chkconfig xend on <ENTER></code> <code># service xend start <ENTER></code></p> <p>Linux Check the configuration file of the OS. Refer to "Chapter 2" the <i>ServerView Resource Orchestrator V3.0 Installation Guide</i> for details on the configuration file.</p>

Component	Action
GSPB	The procedure used to replace a GSPB is the same as for replacing a network interface. Replace 'NIC' with 'GSPB' in the procedure.
HBA	When using I/O virtualization, the HBA will automatically inherit the WWN. Therefore, there is no need to re-configure access paths on the storage side. Refer to "Chapter 4 Pre-setup preparations" in the <i>ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide</i> for details on how to change WWN information.
Boot Disk (Local)	1. Replace the faulty boot disk with a new one. 2. If the boot disk's content was backed up, restore it. Refer to "Chapter 8" in the <i>ServerView Resource Orchestrator V3.0 Operation Guide</i> for details on back up and restoration of admin servers.
System Board	The procedure is the same as for replacing servers.
IO Board	No action required.
Memory Modules and other parts	No action required.

5.2.3 [Replacing Non-server Hardware]

Replacing registered chassis, management blades, or any other hardware components external to servers:

Component	Action
Chassis	No action required.
Management Blades	No action required.
Management Boards	No action required.

Component	Action
LAN Switch Blades	<ol style="list-style-type: none"> 1. Replace the faulty LAN switch blade. 2. Restore the LAN switch blade configuration backup (which includes all settings) to the new LAN switch blade. If no back up exists, restore by configuring each setting (except VLAN settings) as for initial installation. Refer to the relevant LAN switch blade manual on back up and restoration of LAN switch blade configurations. 3. From the Tree panel select the Resource Tree, right-click the target 'LAN switch', and select Restore from the popup menu. The Restore LAN switch dialog is displayed. 4. Click OK. VLAN settings are applied to the specified LAN switch blade. <p>Note: For PRIMERGY BX900/BX400 LAN switch blades in IBP mode, no action is required. For other PRIMERGY BX models, after replacement, update with the VLAN settings that were previously configured. For different models, first delete the registered LAN switch blade, and then register the replacement LAN switch blade. After the LAN switch blade is registered, the VLAN settings must be configured for the internal and external ports. Refer to "4.2 Defining and Configuring the Network Environment" in the <i>ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide</i> for more information on configuring VLANs on LAN Switches. For PRIMERGY BX900/BX400 LAN switch blades, changing the operating mode (switch mode or IBP mode), no action is required.</p>
Fibre Channel Switch Blades	No action required.
Power Monitoring Devices	<ol style="list-style-type: none"> 1. Replace the faulty power monitoring device. 2. Set the admin LAN IP address and SNMP community on the replacement device to the same values as for the faulty device. 3. From the Tree panel select the Resource Tree, right-click the 'power monitoring device' (PDU or UPS), and select Hardware Maintenance and Re-configure from the popup menu. The Re-configure Hardware Properties dialog is displayed. 4. Click OK. The power monitoring device's hardware properties are re-configured.
Storage Blades	<p>No action required (not containing the boot disk of a server blade).</p> <p>When containing a boot disk of a server blade:</p> <ol style="list-style-type: none"> 1. Replace the storage blade. 2. Insert the server blade's boot disk in the new storage blade. 3. If the boot disk's content was backed up, restore it.
LAN Switches	No action required.
Storage System	<p>Storage parameters should be changed.</p> <p>Please refer to "4.3 Deciding and Configuring the Storage Environment" in the <i>ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide</i> for more details.</p>

5.3 Backup and Restore

Operation

These sections explain configuration of image files on admin servers and also the backup and restore procedures.

Action

5.3.1 [Configuration]

Note:

The descriptions in this section are based on Windows. For Linux, exchange 'Folder' with 'Directory', and \ with /.

1) Folders

Image files are stored in the following folders:

Windows

Installation folder \SVROR\ScwPro\depot\Cloneimg

Linux

/var/opt/FJSVscw-deploysv/depot/CLONEIMG

System images and cloning images are stored in different image file storage folders (resource folders):

System image resource folder

Image file storage folder\managed server name@0@0@management information@management information@version

Managed server name is the 'physical server name' registered on the manager.

Management information is the 'fixed information'.

Version is the 'version number' of the system image of the managed server.

Cloning image resource folder

Image file storage folder\cloning image name@version

Cloning image name is the 'name' specified when collecting cloning images.

Version is the 'version number' of cloning images.

2) Files

The following files are stored in each resource folder for system images and cloning images:

- diskimg.fc2
- diskimg.ini

5.3.2 [Backing Up Image Files]

1) Confirm the following information for 'backup image files' in the 'image list' from the ROR Console:

System images

Server name and version

Cloning images

Cloning image name and version

- 2) Logout from all ROR Consoles.
- 3) For Resource Orchestrator VE, confirm that no operations are being performed.
- 4) Stop the manager. Confirm that both the 'Manager services' and 'Related services' have been stopped.
- 5) Copy the resource folders corresponding to the items confirmed in step 1. Start the manager. Confirm that both the 'Manager services' and 'Related services' have been started.
- 6) Confirm actions. From the ROR Console, select the **Image List** tab and confirm that the restored system images and cloning images are the same as obtained in step 1.

Note:

The back up destination can be user defined or external media can be used.

The back up of image files should be performed for each resource folder.

Reference

Refer to "Chapter 8 Backup and Restoration of Admin Servers" the *ServerView Resource Orchestrator V3.0 Operation Guide* for more details.

5.3.3 [Restoring Image Files]

To restore image files of managed servers the hardware must meet the following conditions:

- The model, motherboard, and CPU of the managed server must be identical.
- The hardware configuration of each server must be identical, including optional cards and the slots they are mounted in.
- The BIOS settings must be properly configured.
- All servers must use the same redundancy configuration (if any) and the same number of redundant paths for LAN and SAN connections.
- All servers must be able to access the same network and storage devices.
- The maximum number of versions of image files managed by the manager is three. Do not restore image files of managed servers which exceed this.

Note:

Do not restore system images of managed servers which have not been registered with the manager.

- 1) Confirm the system images and cloning images in the image list on the ROR Console.
- 2) Delete images as necessary. Delete any unnecessary system images and cloning images from the ROR Console in advance, to avoid exceeding the maximum number of versions that can be retained for each managed server.
- 3) Stop the manager. Confirm that both the 'Manager services' and 'Related services' have been stopped.

- 4) Restore the image files by copying each backed up 'resource folder' to the image file storage folder.

Note:

Copy the image files in the image file storage folders using the names of the resource folders when they were backed up. However, if a resource folder of the same version exists, add "1" to the version so that there is no conflict.

- 5) Start the manager. Confirm that both the 'Manager services' and 'Related services' have been started.
- 6) From the ROR Console, select the **Image List** tab. Confirm that the restored system images and cloning images are displayed.

Reference

Refer to "Chapter 8 Backup and Restoration of Admin Servers" the *ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide* for more details

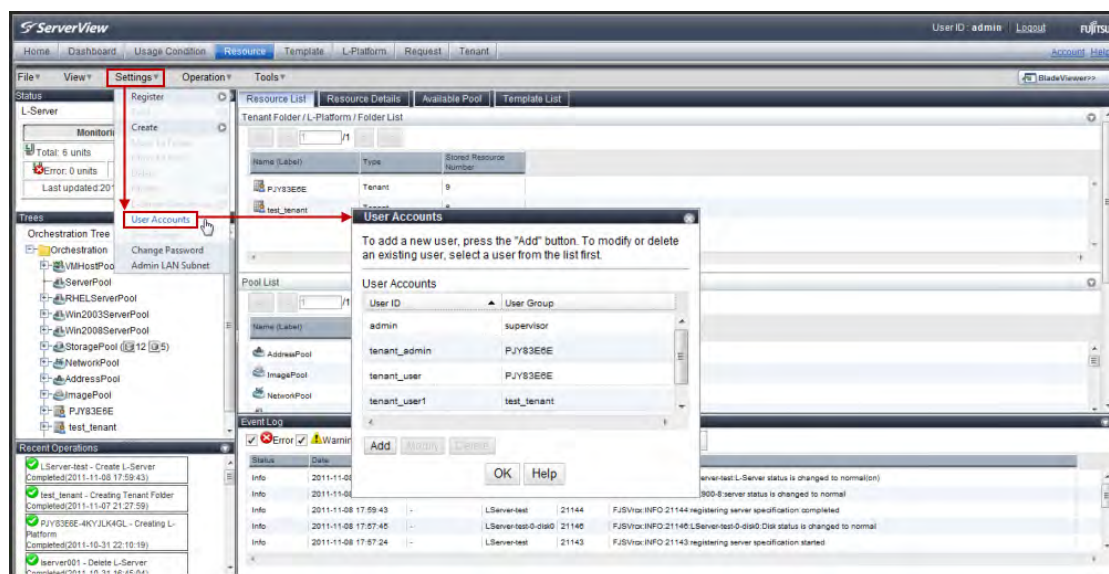
Chapter 6 Managing the Infrastructure (Infra-Ad)

This chapter provides information for Infrastructure Administrator management.

6.1 Manage User Accounts

Operation

This section explains the processes involved in user management.



Action

6.1.1 [Register a User Account]

- 1) From the ROR Console, select **Resource**.
- 2) Select **Settings** and **User Accounts**.
The **User Accounts** dialog is displayed.
- 3) Click **Add**.
The **Register User Account** dialog is displayed.
- 4) Set the following items:
 - User name
 - Password (Confirm password)
 - Scopes/Roles (Optional)
 - Resource
 - Role

- Label (Optional)
 - Comment (Optional)
- 5) Click **OK**.

Result

The newly created user is displayed in the **User Accounts** dialog.

Note:

Only users with the infrastructure administrator, tenant administrator, or administrator role can create user accounts.

When using directory services, users cannot be managed using the ROR Console.

From the command line, execute the **rcxadm user create** command.

6.1.2 [Viewing a User Account]

From the ROR Console, click **Resource** and then select **Settings** and **User Accounts**.

The **User Accounts** dialog is displayed from which a list of 'user accounts' can be viewed.

Note:

From the command line, execute the **rcxadm user list** or **rcxadm user show** command.

6.1.3 [Modifying a User Account]

User Accounts

- 1) From the ROR Console, select **Resource**.
- 2) Select Settings and User Accounts.
The **User Accounts** dialog is displayed.
- 3) Select a 'user account' and click **Modify**.
The **Modify User Account** dialog is displayed.
- 4) Edit the items you want to modify, and click **OK**.

Result

The 'user account' is modified.

Password (current user)

- 1) From the ROR Console, select **Resource**.
- 2) Select Settings and Change Password.
- 3) The **Change Password** dialog is displayed.

- 4) Edit the password details, and click **OK**.

Result

The 'Password' is changed.

Note:

From the command line, execute the **rcxadm user modify** command.

6.1.4 [Deleting a User Account]

- 1) From the ROR Console, select **Resource**.
- 2) Select Settings and User Accounts.
The **User Accounts** dialog is displayed.
- 3) Select the 'user account' and click **Delete**.
The **Delete User Account** dialog is displayed.
- 4) Click **OK**.

Result

The 'user account' is deleted.

Note:

From the command line, execute the **rcxadm user modify** command.

Reference

Refer to the ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrators for details on the **rcxadm user** command.

Refer to "Chapter 3 Managing Tenants" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide* for information on user management when using the Directory Service.

6.2 Register Physical Resources

Operation

The following resources can be registered in Resource Orchestrator:

- VIOM
- Storage management software
- VM management software

- Chassis
- Managed server
- LAN switch
- Power monitoring device
- Storage resources
- Network resources
- Address set resources
- Virtual image resources
- Physical image resources

Action

6.2.1 [Register Resources]

The table below explains the procedure for registering resources.

Resource Type	Resource Tree	Registration Method	Registration Based on L-Server Type	
			Physical	VM
VIOM	Management Software	Refer to the ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide and ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators.	✔ ^(*1)	✘
VM management software	Management Software		✘	✔
Storage management software	Storage Resource Tree		✔	✔ ^(*2)
Chassis	Server Resource		✔ ^(*1)	✔ ^(*1)
Managed server	Server Resource		✔	✔
LAN switch blades	Server Resource		✔ ^(*1)	✔ ^(*1)
Virtual storage	Storage Resource Tree		✔ ^(*3)	✔ ^(*4)
Disk Resource	Storage Resource Tree		✔ ^(*5)	✔ ^(*6)
Network Device Resource	Network Device		✔ ^(*7)	✔ ^(*7)
Network Resource	Network Device		✔	✔

Resource Type	Resource Tree	Registration Method	Registration Based on L-Server Type	
			Physical	VM
Address Set Resource	Server Resource		✔	✔ (*2),(*6)
images Resource	Server Resource		✔ (*8)	✔ (*8)
Power monitoring device	Power Monitoring Device		✔ (*9)	✔ (*9)

✔ Required

✘ Not Required

Optional (register the resource when needed):

- *1 Register when using blade servers.
- *2 Register when using RHEL5-Xen servers.
- *3 Register when using virtual storage resources such as RAID groups and aggregates.
- *4 Register when using virtual storage resources such as datastores.
- *5 Register when using disk resources created in advance such as LUNs.
- *6 Register when using RHEL-KVM servers.
- *7 Register when using firewalls and L2 switches.
- *8 Register when using images created in advance.
- *9 Register when monitoring power consumption.

The following resources do not have to be registered at this point:

- Storage resources (For V3.0 use command line (see note below))
- Network resources (For V3.0 use command line (see note below))
- Address set resources
- image resources

For Storage resources, from the command line, execute the **rcxadm storagemgr** command.

- Execute the `rcxadm storagemgr register` command to register storage management software (ESF, etc) `rcxadm storagemgr register -name name -soft_name soft_name [-label label] [-comment comment] [-soft_url url] [-ip ipaddress] [-port number] [-user_name user_name] [-passwd password]-passwd_file password_file`
- By Registering 'storage management software' or 'VM management software', information regarding storage will be obtained automatically and detected as a storage resource.

For Network resources from the command line, execute the **rcxadm netdevice** command.

- Execute the `rcxadm netdevice create` command to register a network device (e.g. Firewall, LAN switch) `rcxadm netdevice create -file file.xml [-nowait]`

- Execute the `rcxadm netconfig import` command to automate the registration of all the network device defined in the configuration file `rcxadm netconfig import -file file.xml [-dryrun]-nowait]`
- Customize the network device control script located in the ROR manager [Optional]

Registering Storage resources and Network resources can be done via the ROR Console in V3.1 or later.

Reference

Refer to "8.1 Registering Resources with Resource Orchestrator" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide* for more details.

Refer to "rcxadm storagemgr" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrator (Resource Management)* for more details.

6.3 Register Resources to Resource Pools





Operation

This section explains how to register resources to pools.

A resource pool is a type of resource folder which stores the resources for selection when creating or adding L-Servers. A resource pool is a collection of physical servers, VM hosts, storage, networks, images, and other resources of the same type. Resource pools allow you to effectively plan the organization and operation of your infrastructure environment.

Multiple resource pools can be created depending on operational requirements (hardware type, security, resource management units). If the resources in a resource pool are insufficient, a new resource can be added or a resource can be moved from another resource pool to compensate.

The table below explains how resources can be registered to resource pools.

Resource Pool Type	Resource Type	Registration Based on L-Server Type	
		Physical	VM
VM pool	VM host resource		
Server pool	Physical server resource		

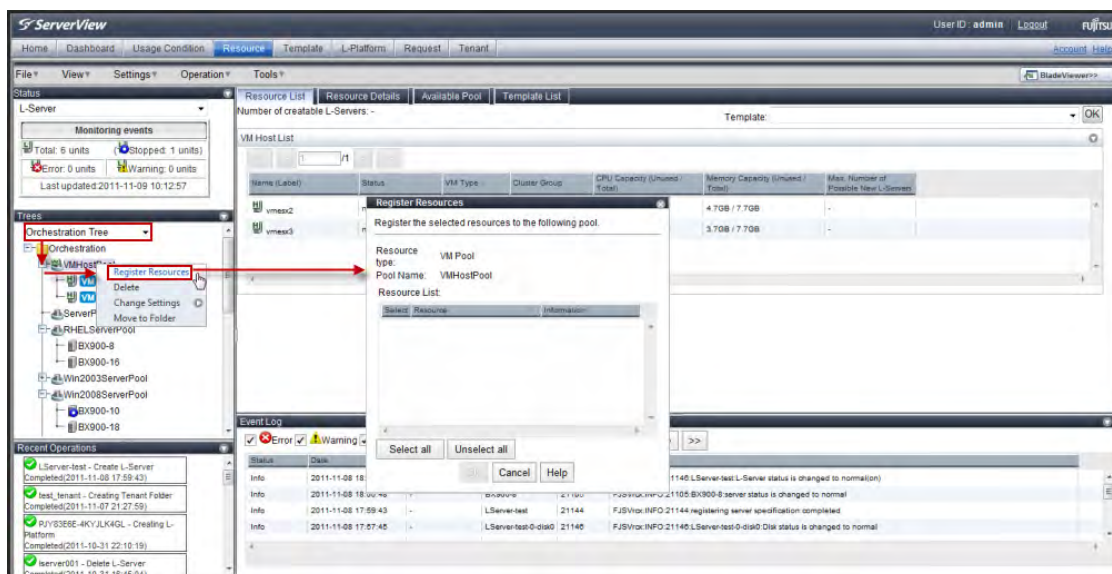
Resource Pool Type	Resource Type	Registration Based on L-Server Type	
		Physical	VM
Storage pool	Virtual storage resource	✓	✓
Network pool	Network resource	✓	✓
Address pool	Address set resource	✓	✗
Image pool	<p>There are two types:</p> <ol style="list-style-type: none"> Virtual image resource An image that is created using a template from VM management software for VM guest creation, or that is collected as a cloned image from an L-Server. Physical image resource A cloned image collected by cloning a physical server. 	✗ (*1)	✓ (*2)

*1 When collecting cloned images from L-Servers, the images are automatically stored in image pools.

*2 When using templates, register them to image pools.

Note:

During installation, one resource pool is created for each resource pool type.



Action

6.3.1 [Register a VM Host Resource to a Pool]

- 1) From the **Trees** panel select the **Orchestration Tree**, right-click **VMHostPool** and select **Register Resources** from the popup menu.
The **Register Resources** dialog is displayed.
- 2) Select the 'VM host' to register.
The list of the 'VM hosts' is displayed in the **Resource List**.
- 3) Select the checkbox for the 'VM host' to be registered, or select all 'VM host' (virtual storage) resources by clicking **Select all**.
- 4) Click **OK**.

Result

A 'VM host' is registered.

Note:

Storage Migrating an L-Server can only be possible between VM hosts belonging to the same cluster group (when two or more cluster groups are registered in the same VM pool).

6.3.2 [Register a Physical Server Resource to a Pool]

- 1) From the **Trees** panel select the **Orchestration Tree**, right-click the **ServerPool** and select **Register Resources** from the popup menu.
The **Register Resources** dialog is displayed.
- 2) Select the 'physical server' to register.
The list of the 'physical servers' is displayed in the **Resource List**.
- 3) Select the checkbox for the 'physical server' to be registered, or select all 'physical servers' displayed by clicking **Select all**.
- 4) Click **OK**.

Result

A 'physical server' is registered.

6.3.3 [Register a Storage Resource to a Pool]

- 1) From the **Trees** panel select the **Orchestration Tree**, right-click **StoragePool** and select **Register Resources** from the popup menu.
The **Register Resources** dialog is displayed.
- 2) Select the 'storage resource' to register:
Option 1: Virtual Storage
Select **Virtual storage** (when creating a specified size of disk automatically from the virtual storage during L-Server creation).

The list of 'virtual storage' resources is displayed in the Resource List.

Option 2: Disk resource

Select **Disk resource** (when using a disk created in advance as an L-Server).

The list of 'disk resources' is displayed when the items below are specified as search conditions.

- Virtual Storage (Select from the 'disk resources')
 - Size (Enter the size of the 'disk resource')
- 3) Select the checkbox for the 'disk resource' to be registered, or select all 'disk resources' displayed by clicking **Select all**.
 - 4) Click **OK**.

Result

A 'storage resource' is registered.

Note:

When the disk resource is registered in a global pool, it is possible to be allocated the disk to unspecified users, so caution is necessary.

When using a LUN (created in advance as a disk resource), if the L-Server is deleted or disks are deleted from L-Servers, the content of disks will remain.

When using a LUN (created in advance as a disk resource), operate the LUN in a local pool, and delete data on the disk during deletion of L-Servers or detachment of disks.

Use the following methods to delete the data on disks:

- Using an OS, perform disk formatting while the L-Server is connected
- Using a function of the storage, perform disk formatting (for ETERNUS)
- Create a LUN again

6.3.4 [Register a Network Resource to a Pool]

- 1) From the **Trees** panel select the **Orchestration Tree**, right-click the 'network pool' and select **Create Network Resource** and **New** from the popup menu.

The **Create a network resource** dialog is displayed.

- 2) Enter the specification for the items listed below.
 - Network resource name
 - Type (Public LAN / Admin LAN / iSCSI boot)
 - Detail Configuration
 - VLAN ID/Uplink port settings:
 - a. Click Settings.
 - b. The **Define VLAN ID/Uplink port settings** dialog is displayed. Specify the 'VLAN ID' by selecting a 'VLAN ID' assigned to the external port of the LAN switch blade, or enter a number manually (specify a pre-designed 'VLAN ID' by entering an integer between 1 and 4094).
 - For external networks including blade servers select the 'VLAN ID' of an external port
 - For networks with rack mount servers only, enter a 'VLAN ID'

- When selecting the **Filter ports by VLAN ID** checkbox with an ID specified, the next time an external connection port is configured, the displayed information is filtered.
- Uplink port settings (VLAN ID/Chassis Name/Switch Name/Port Number/VLAN Type) (Optional)
 - a. When connecting an external network to an L-Server, configure the settings for the internal ports and virtual switches of the LAN switch blade to enable communication for the specified ports.
 - b. Click Settings. The VLAN ID/Uplink port settings dialog is displayed.
 - c. Specify the external connection port to use when automatically setting external networks, including blade servers.
 - d. Select the checkbox for the external connection port that was previously configured. Select two ports to make a pair. If there are multiple chassis, select the ports for all the chassis to use.
 - e. When specifying a port in a link aggregation configuration, perform the following:
 - Confirm the settings of the LAN switch blade in advance, and select one or more ports for which link aggregation has been configured.
 - If the target port is not displayed in the external connection port list, clear the **Filter ports by VLAN ID** checkbox. Regardless of the 'VLAN ID', the ports available for external connections on the LAN switch blade are displayed.

(Do not specify for internal networks or external networks with rack mount servers only.)

In ROR, a user can choose whether to automatically configure VLAN (tagged VLAN) for external connection ports of a network resource. When the user selects automatic configuration, VLAN will be set by ROR to the uplink ports of the switch blades defined as external connection ports.
- Subnet Settings (Optional)
 - a. Click **Add** to display the **Define start and end IP addresses** dialog, specify the range of IP addresses to exclude, and click **OK**. (To reactivate the excluded IP addresses, select the checkbox, and click **Delete**).
 - b. Click **OK** to display the original dialog with the entered settings.

Note:

Enter these settings if you want to automatically set a network and IP address for the NIC connected to the network resource when deploying an image on an L-Server.

IP addresses included in subnet addresses are allocated to L-Servers, but it is possible to specify a range of addresses to exclude (network addresses and broadcast addresses are automatically excluded).

- Subnet address/Subnet mask

Enter the subnet address and subnet mask to set using the "xxx.xxx.xxx.xxx" format.

Note:

When creating a physical L-Server, specify a different subnet from admin LAN for the public LAN subnet.

The maximum value for a subnet mask is 255.255.255.255 (32bit mask) and the minimum value is 255.255.0.0 (16bit mask). However, 255.255.255.254 cannot be specified.

- Default gateway (Optional)
Enter the IP address for the default gateway to use when communicating externally of the subnet.
- Exclusion IP range
Enter IP addresses that you do not want to automatically assign to an L-Server because they are being used for other devices.

Note:

As the network address and broadcast address are automatically excluded, do not specify them as IP addresses to exclude.

- Label (Optional)
A custom label can be defined for the network resource. User-defined labels make it easier to identify the resource (Enter up to 32 alphanumeric characters or symbols).
- Comments (Optional)
A custom comment can be defined for the network resource. (Enter up to 256 alphanumeric characters or symbols).

3) When you have entered all the network resource details, click **OK**.

Result

A 'network resource' is registered.

6.3.5 [Register an Address Set to a Pool]

In the following cases an address set resource will need to be created and registered to a resource pool:

When creating physical L-Servers:

- For blade servers (WWNs/MAC)
- For rack mount servers (WWNs)

Registration in Address Pools (WWNs)

- 1) To register a WWN in an address pool, execute the **rcxadm addrset create** command.
- 2) Execute the **rcxadm addrset create** command to register WWN address

```
rcxadm addrset create -name name -type WWN -file file -pool pool [-exclude address[,address]...] [-label label] [-comment comment] [-nowait]
```

Result

A 'WWN address' is registered.

Note:

Registering a WWN in an address pool can be done via the ROR Console in V3.1 or later.

Reference

Refer to the ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrators for more details.

Registration in Address Pools (MAC addresses)

- 1) To register a MAC address in an address pool, execute the **rcxadm addrset create** command.
- 2) Execute the **rcxadm addrset create** command to register the MAC address below:

```
rcxadm addrset create -name name -type MAC -file file -pool pool [-exclude address[,address]...] [-label label] [-comment comment] [-nowait]
```

Result

A 'MAC address' is registered.

Note:

As the network address and broadcast address are automatically excluded, do not specify them as IP addresses to exclude.

Registering a MAC address in an address pool can be done via the ROR Console in V3.1 or later.

Reference

Refer to the ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrators for more details.

6.3.6 [Register a Virtual Image Resource to a Pool]

For images created using VM management software, register the name of a template as follows to enable Resource Orchestrator to process it:

- 1) From the **Trees** panel the **Orchestration Tree**, right-click the 'image pool', and select **Register Resources** from the popup menu.
The **Register Resources** dialog is displayed.
- 2) Select the 'image' to register.
- 3) Click **OK**.

Result

The 'image' is registered.

Note:

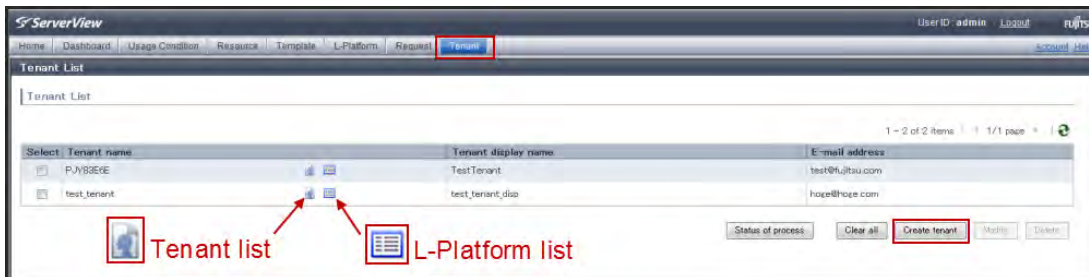
Delete any characters other than alphanumerical characters and underscores.

Ensure an alphabetic character is used for the first character.

6.4 Managing Tenants

Operation

This section explains how to manage tenants.



Action

Create, view, modify and delete tenants.

6.4.1 [Creating a Tenant]

- 1) From the ROR Console menu, select **Tenant**.
The **Tenant List** is displayed.
- 2) Click **Create tenant**.
- 3) From the **Create Tenant** window, set the following items:
 - **Tenant name**
Enter the password of the user name. (Enter up to 32 alphanumeric characters including underscores or hyphens).
 - **Tenant display name**
Enter the password of the user name. (Enter up to 30 alphanumeric characters including underscores or hyphens).
 - **Email address**
- 4) Next, set the **Global Pools** by selecting the appropriate check boxes:
- 5) Click **Confirm**.
- 6) Check the details and then click **Create**.

Result

A tenant is created and will now be displayed in the **Tenant List**.

Note:

To create tenants, from the command line, execute the **rcxadm tenant** command.

6.4.2 [Viewing the Tenant User List]

To view the 'Tenant User List', from the **Tenant List** click the **User List** icon (See image at the start of this section).

Note:

From the **User List** window it is possible to register a user to the tenant that you selected from the **Tenant List**. To register a user, simply click **Register user** and input values into the fields as required.

To check the status of a Tenant, click **Status of process**.

6.4.3 [Viewing the Tenant L-Platform List]

To view the 'L-Platform List', from the **Tenant List** click the **L-Platform List** icon (See image at the start of this section).

Note:

From the **L-Platform List** window it is possible to move an L-Platform to another tenant or change the L-Platform owner.

To check the status of an L-Platform, click **Status of process**.

6.4.4 [Modifying a Tenant]

- 1) From the **Tenants List** select the appropriate tenant and click **Modify**.
The **Modify Tenant** window is displayed.
- 2) Edit the items to be modified and click **Confirm**.
- 3) Check the details and click **Modify**.

Result

The 'tenant' is modified.

6.4.5 [Deleting a Tenant]

- 1) From the **Tenants List** select the appropriate tenant and click **Delete**.
The **Delete Tenant** window is displayed.

- 2) Confirm the details and then click **Delete**.

Result

The target 'tenant' is deleted.

Note:

For tenants, from the command line, execute the **rcxadm tenant** command.

A tenant cannot be restored once it has been deleted.

6.4.6 [Registering a User to an Existing Tenant]

From the **User List** window it is possible to register a user to the tenant that you selected from the **Tenant List**. To register a user, simply click **Register user** and input values into the fields as required.

6.4.7 [Deleting a User]

- 1) From the **User List** window, select the appropriate user and click **Delete**.
The **Delete User** window is displayed.
- 2) Confirm the details and click **Delete**.

Result

The target 'user' is deleted.

Note:

For tenants, from the command line, execute the **rcxadm user** command.

A user cannot be restored once it has been deleted.

6.4.8 [Moving a User]

- 1) From the **User List** window, select the appropriate user and click **Move User**.
The **Move User** window is displayed.
- 2) Select the **Destination Tenant** from the pop-up menu and click **Confirm**.

Result

The target 'user' is moved.

6.4.9 [Setting the User Password]

- 1) From the **User List** window, select the appropriate user and click **Change password**.
The **Change User Password** window is displayed.
- 2) Enter the 'Password' and the 'Password' confirmation in the appropriate fields and click **Change**.

Result

The target 'user' password is set.

Reference

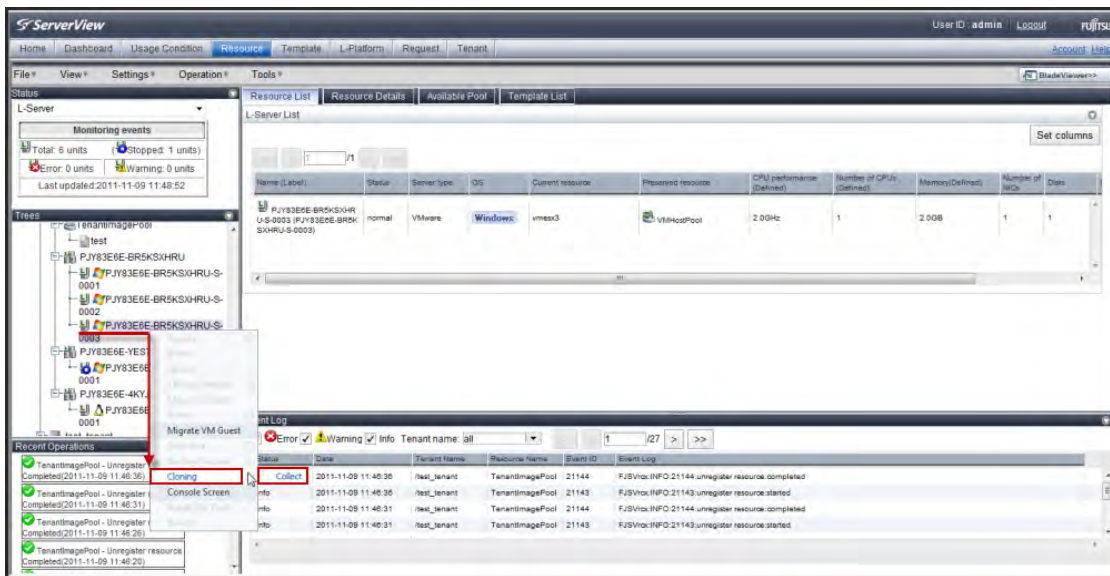
Refer to "rcxadm tenant" in the ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrators (Resource Management) for details on the rcxadm tenant command.

Refer to "Chapter 8 Tenant" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators for more details.

6.5 Managing Cloning Images

Operation

This section explains how to manage cloning images.



Action

Use the following two methods to collect images:

6.5.1 [Collecting an Image]

Collecting Cloning Images from L-Servers with an OS Installed

- 1) After installing an OS, stop the target 'L-Server'.
- 2) From the **Trees** panel select the **Orchestration Tree**, right-click the target 'L-Server' and select **Cloning** and then **Collect** from the popup menu.
- 3) The **Collect a Cloning Image** dialog is displayed.
- 4) Enter the details for the **Cloning image information**
Select the **Destination pool** from the popup menu.
- 5) Click **OK**.

Result

The 'image' is collected.

Note:

For images, from the command line, execute the **rcxadm image create** command.

Images are stored in image pools.

Images (identifiable by their name attribute) can be managed by image version.

Reference

Refer to "rcxadm image" in the ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrators for details on the rcxadm image create command.

Collecting Images from Templates of Server Virtualization Software

For details on collecting images from server virtualization software, see the reference section below.

Note:

If an image is created using VM management software, it can be used as is.

Reference

Refer to "Chapter 7 Registering Resources in Resource Pools" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators for more details.

Refer to "Chapter 10 Creating L-Servers" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators for VMware, Hyper-V and Oracle VM.

6.5.2 [Viewing an Image]

- 1) From the **Trees** panel select the **Orchestration Tree**, select the target 'image pool', and then select the **Resource List** tab.
The list of registered 'images' is displayed.

- 2) Click the **Resource Details** tab, and the image details are displayed.

Note:

For viewing image lists, from the command-line, execute the **rcxadm image list** command.

Reference

Refer to "rcxadm image" in the ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrators (Resource Management) for details on the rcxadm image list command.

6.5.3 [Deleting an Image]

- 1) From the **Trees** panel select the **Orchestration Tree**, select the target 'image pool'.
The **Resource List** tab is displayed.
- 2) Right-click the target 'image' in the 'image pool', and select **Delete** from the popup menu.
- 3) Click **OK**.

Result

The 'image' is deleted.

Note:

When deleting images, the corresponding templates and related files (such as .vhd, .vfd, Unattend.xml) in the SCVMM library are deleted. When the files on SCVMM are associated with other templates or use VM, deletion of the files will fail.

In the deletion of templates, the folder that contained the template is not deleted; the same as for template and related file deletion from the SCVMM management console. When empty folders are unnecessary, open each library and delete them individually from SCVMM.

For deleting images, from the command-line, execute the **rcxadm image delete** command.

Reference

Refer to "rcxadm image" in the ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrators for details on the rcxadm image delete command.

Refer to "Creating an L-Server" in the ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide for Hyper-V.

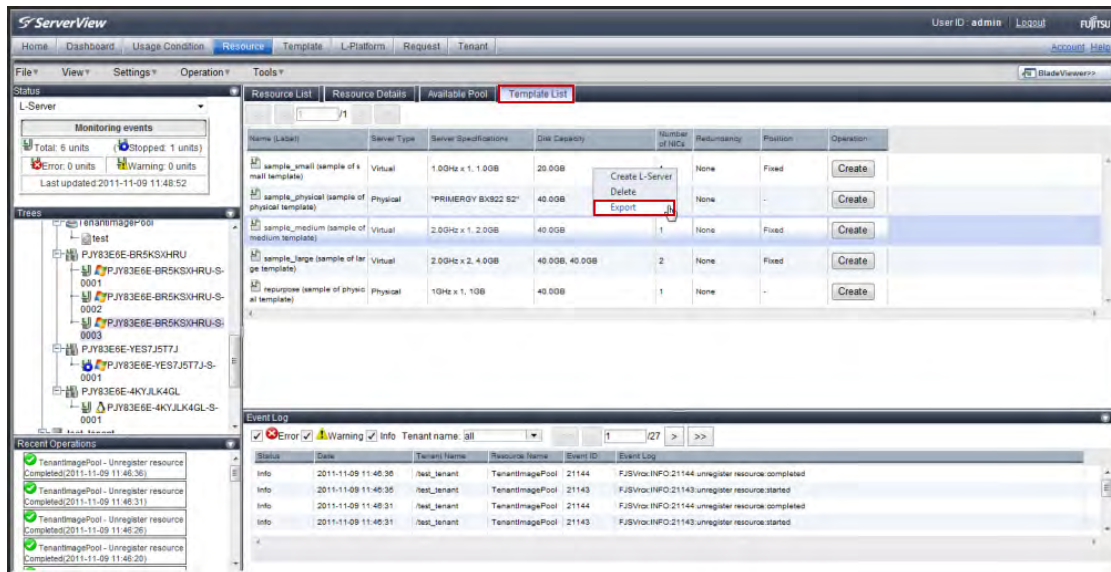
6.6 Managing L-Server Templates

Operation

An L-Server template comprises of pre-defined specifications (CPUs, memory capacity, disk capacity, network, NICs and Operating systems) for an L-Server.

L-Server templates allow for easy management of resources, the template list is an effective tool for quick reference to allocated resources.

By using a template, resources are automatically selected from a resource pool.



Action

Create, edit, import and delete an L-Server template.

6.6.1 [Create an L-Server Template]

To create an L-Server template, export the 'sample L-Server template' and then edit the exported template. A new L-Server template can be created by importing the edited template.

See 'Editing an L-Server template' below for more details.

6.6.2 [Exporting a L-Server Template]

- 1) From the **Trees** panel select the **Orchestration Tree**.
- 2) From the **Main** panel select the **Template List** tab, right-click the 'L-Server template' to export and select **Export** from the popup menu.
- 3) The **File Download** dialog is displayed.
- 4) Click **Save**.

Result

The 'L-Server template' is exported.

Note:

From the command line, execute `rcxadm template export`.

6.6.3 [Editing an L-Server Template]

To edit an L-Server template, edit the 'L-Server template XML definitions file'.

The L-Server template XML definitions differ depending on the server type:

- Refer to "Chapter 8 L-Server Template operations" in the ServerView Resource Orchestrator V3.0 User's Guide for Infrastructure Administrators (Resource Management).

Note:

Use the UTF-8 character code for XML files.

Make sure that there are no unnecessary line breaks or blankspaces when defining an XML file.

Specify tags and attributes according to Resource Orchestrator XML specifications. Tags not listed in the XML specifications are not recognized.

Resources that are specified in an XML must be included in the access scope of the user that performs the operation.

If a template is imported without editing the 'L-Server template name' (LServerTemplate name) of the 'L-Server template file', the content of the existing L-Server template is overwritten.

If an L-Server template is imported after the name has been edited from when it was exported, the L-Server template will be added.

When defining multiple L-Server templates, define multiple L-Servers for each file, assign them different L-Server template names, and enclose them with LServerTemplates tags.

If there is only one L-Server template, the LServerTemplates tag is optional.

6.6.4 [Importing an L-Server Template]

- 1) From the **Trees** panel select the **Orchestration Tree**.
- 2) Select **File** and **L-Server Template** and **Import** from the menu.
- 3) Specify the file name or browse to locate a file, and click **OK**.

Result

The 'L-Server template' is imported.

Note:

When a registered L-Server template name is specified, a 'template overwrite warning' dialog is displayed. Click **OK** to overwrite or **Cancel** to return to the **Template Import** dialog and use an alternative file name.

From the command line, execute the **rcxadm template import** command.

6.6.5 [Deleting an L-Server Template]

- 1) From the **Main** panel select the **Template List** tab, right-click the 'L-Server template' to delete, and select **Delete** from the popup menu. The **Delete a Resource** dialog is displayed.
- 2) Click **OK**.

Result

The 'L-Server template' is deleted.

Note:

From the command line, execute the **rcxadm template delete** command.

Reference

Refer to "rcxadm template" in the ServerView Resource Orchestrator Cloud Edition V3.0 Reference Guide for Infrastructure Administrators (Resource Management) for details on the rcxadm template export / Import / delete command.

Chapter 7 Using the Dashboard (Infra-Ad and Ten-Ad)

The 'Dashboard' collects and displays the information required for operational monitoring of the cloud environment. 'Infrastructure Administrators' and 'Tenant Administrators' can monitor the status of the resource pool from the 'Dashboard'.

They can also monitor the status of L-Platforms and L-Servers by using the 'System Condition'.

This chapter provides information on using the 'Dashboard' and the 'System Condition' to navigate and view the usage status of the various L-Platform components.

7.1 Viewing Statistics

Operation

This section provides how to display the resource usage for each resource pool, Tenant, L-Platform and L-Server.

Action

7.1.1 [Display Dashboard]

- 1) From the ROR Console menu, select **Dashboard**
- 2) If the user holds the roles of both 'Infrastructure Administrator' and 'Tenant Administrator', select the appropriate Tenant ID from the drop down menu.

The **Dashboard** page is displayed.



Note:

If the user holds the roles of both 'Infrastructure Administrator' and 'Tenant Administrator', the **select menu** will be displayed.

When selecting the 'Infrastructure Administrators' dashboard, the tenant status is not displayed.

The table below explains how the 'Dashboard' displays six types of chart.

Resource Pool	Description
VM pool (CPU)	Usage ratio of VM pools (CPU) Displays the VM host resource (CPU) free space and allocated space in the entire VM pool.
VM pool (Memory)	Usage ratio of VM pools (Memory) Displays the VM host resource (memory) free space and allocated space in the entire VM pool.
Server pool	Usage ratio of server pools Displays the server resources free space and allocated space in the entire server pool.
Storage pool	Usage ratio of storage pools Displays the storage resources free space and allocated space in the entire server pool.
Network pool	Usage ratio of network pools Displays the network resource (IP address) free space and allocated space in the entire network pool. This is only displayed if physical servers are registered to the server pool.
Address pool	Usage ratio of WWN addresses and MAC addresses Displays the Address resources (WWN address and MAC address) free space and allocated space in the entire Address pool. This is only displayed if physical servers are registered to the server pool.

- 3) The detailed information of each of the resource pools are shown by relationship chart menu on the charts (as listed above). It is possible to check the resource utilization status, the deployment capacity.

Analysing resource pools helps 'Infrastructure Administrators' and 'Tenant Administrators' to:

- Understand the change in the 'use rate' of the resource pools for three months in the past, and use it for premeditated resource reinforcement.
- Verify how many VMs can be deployed using the prefabricated templates.

Reference

Refer to "Chapter 3 Dashboard" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators or the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators for more details.

7.1.2 [Display System Condition]

- 1) From the ROR Console menu, select **System Condition**.

The **System Condition** page is displayed.

- 2) Click on **Tree Display**, select the Tenant and then select the L-Platform or the L-Server.
- 3) Select an 'L-Platform' in the **CI list**, and then click **Show Graph**.

The main pane displays the performance information to be confirmed.

- 4) Select the **Server List** tab and select the tenants in the left pane. Click **Search**.

A list of servers that match the search conditions is displayed.

Displaying performance information on CPU, the memory, the disk, and the network etc. of L-Server by using System Condition helps you to confirm whether the resource of CPU and the memory size, etc. is properly allocated.

Reference

Refer to "Chapter 11 Monitoring L-Platforms" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Operation Guide* and "Chapter 4 System Condition" in the *ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators* or the *ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators* for more details.

7.2 Monitoring Alerts

It is possible to customize the software so that the 'Infrastructure Administrator' can monitor alerts; this is performed using 'Interstage Business Process Manager Analytics Studio'.

The alerts are monitored using the global pools.

Reference

Refer to "Appendix K to Customize Dashboard" in the *ServerView Resource Orchestrator Cloud Edition V3.0 Setup Guide* for more details.

Chapter 8 Working with System Images (Infra-Ad and Ten-Ad)

This chapter provides information for Tenant Administrators and Infrastructure Administrators on image management.

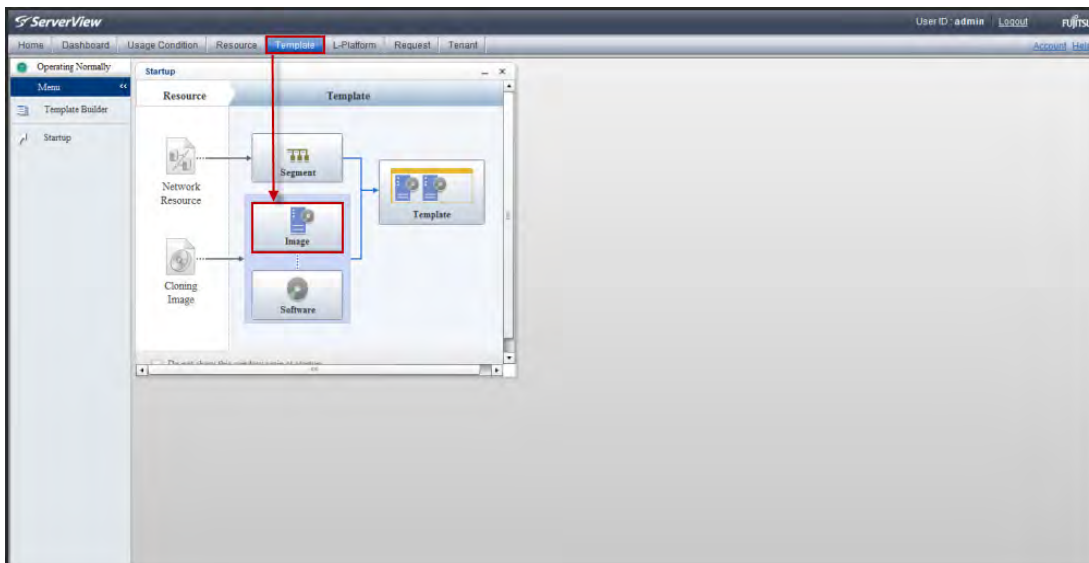
8.1 Modifying System Images

Operation

This section explains how to create, modify and delete a system image.

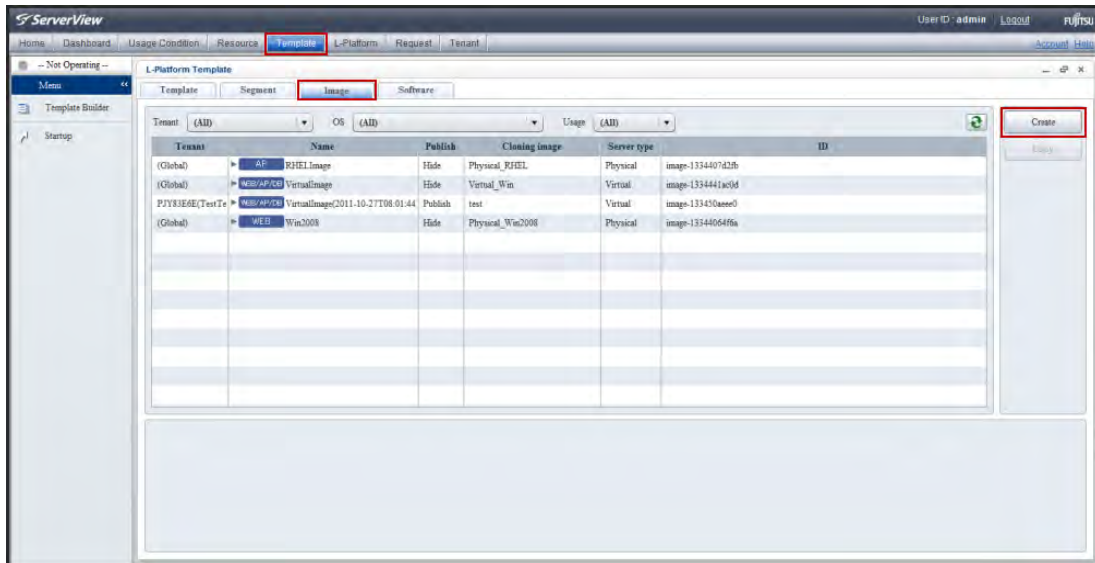
Action

8.1.1 [Create an Image]



- 1) From the ROR Console menu, select **Template**.
The **Startup** window is displayed.
- 2) Click on the **Image** icon.
The **L-Platform Template** window is displayed with the **Image** tab active.

3) Click **Create**.



The **Create Image Information** window is displayed.

4) Perform the following actions:

1. Select Image (select a virtual image from the list)

2. Input the Basic Information:

- Image information name
- Type
- Usage (WEB/AP/DB)
- System disk
- Maximum number of CPUs
- Maximum CPU performance
- Maximum memory
- Maximum number of data disks
- Maximum data disk size
- Maximum number of NICs
- Initial password
- Initial password (confirm)
- Resource tags

3. Select Software (select checkbox(s) for the OS and/or middleware from the list)

4. Add Patch Information (click **Add Patch**)

5. Confirm the information

5) Click **Create**.

Result

The newly created image is now present under the **Image** tab.

Action

8.1.2 [Publish an Image]

- 1) From the **L-Platform Template** window, select the **Image** tab.
- 2) From the **image information** list, select the appropriate image information to be published or hidden.
- 3) Click **Publish** or **Hide** as appropriate.

Result

The selected image information is published or hidden.

Reference

Refer to "6.3 L-Platform Management" and "5.3.7 Publishing Image Information" in the *ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators* for more details.

Chapter 9 Working with Templates (Infra-Ad and Ten-Ad)

This chapter provides information for Infrastructure Administrators and Tenant Administrators on template management.

9.1 Creating L-Platform Templates

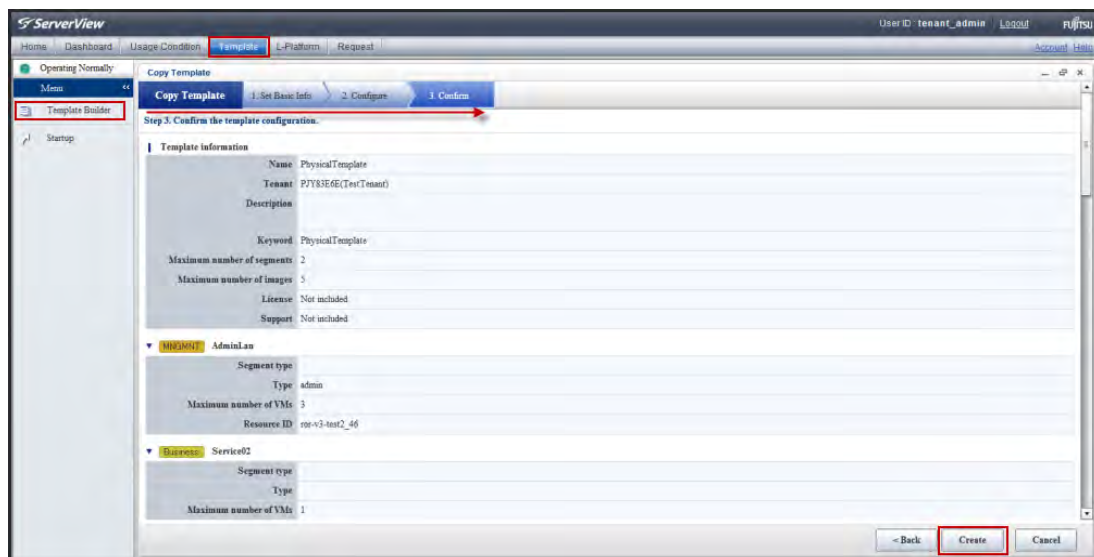
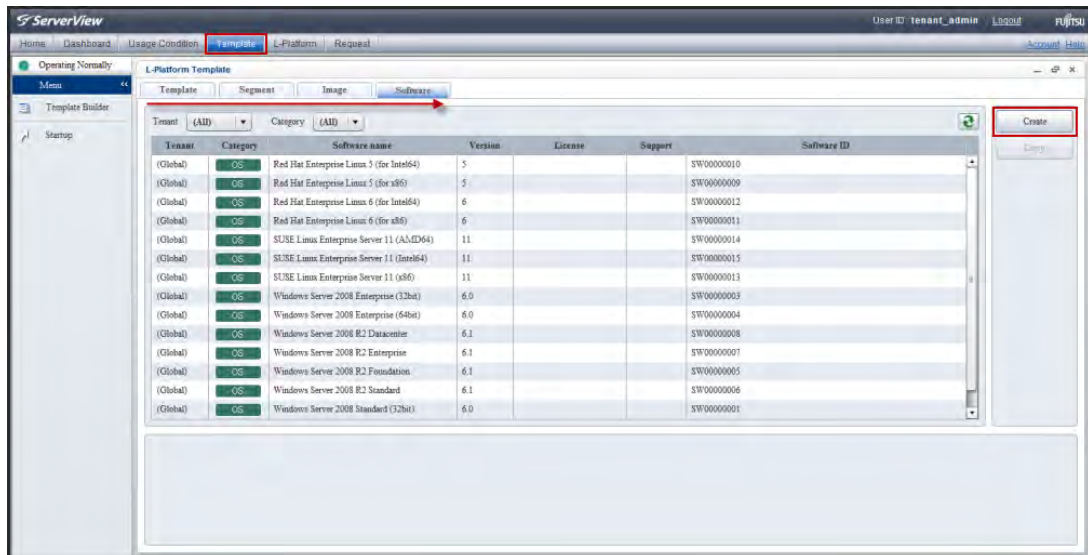
Operation

This section explains how to create an L-Platform template.

Action

9.1.1 [Create a Template information](Infra-Ad)

- 1) From the ROR Console menu, select **Template**. The **Startup** window is displayed.
- 2) Click on the **Template** image.
- 3) Click **Create**.
The **Create New Template** window is displayed.
- 4) On the **Set Basic Info** page, set the basic information for the template information.
- 5) Click **Next**. The **Configure** page is displayed.
- 6) In the additional options, select the tab (Segment, Image, or Disk) of the resource to be added. 'Drag and drop' to the resource configuration area the resource to be added to add it to the template information.
- 7) Select the added resource, and then edit the resource. Click **Next**.
- 8) On the **Confirm** page, check the configuration of the set template information.
- 9) Click **Create**.



Note:

There are two functions for the creation of an 'L-Platform', as follows:

- When creating a new 'L-Platform' use the **Create** button.
- When creating an 'L-Platform' based on an existing 'L-Platform' use the **Copy** button.

Result

The Template Information is modified.

Reference

Refer to "Chapter 5 Template" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators or ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators for more details.

9.2 Managing L-Platform Templates

Operation

This section explains how to search for and modify an L-Platform template.

Action

9.2.1 [Search for a Template information]

- 1) From the ROR Console menu, select **Template** tab. The **Startup** window is displayed.
- 2) Click on the **Template** image.
- 3) Click **Template**.
- 4) Use the filter options (Tenant, Keyword) and click **Search**.

Result

The list of published L-Platforms is displayed.

9.2.2 [Copy a Template information]

- 1) From the ROR Console menu, select **Template**. The **Startup** window is displayed.
- 2) Click on the **Template** image.
- 3) Select the 'L-Platform' template to be modified from the list.
- 4) Click **Copy**. The **Copy Template** window is displayed.
- 5) On the **Set Basic Info** page, set the basic information for the template information.
- 6) Click **Next**. The **Configure** page is displayed.
- 7) In the additional options, select the tab (Segment, Image, or Disk) of the resource to be added. 'Drag and drop' to the resource configuration area the resource to be added to add it to the template information.
- 8) Select the added resource, and then edit the resource. Click **Next**.
- 9) On the **Confirm** page, check the configuration of the set template information.
- 10) Click **Create**.

Result

The L-Platform template is modified.

Reference

Refer to "Chapter 5 Template" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators or ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators for more details.

9.2.3 [Edit a Template information]

- 1) From the ROR Console menu, select **Template**. The **Startup** window is displayed.
- 2) Click on the **Template** image.
- 3) Select the 'L-Platform' template to be edited from the list.
- 4) Click **Edit**. The **Edit Template** window is displayed.
- 5) On the **Set Basic Info** page, set the basic information for the template information.
- 6) Click **Next**. The **Configure** page is displayed.
- 7) In the additional options, select the tab (Segment, Image, or Disk) of the resource to be added. 'Drag and drop' to the resource configuration area the resource to be added to add it to the template information.
- 8) Select the added resource, and then edit the resource. Click **Next**.
- 9) On the **Confirm** page, check the configuration of the set template information.
- 10) Click **OK**.

Result

The L-Platform template is edited.

9.2.4 [Delete an L-platform Template]

- 1) From the ROR Console menu, select **Template**. The **Startup** window is displayed.
- 2) Click on the **Template** image.
- 3) From the **L-Platform Template** window, select the appropriate tab (Template, Segment, Image, or Software) of the information to be deleted.
- 4) From the list, select the information to be deleted and click **Delete**.
A deletion confirmation message is displayed.
- 5) Click **OK**.

Result

The selected information is deleted.

Note:

If all the information that comprises an L-Platform template is to be deleted, use the following sequence:

1. Template information
2. Segment information
3. Image information
4. Software information

Template information, Image information and Software information are to be deleted only when they are not used itself.

9.2.5 [Publish an L-platform Template]

- 1) From the ROR Console menu, select **Template**. The **Startup** window is displayed.
- 2) Click on the **Template** image.
- 3) Select the 'L-Platform' template to be published from the list.
- 4) Click **Publish**.

Result

The L-Platform is published.

Reference

Refer to "5.3.6 Publishing and Hiding L-Platform Template" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Infrastructure Administrators or ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators for more details.

Chapter 10 Tenant Administration (Ten-Ad)

This chapter provides information on managing tenant users, approval requests and tenant pools in Resource Orchestrator 3.0.

10.1 Managing Tenant Users

Operation

This section explains how to manage Tenant Users.

10.1.1 [Add a Tenant User]

The Register User window can be used for pre-registration of a new user.

- 1) In the **User List** window, click **Register user**.
The **Register User** window is displayed.
- 2) In the **Register User** window specify the information for the user to register.
- 3) Check the user information, and then click **Apply**.
The Registration application acceptance completion window is displayed.
- 4) Click **Back to User List** to return to the **User List** window.

Note:

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.

Result

When user registration is completed, a registration completion email is automatically sent.

10.1.2 [Modify Tenant User Information]

- 1) From the **User List** window, select the targeted user, and then click **Modify**.
The **Modify User** window is displayed.
- 2) Edit the value of the item being changed.
- 3) Click **Confirm**.
The **Confirmation** window is displayed.
- 4) Check the contents being changed, and then click **Modify**.
- 5) Click **Back to User List** to return to the **User List** window.

Result

The user information is modified.

10.1.3 [Change Password]

- 1) In the **User List** window, select the target user, and then click **Change password**.
The **Change User Password** window is displayed.
- 2) Enter the password to be changed, and then click **Change**.
- 3) Click **Back to User List** to return to the **User List** window.

Result

The password is changed.

Reference

Refer to "Chapter 8 Tenant" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators for more details.

10.2 Managing approval Requests

Operation

This section explains how to approve approval requests.

Action

10.2.1 [Approving a Tenant Request]

- 1) Click the URL given in the approval request email.
- 2) From the ROR Console, select **Request**.
- 3) In the Task Filters drop-down list on the My Tasks window, select **My Tasks**.
- 4) Select the process instance task, and then click the **Details** tab.
- 5) Select the **Application** tab from the **Form** panel. Then check the content of the application.
- 6) Select the **Approve** tab. If required, enter a comment in **Approval comment**.
- 7) Click either the **0: Approve** button or the **1: Reject** button on the **Make Choice** panel.

Note:

For V3.1 or later, the interface design that explains the registration procedures will be the same as the L-Platform interface design.

Result

The Tenant User will be sent either a confirmation or a rejection email depending on the process.

Reference

Refer to "Chapter 7 Request" the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators for more details.

10.3 System Condition (Monitoring Tenant Pools)

Operation

This section explains how to monitor the status of Tenant pools.

Action

10.3.1 [Monitoring System Condition]

- 1) From the ROR Console menu, select **System Condition**.
The **System Condition** and **CI List** page is displayed.
- 2) From the tree in the left-hand pane select the 'Tenant' and the 'L-Platform' you wish to view.
- 3) Select an 'L-Platform' in the **CI list**, and then click **Show Graph**.

The **Tenants System Condition** status is displayed in the lower pane.

Reference

Refer to "Chapter 4 System Condition" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Administrators for more details.

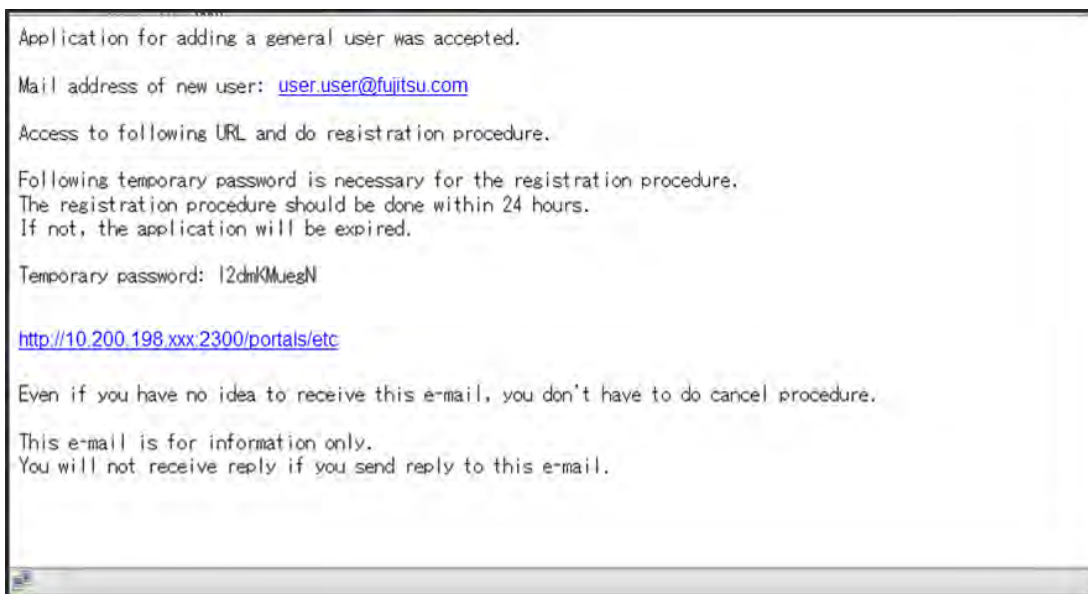
Chapter 11 System Management (Ten-User)

This chapter provides information on user registration and managing L-Platforms.

An L-Platform is one or more Servers that include both network and firewall information.

11.1 New User Registration

An email is sent for the new user registration application process.



- 1) Click the URL in the user registration mail.
The **Register User** page will be displayed.
- 2) Enter the temporary password (supplied in the email).
- 3) Click Advance to registration procedure.
- 4) Complete the registration details as displayed.
- 5) Verify the information displayed in the **Confirm input content** window and click **Register**.

Result

The new user is registered. A registration completion email is automatically sent.

Reference

Refer to "1.6 New User Registration Tasks" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Users for more details.

Note:

For V3.1 or later, the interface design that explains the registration procedures will be the same as the L-Platform interface design.

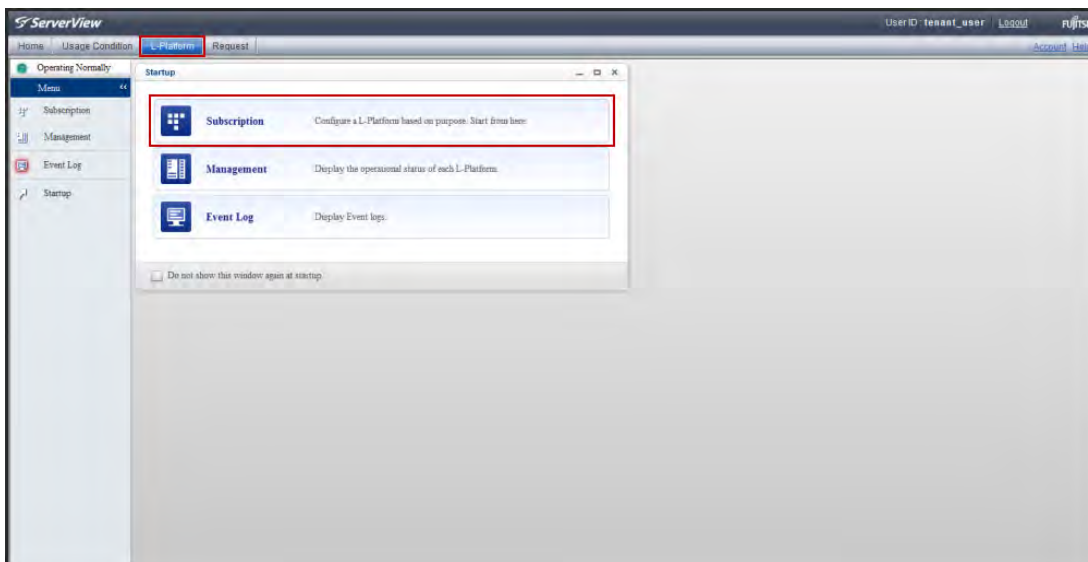
11.2 Managing L-Platforms

Operation

Subscribe to an L-Platform, change the L-Server configuration and add disks.

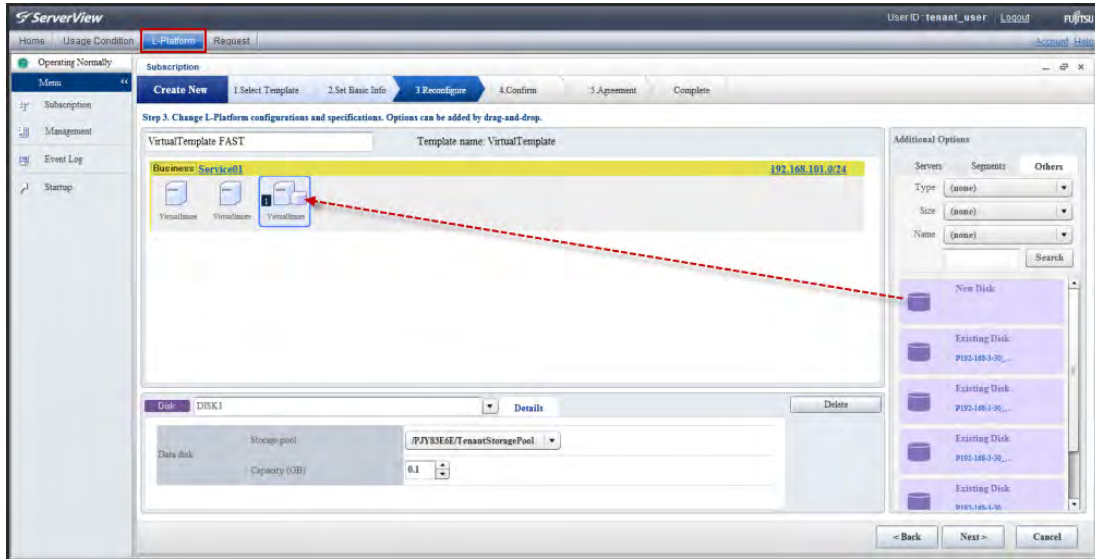
Action

11.2.1 [Subscribe to an L-Platform]

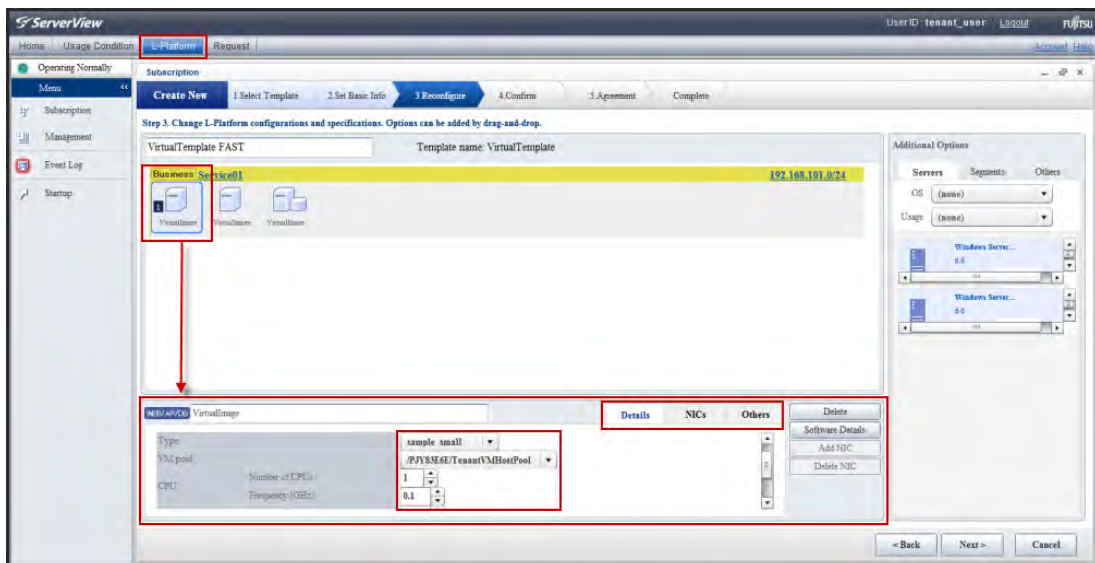


- 1) From the ROR Console menu, select **L-Platform**.
From the main pane, click **Subscription**.
- 2) The **Subscription** window is displayed.
- 3) Click **Subscribe a new L-Platform**.
The **Select Template** page is displayed.
- 4) To refine the template list, use the **Keyword** text box and click **Search**.
- 5) Select a template from the list.
- 6) The template details are displayed in the right-hand pane, click **Next**.
The **Set Basic Info** page is displayed.
- 7) Enter the 'L-Platform name' and click **Next**.
The **Reconfigure** page is displayed.
- 8) To add a Server, drag-and-drop the **Server icon** from the **Servers** tab to the L-Platform template area (see image below).

- 9) To add a data disk to a Server, from the right-hand **Additional Options** pane, select the **Others** tab and drag-and-drop the **Disk icon** to the appropriate **Server icon** (see image below). The storage pool and disk size can be configured in the **Details** area.



- 10) To change the Server type, click on the **Server icon** and select the appropriate server from the **Type** drop-down menu in the lower details pane.
- 11) To change detailed Server specifications (Hostname, Type, VM Pool, CPU, Memory, System Disk and Boot priority), click the **Detail** tab. Enter the values and click **OK**.
- 12) To change a pool (VM Pool, Storage Pool), click on the Server icon and select the appropriate pool from the Type drop-down menu in the lower details pane.
- 13) To change the IP address of a Server, select the **NICs** tab and choose **Manual** for the drop down menu options, then enter the IP address.
- 14) To add a NIC to the Server, click **Add NIC**.
- 15) To delete a NIC from the Server, click **Delete NIC**.



- 16) Click **Next**.
The **Confirm** page is displayed.

- 17) Check the details and click **Next**.
The **Agreement** page is displayed.
- 18) Select the **Agree the license** checkbox and click **Subscribe**.
The **Forward screen** window is displayed.
- 19) Enter the request in the **Reason for application** text field, and click **Forward**.
If there are two or more tenant administrators, select one from **Forward destination** to whom the application should be forwarded.
The L-Platform subscription is accepted window is displayed.
- 20) Click **Close**.

Result

The subscription application is completed. A confirmation email will be sent.

Reference

Refer to "4.2 Subscribe to an L-Platform" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Users for more details.

11.2.2 [Cancel an L-Platform Subscription]

- 1) From the ROR Console, select **Request**.
- 2) In the **Task Filters** drop-down list on the **My Tasks** window, select **My Tasks**.
A list of tasks with the status 'Active' displayed.
- 3) Select the task with the activity name 'Cancel' in the process instance that you want to cancel and then click the **Details** tab.
- 4) Select the **Application** tab on the **Form** pane, and then check the content of the application.
- 5) Click the **0: Cancel** button on the **Make Choice** panel.

Result

The subscription cancellation is completed.

Reference

Refer to "5.2 Cancelling an Application" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Users for more details.

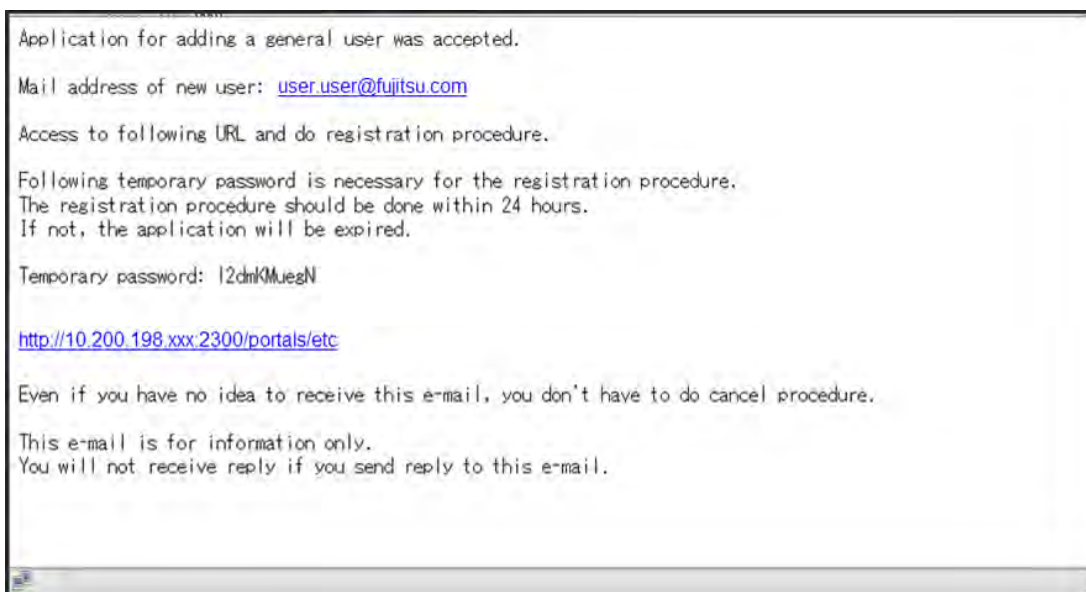
Chapter 12 System Operation (Ten-User)

This chapter provides information on power management, backup, attaching disks and configuration changes.

12.1 User Registration

Operation

This section explains the Tenant User registration process.



Action

12.1.1 [Accept User Registration]

- 1) From the email received from the Tenant Administrator, click the hyperlink.
The **Register User** window is displayed.
- 2) Enter the temporary password (sent in the email).
- 3) Select the confirmation checkbox, and click **Advance to registration procedure**.
- 4) Enter the values as appropriate, and click **Register**.

Result

A registration completion email is sent.

12.2 Power Management

Operation

This section explains power management, switching servers ON/OFF.

Action

12.2.1 [Switch L-Server ON/OFF]

- 1) From the ROR Console menu, select **L-Platform**.
The **Startup** window is displayed.
- 2) From the main pane, click **Management**.
The **Management** page is displayed.
- 3) Click L-Platform Management.
The **L-Platform List** page is displayed.
- 4) Select the appropriate 'L-Platform', and click **Details** in the right-hand pane.
- 5) From the main pane, select the appropriate 'L-Server' and click either **ON** or **OFF** in the lower pane.

Result

The L-Server is powered ON or OFF.

Reference

Refer to "4.3 L-Platform Management" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Users for more details.

12.3 Backup and Restore

Operation

This section explains how to perform a backup and restore.

Action

12.3.1 [Taking a Snapshot] (Virtual Server)

- 1) From the ROR Console menu, select **L-Platform**.
The **Startup** window is displayed.
- 2) From the main pane, click **Management**.
The **Management** page is displayed.

- 3) Click **Server List**, to display the server window.
The **Server List** window is displayed.
- 4) Select the appropriate server, and click **Snapshot**.
The **Snapshot** page is displayed.
- 5) Click **Take Snapshot**, and enter a comment (128 characters) in the text field of the pop-up window.
- 6) Click Take Snapshot.

Result

The snapshot is taken.

Note:

To perform a snapshot, the target virtual server must be shut down.

Snapshots are taken up to three generations. If you take a snapshot and three generations already exist, the oldest snapshot is deleted.

To change the configuration to collect more than three generations, contact your system manager.

Take care when using the snapshot restore function, with regards for support for Hyper-V and VMWare Virtualization software. For RHEL5-Xen or RHEL-KVM, the snapshot restore function is not supported.

If an error occurs during snapshot/restore processing, the server enters into an 'error' state. When this occurs, the error is displayed on the **Server List** window, click on the **X** button to reset the 'error' condition.

When backing up to a disk or a tape device other than the disk devices running on the virtual server, use a backup product that supports virtual servers.

After making configuration changes, we recommend taking a new snapshot. Otherwise, when restoring a snapshot (made prior to the changes) the new configuration will be overwritten by the historic data.

If a previously created snapshot is not displayed on the window (although you have not deleted it), contact your system manager.

12.3.2 [Restoring a Snapshot] (Virtual Server)

- 1) Select the appropriate snapshot from the **Snapshot List**.
- 2) Click **Restore**.

Result

The snapshot is restored.

12.3.3 [Deleting a Snapshot] (Virtual Server)

Select the appropriate snapshot from the **Snapshot List**, and click **Delete**.

Note:

The **Snapshot History** screen does not display a **Delete** button, only snapshot and restore functions.

12.3.4 [Backup] (Physical Server)

- 1) From the ROR Console menu, select **L-Platform**.
The **Startup** window is displayed.
- 2) From the main pane, click **Management**.
The **Management** page is displayed.
- 3) Click **Server List**, to display the server window.
The **Server List** window is displayed.
- 4) Select the appropriate server, and click **Backup**.
The **Backup** page is displayed.
- 5) Click **Take Backup**, and enter a comment (128 characters) in the text field of the pop-up window.
The comment will be displayed in the **Backup List**.
- 6) Click Take Backup.

Result

The backup is started.

Note:

To perform a backup, the target virtual server must be shut down.

Backups are taken up to three generations. If you take a snapshot and three generations already exist, the oldest snapshot is deleted.

To change the configuration to collect more than three generations, contact your system manager.

If an error occurs during backup/restore processing, the server enters into an 'error' state. When this occurs, the error is displayed on the Server List window, click on the X button to reset the 'error' condition.

After making configuration changes, we recommend taking a new backup. Otherwise, when restoring a backup (made prior to the changes) the new configuration will be overwritten by the historic data.

Reference

Refer to "4.3.7 Physical Server Backup and Restore" in the *ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide* for Tenant Users for more details.

12.3.5 [Restore a Backup] (Physical Server)

- 1) From the ROR Console menu, select **L-Platform**.
The **Startup** window is displayed.
- 2) From the main pane, click **Management**.
The **Management** page is displayed.
- 3) Click **Server List**, to display the server list.
The **Server List** window is displayed.
- 4) Select the appropriate server, and click **Restore**.

Result

The **Restore** is started.

Reference

Refer to "4.3.7 Physical Server Backup and Restore" in the *ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide* for Tenant Users for more details.

12.4 Attaching and Detaching a Disk

Operation

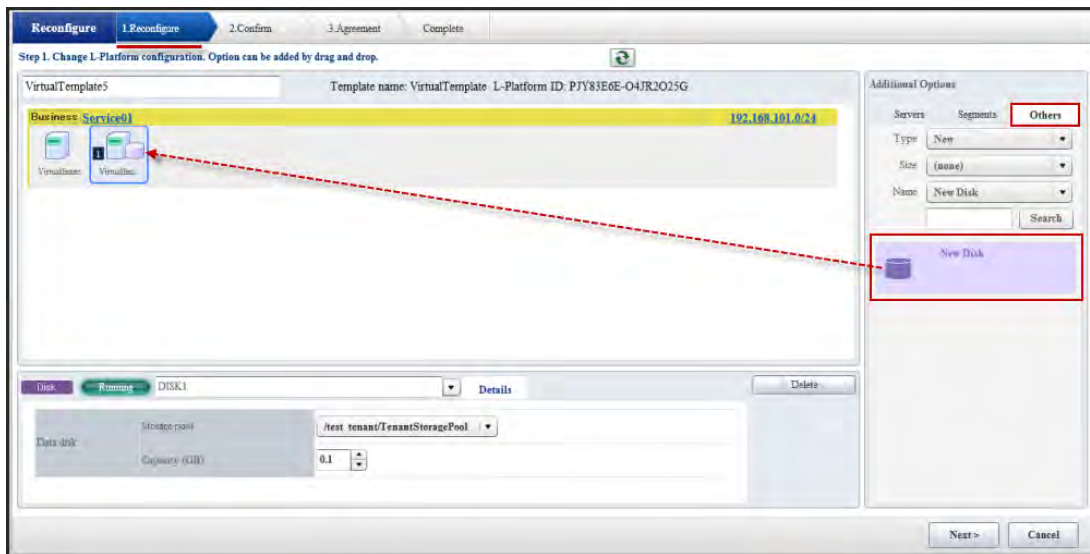
This section explains how to attach and detach a disk.

Action

12.4.1 [Attaching and Detaching Disk]

- 1) From the ROR Console menu, select **L-Platform**.
The **Startup** window is displayed.
- 2) From the main pane, click **Management**.
The **Management** page is displayed.
- 3) Click **Server**.
The L-Platform List or L-Server List page is displayed.
- 4) Select the appropriate 'L-Platform' or 'L-Server', and click **Others** in the right-hand **Additional Options** pane.
- 5) To add a Disk, drag-and-drop the **Disk icon** from the **Others** tab to the appropriate 'L-Server' icon.
- 6) From the lower pane, set the configuration as required.

- 7) To detach the disk, from the lower pane, select the disk and click **Delete**.



Result

The Disk is attached or detached.

Reference

Refer to "4.3.9 L-Platform Reconfiguration" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Users for more details.

12.5 Changing the Configuration

Operation

This section explains making changes to the configuration of an L-Platform.

Action

12.5.1 [Modifying the Configuration]

- 1) From the ROR Console menu, select **L-Platform**.
The **Startup** window is displayed.
- 2) From the main pane, click **Management**.
The **Management** page is displayed.
- 3) Select the 'L-Platform' you wish to reconfigure.
- 4) Select the appropriate 'L-Platform' and 'L-Server' and reconfigure the settings by changing the values in the lower pane.
- 5) Make changes to the values as required, and click **Reconfigure**.

Result

The configuration is modified.

Reference

Refer to "4.3.9 L-Platform Reconfiguration" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Users for more details.

12.6 Checking System Condition

Operation

This section explains how to check your system condition.

Action

12.6.1 [Monitoring System Condition]

- 1) From the ROR Console menu, select **System Condition**.
The **CI List** page is displayed.
- 2) Selecting a folder from the left-hand tree will list the folders under the 'L-Platform'.
- 3) Click **Show Graph** to switch the view from list to chart format.

Reference

Refer to "Chapter 3 System Condition" in the ServerView Resource Orchestrator Cloud Edition V3.0 User's Guide for Tenant Users for more details.