FUJITSU

FUJITSU Software ServerView Resource Orchestrator Cloud Edition V3.2.0

Reference Guide (Command/XML)

Windows/Linux

J2X1-7616-07ENZ0(06)
September 2016

Preface

Purpose of This Document

This manual explains the commands and XML files available in FUJITSU Software ServerView Resource Orchestrator Cloud Edition (hereinafter Resource Orchestrator).

Intended Readers

This manual is written for people who will install and administer systems using Resource Orchestrator.
It is strongly recommended that you read the "Design Guide CE" before using this manual.
When setting up systems, it is assumed that readers have the basic knowledge required to configure the servers, storage, and network devices to be installed.

Structure of This Document

This manual is composed as follows:

Part 1 Command Reference

Explains each type of command.

Chapter 1 Overview

Provides an overview of the commands provided in Resource Orchestrator.

Chapter 2 Login

Explains the command used to log in to Resource Orchestrator.

Chapter 3 Resource Operations

Explains the commands used to manage resources in Resource Orchestrator.

Chapter 4 Image Operations

Explains the command used to perform image operations in Resource Orchestrator.

Chapter 5 Control and Environment Setup

Explains the commands used to control Resource Orchestrator managers and agents, and to configure environment settings.

Chapter 6 Backup and Restoration Operations for Configuration Definition Information

Explains the commands used to perform backup and restoration in Resource Orchestrator.

Chapter 7 User Operations

Explains the commands used to perform user operations in Resource Orchestrator.

Chapter 8 L-Server Template Operations

Explains the commands used to manage L-Server templates in Resource Orchestrator.

Chapter 9 L-Platform Template Management Commands

Explains the commands used to manage L-Platform templates in Resource Orchestrator.

Chapter 10 L-Platform Commands

Explains the commands used to manage L-Platform in Resource Orchestrator.

Chapter 11 Accounting Commands

Explains the accounting commands available in Resource Orchestrator.

Chapter 12 Role Customization Commands

Explains the commands used to perform role operations in Resource Orchestrator.

Chapter 13 Maintenance Commands

Explains the maintenance commands available in Resource Orchestrator.

Chapter 14 L-Platform API Related Operations

Explains the L-Platform API commands available in Resource Orchestrator.

Part 2 File Reference

Explains the input files for each type of command.

Chapter 15 XML Files

Explains XML files.

Appendix A GUI/CLI

Explains the GUI/CLI.

Appendix B Script Execution when Operating L-Platforms or L-Servers

Provides an overview of script execution during operation.

Appendix C Registered Software IDs

Explains registered software IDs.

Web Site URLs

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

Document Conventions

The notation in this manual conforms to the following conventions.

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

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

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

[Windows Manager]	Sections related to Windows manager
[Linux Manager]	Sections related to Linux manager
[Windows]	Sections related to Windows
[Linux]	Sections related to Linux
[Red Hat Enterprise Linux]	Sections related to Red Hat Enterprise Linux
[Solaris]	Sections related to Solaris
[VMware]	Sections related to VMware
[Horizon View]	Sections related to VMware Horizon View
[Hyper-V]	Sections related to Hyper-V
[Xen]	Sections related to RHEL5-Xen
[KVM]	Sections related to RHEL-KVM
[Solaris Zones]	Sections related to Solaris Zones (Solaris 10) and Solaris Zones (Solaris 11)

[Solaris Zones (Solaris 10)]	Sections related to Solaris Zones with Solaris 10 VM hosts
[Solaris Zones (Solaris 11)]	Sections related to Solaris Zones with Solaris 11 VM hosts
[OVM for x86]	Sections related to Oracle VM Server for x86 2.2 and Oracle VM Server for x86 3.x
[OVM for x86 2.2]	Sections related to Oracle VM Server for x86 2.2
[OVM for x86 3.x]	Sections related to Oracle VM Server for x86 3.2 and Oracle VM Server for x86 3.3
[OVM for SPARC]	Sections related to Oracle VM Server for SPARC
[Citrix Xen]	Sections related to Citrix XenServer
[Physical Servers]	Sections related to physical servers

- Unless specified otherwise, the blade servers mentioned in this manual refer to PRIMERGY BX servers.
- Oracle Solaris may also be indicated as Solaris, Solaris Operating System, or Solaris OS.
- Oracle Solaris Zones may also be indicated as Solaris Containers or Solaris Container.
- Oracle VM Server for x86 may also be indicated as Oracle VM.
- In Resource Orchestrator, the following servers are referred to as SPARC Enterprise.
  - SPARC Enterprise M3000/M4000/M5000/M8000/M9000
  - SPARC Enterprise T5120/T5140/T5220/T5240/T5440
- In Resource Orchestrator, the following servers are referred to as SPARC M10.
  - SPARC M10-1/M10-4/M10-4S
- Fujitsu M10 is the product name used for SPARC M10 when they are sold outside Japan.
- References and character strings or values requiring emphasis are indicated using double quotes (").
- GUI items are shown enclosed by brackets ([ ]).
- The order of selecting menus is indicated using [ ]-[ ].
- Text to be entered by the user is indicated using bold text.
- Variables are indicated using italic text and underscores.
- The ellipses ("...") in menu names, indicating settings and operation window startup, are not shown.
- The ">" used in Windows is included in usage examples. When using Linux, read ">" as meaning "#".
- When using Resource Orchestrator on Windows 8 and Windows Server 2012, please note the following.
  When OS operations are explained in this manual, the examples assume OSs up to Windows 7 and Windows Server 2008. When using Resource Orchestrator on Windows 8 or Windows Server 2012, take explanations regarding the [Start] menu as indicating the [Apps] screen.
  The [Apps] screen can be displayed by right-clicking on the [Start] screen and then right-clicking [All apps].
- When using Resource Orchestrator on Windows 8.1 and Windows Server 2012 R2, please note the following.
  When OS operations are explained in this manual, the examples assume OSs up to Windows 7 and Windows Server 2008. When using Resource Orchestrator on Windows 8.1 or Windows Server 2012 R2, take explanations regarding the [Start] menu as indicating the [Apps] screen.
  The [Apps] screen can be displayed by swiping the [Start] screen from bottom to top, or clicking the downward facing arrow on the lower-left of the [Start] screen.

Menus in the ROR console

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

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

Regarding Installation Folder Paths

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

Replace it as shown below.

[Virtual Edition]

- When using Windows 64-bit (x64)

  C:\Program Files (x86)\Resource Orchestrator

- When using Windows 32-bit (x86)

  C:\Program Files\Resource Orchestrator

[Cloud Edition]

C:\Program Files (x86)\Resource Orchestrator

Command Examples

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

Abbreviations

The following abbreviations are used in this manual:

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

Abbreviation	Products
Windows Server 2008	Microsoft(R) Windows Server(R) 2008 Standard Microsoft(R) Windows Server(R) 2008 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Standard Microsoft(R) Windows Server(R) 2008 R2 Enterprise Microsoft(R) Windows Server(R) 2008 R2 Datacenter
Windows 2008 x86 Edition	Microsoft(R) Windows Server(R) 2008 Standard (x86) Microsoft(R) Windows Server(R) 2008 Enterprise (x86)
Windows 2008 x64 Edition	Microsoft(R) Windows Server(R) 2008 Standard (x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x64)
Windows Server 2012	Microsoft(R) Windows Server(R) 2012 Standard Microsoft(R) Windows Server(R) 2012 Datacenter Microsoft(R) Windows Server(R) 2012 R2 Essentials Microsoft(R) Windows Server(R) 2012 R2 Standard Microsoft(R) Windows Server(R) 2012 R2 Datacenter
Windows PE	Microsoft(R) Windows(R) Preinstallation Environment
Windows Vista	Windows Vista(R) Business Windows Vista(R) Enterprise Windows Vista(R) Ultimate
Windows 7	Windows(R) 7 Professional Windows(R) 7 Ultimate
Windows 8	Windows(R) 8 Pro Windows(R) 8 Enterprise Windows(R) 8.1 Pro Windows(R) 8.1 Enterprise
Windows 10	Windows(R) 10 Pro Windows(R) 10 Enterprise
Linux	Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.5 for x86) Red Hat(R) Enterprise Linux(R) ES (4.5 for x86) Red Hat(R) Enterprise Linux(R) AS (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.6 for x86) Red Hat(R) Enterprise Linux(R) ES (4.6 for x86) Red Hat(R) Enterprise Linux(R) AS (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.7 for x86) Red Hat(R) Enterprise Linux(R) ES (4.7 for x86) Red Hat(R) Enterprise Linux(R) AS (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.8 for x86) Red Hat(R) Enterprise Linux(R) ES (4.8 for x86) Red Hat(R) Enterprise Linux(R) AS (4.8 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.8 for EM64T) Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.1 (for x86) Red Hat(R) Enterprise Linux(R) 5.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.2 (for x86) Red Hat(R) Enterprise Linux(R) 5.2 (for Intel64)

Abbreviation	Products
	Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.5 (for x86) Red Hat(R) Enterprise Linux(R) 5.5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.6 (for x86) Red Hat(R) Enterprise Linux(R) 5.6 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.7 (for x86) Red Hat(R) Enterprise Linux(R) 5.7 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.8 (for x86) Red Hat(R) Enterprise Linux(R) 5.8 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.9 (for x86) Red Hat(R) Enterprise Linux(R) 5.9 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.10 (for x86) Red Hat(R) Enterprise Linux(R) 5.10 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.11 (for x86) Red Hat(R) Enterprise Linux(R) 5.11 (for Intel64) Red Hat(R) Enterprise Linux(R) 6 (for x86) Red Hat(R) Enterprise Linux(R) 6 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.1 (for x86) Red Hat(R) Enterprise Linux(R) 6.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.3 (for x86) Red Hat(R) Enterprise Linux(R) 6.3 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.4 (for x86) Red Hat(R) Enterprise Linux(R) 6.4 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.5 (for x86) Red Hat(R) Enterprise Linux(R) 6.5 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.6 (for x86) Red Hat(R) Enterprise Linux(R) 6.6 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.7 (for x86) Red Hat(R) Enterprise Linux(R) 6.7 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.8 (for x86) Red Hat(R) Enterprise Linux(R) 6.8 (for Intel64) Red Hat(R) Enterprise Linux(R) 7.0 (for Intel64) SUSE(R) Linux Enterprise Server 10 Service Pack 2 for x86 SUSE(R) Linux Enterprise Server 10 Service Pack 2 for EM64T SUSE(R) Linux Enterprise Server 10 Service Pack 3 for x86 SUSE(R) Linux Enterprise Server 10 Service Pack 3 for EM64T SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T SUSE(R) Linux Enterprise Server 11 Service Pack 1 for x86 SUSE(R) Linux Enterprise Server 11 Service Pack 1 for EM64T Oracle Enterprise Linux Release 6.7 for x86 (32bit) Oracle Enterprise Linux Release 6.7 for 86_64 (64bit) Oracle Enterprise Linux Release 7.2 for x86 (32bit) Oracle Enterprise Linux Release 7.2 for x86_64 (64bit)
Red Hat Enterprise Linux	Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.5 for x86) Red Hat(R) Enterprise Linux(R) ES (4.5 for x86) Red Hat(R) Enterprise Linux(R) AS (4.5 for EM64T)

Abbreviation	Products
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Abbreviation	Products
Red Hat Enterprise Linux 5	Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.1 (for x86) Red Hat(R) Enterprise Linux(R) 5.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.2 (for x86) Red Hat(R) Enterprise Linux(R) 5.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.5 (for x86) Red Hat(R) Enterprise Linux(R) 5.5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.6 (for x86) Red Hat(R) Enterprise Linux(R) 5.6 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.7 (for x86) Red Hat(R) Enterprise Linux(R) 5.7 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.8 (for x86) Red Hat(R) Enterprise Linux(R) 5.8 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.9 (for x86) Red Hat(R) Enterprise Linux(R) 5.9 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.10 (for x86) Red Hat(R) Enterprise Linux(R) 5.10 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.11 (for x86) Red Hat(R) Enterprise Linux(R) 5.11 (for Intel64)
Red Hat Enterprise Linux 6	Red Hat(R) Enterprise Linux(R) 6 (for x86) Red Hat(R) Enterprise Linux(R) 6 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.1 (for x86) Red Hat(R) Enterprise Linux(R) 6.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.3 (for x86) Red Hat(R) Enterprise Linux(R) 6.3 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.4 (for x86) Red Hat(R) Enterprise Linux(R) 6.4 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.5 (for x86) Red Hat(R) Enterprise Linux(R) 6.5 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.6 (for x86) Red Hat(R) Enterprise Linux(R) 6.6 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.7 (for x86) Red Hat(R) Enterprise Linux(R) 6.7 (for Intel64) Red Hat(R) Enterprise Linux(R) 6.8 (for x86) Red Hat(R) Enterprise Linux(R) 6.8 (for Intel64)
Red Hat Enterprise Linux 7	Red Hat(R) Enterprise Linux(R) 7.0 (for Intel64)
RHEL5-Xen	Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Linux Virtual Machine Function
RHEL-KVM	Red Hat(R) Enterprise Linux(R) 6.1 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.1 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.2 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.2 (for Intel64) Virtual Machine

Abbreviation	Products
	Function Red Hat(R) Enterprise Linux(R) 6.3 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.3 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.4 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.4 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.5 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.5 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.6 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.6 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.7 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.7 (for Intel64) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.8 (for x86) Virtual Machine Function Red Hat(R) Enterprise Linux(R) 6.8 (for Intel64) Virtual Machine Function
Xen	Citrix XenServer(R) 5.5 Citrix Essentials(TM) for XenServer 5.5, Enterprise Edition Citrix XenServer(R) 6.0 Citrix Essentials(TM) for XenServer 6.0, Enterprise Edition Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.4 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.4 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.5 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.5 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.6 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.6 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.7 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.7 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.8 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.8 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.9 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.9 (for Intel64) Linux Virtual

Abbreviation		Products
		Machine Function Red Hat(R) Enterprise Linux(R) 5.10 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.10 (for Intel64) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.11 (for x86) Linux Virtual Machine Function Red Hat(R) Enterprise Linux(R) 5.11 (for Intel64) Linux Virtual Machine Function
XenServer 6		Citrix XenServer(R) 6.0 Citrix Essentials(TM) for XenServer 6.0, Enterprise Edition
DOS		Microsoft(R) MS-DOS(R) operating system, DR DOS(R)
SUSE Linux Enterprise Server		SUSE(R) Linux Enterprise Server 10 Service Pack 2 for x86 SUSE(R) Linux Enterprise Server 10 Service Pack 2 for EM64T SUSE(R) Linux Enterprise Server 10 Service Pack 3 for x86 SUSE(R) Linux Enterprise Server 10 Service Pack 3 for EM64T SUSE(R) Linux Enterprise Server 11 for x86 SUSE(R) Linux Enterprise Server 11 for EM64T SUSE(R) Linux Enterprise Server 11 Service Pack 1 for x86 SUSE(R) Linux Enterprise Server 11 Service Pack 1 for EM64T
Oracle Enterprise Linux		Oracle Enterprise Linux Release 6.7 for x86 (32bit) Oracle Enterprise Linux Release 6.7 for 86_64 (64bit) Oracle Enterprise Linux Release 7.2 for x86 (32bit) Oracle Enterprise Linux Release 7.2 for x86_64 (64bit)
Solaris		Oracle Solaris 10 05/09 (Update7) Oracle Solaris 11 11/11 Oracle Solaris 11.1 Oracle Solaris 11.2
OVM for x86 2.2		Oracle(R) VM Server for x86 2.2
OVM for x86 3.x	OVM for x86 3.2	Oracle VM Server for x86 v3.2.*x*
	OVM for x86 3.3	Oracle VM Server for x86 v3.3.*x*
OVM for SPARC		Oracle(R) VM Server for SPARC
Oracle VM Manager		Oracle(R) VM Manager
Citrix XenServer		Citrix XenServer(R) 6.0 Citrix XenServer(R) 6.0.2 Citrix XenServer(R) 6.1.0 Citrix XenServer(R) 6.2.0
ESC		ETERNUS SF Storage Cruiser
GLS		PRIMECLUSTER GLS
Navisphere		EMC Navisphere Manager
Solutions Enabler		EMC Solutions Enabler
MSFC		Microsoft Failover Cluster
Solaris		Oracle Solaris 10 05/09 (Update7) Oracle Solaris 11 11/11 Oracle Solaris 11.1 Oracle Solaris 11.2

Abbreviation	Products
SCVMM	System Center Virtual Machine Manager 2008 R2 System Center 2012 Virtual Machine Manager System Center 2012 R2 Virtual Machine Manager
VMware	VMware vSphere(R) 4 VMware vSphere(R) 4.1 VMware vSphere(R) 5 VMware vSphere(R) 5.1 VMware vSphere(R) 5.5 VMware vSphere(R) 6
VMware ESX	VMware(R) ESX(R)
VMware ESX 4	VMware(R) ESX(R) 4
VMware ESXi	VMware(R) ESXi(TM)
VMware ESXi 5.0	VMware(R) ESXi(TM) 5.0
VMware ESXi 5.1	VMware(R) ESXi(TM) 5.1
VMware ESXi 5.5	VMware(R) ESXi(TM) 5.5
VMware ESXi 6.0	VMware(R) ESXi(TM) 6.0
VMware Infrastructure Client	VMware(R) Infrastructure Client
VMware Tools	VMware(R) Tools
VMware vSphere 4.0	VMware vSphere(R) 4.0
VMware vSphere 4.1	VMware vSphere(R) 4.1
VMware vSphere 5	VMware vSphere(R) 5
VMware vSphere 5.1	VMware vSphere(R) 5.1
VMware vSphere 5.5	VMware vSphere(R) 5.5
VMware vSphere 6.0	VMware vSphere(R) 6.0
VMware vSphere Client	VMware vSphere(R) Client
VMware vCenter Server	VMware(R) vCenter(TM) Server
VMware vClient	VMware(R) vClient(TM)
VMware FT	VMware(R) Fault Tolerance
VMware DRS	VMware(R) Distributed Resource Scheduler
VMware DPM	VMware(R) Distributed Power Management
VMware Storage VMotion	VMware(R) Storage VMotion
VMware vDS	VMware(R) vNetwork Distributed Switch
VMware Horizon View	VMware Horizon View 5.2.*x* VMware Horizon View 5.3.*x* VMware Horizon 6.0 (with View)
VIOM	ServerView Virtual-IO Manager
SVOM	ServerView Operations Manager
BladeLogic	BMC BladeLogic Server Automation
Excel	Microsoft(R) Office Excel(R) 2003 Microsoft(R) Office Excel(R) 2007 Microsoft(R) Office Excel(R) 2010 Microsoft(R) Office Excel(R) 2013
Excel 2003	Microsoft(R) Office Excel(R) 2003

Abbreviation	Products
Excel 2007	Microsoft(R) Office Excel(R) 2007
Excel 2010	Microsoft(R) Office Excel(R) 2010
Excel 2013	Microsoft(R) Office Excel(R) 2013
Internet Explorer	Windows(R) Internet Explorer(R) 8 Windows(R) Internet Explorer(R) 9 Windows(R) Internet Explorer(R) 10 Internet Explorer(R) 11
Firefox	Firefox(R)
ServerView Agent	ServerView SNMP Agents for MS Windows (32bit-64bit) ServerView Agents Linux ServerView Agents VMware for VMware ESX Server
RCVE	ServerView Resource Coordinator VE
ROR	FUJITSU Software ServerView Resource Orchestrator
ROR VE	FUJITSU Software ServerView Resource Orchestrator Virtual Edition
ROR CE	FUJITSU Software ServerView Resource Orchestrator Cloud Edition
Resource Coordinator	Systemwalker Resource Coordinator Systemwalker Resource Coordinator Virtual server Edition
Resource Coordinator VE	ServerView Resource Coordinator VE Systemwalker Resource Coordinator Virtual server Edition
Resource Orchestrator	FUJITSU Software ServerView Resource Orchestrator
SVFAB	ServerView Fabric Manager

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Revision History

Month/Year Issued, Edition	Manual Code
November 2011, First Edition	J2X1-7616-01ENZ0(00)
December 2011, Edition 1.1	J2X1-7616-01ENZ0(01)
January 2012, Edition 1.2	J2X1-7616-01ENZ0(02)
February 2012, Edition 1.3	J2X1-7616-01ENZ0(03)
March 2012, Edition 1.4	J2X1-7616-01ENZ0(04)
April 2012, Edition 1.5	J2X1-7616-01ENZ0(05)
July 2012, Second Edition	J2X1-7616-02ENZ0(00)
October 2012, Third Edition	J2X1-7616-03ENZ0(00)
December 2012, Fourth Edition	J2X1-7616-04ENZ0(00)
January 2013, Fifth Edition	J2X1-7616-05ENZ0(00)
January 2013, Edition 5.1	J2X1-7616-05ENZ0(01)
January 2013, Edition 5.2	J2X1-7616-05ENZ0(02)
March 2013, Edition 5.3	J2X1-7616-05ENZ0(03)
June 2013, Edition 5.4	J2X1-7616-05ENZ0(04)
August 2013, Edition 5.5	J2X1-7616-05ENZ0(05)
December 2013, Sixth Edition	J2X1-7616-06ENZ0(00)
February 2014, Edition 6.1	J2X1-7616-06ENZ0(01)
April 2014, Edition 6.2	J2X1-7616-06ENZ0(02)
June 2014, Edition 6.3	J2X1-7616-06ENZ0(03)
April 2015, Seventh Edition	J2X1-7616-07ENZ0(00)
July 2015, Edition 7.1	J2X1-7616-07ENZ0(01)
September 2015, Edition 7.2	J2X1-7616-07ENZ0(02)
December 2015, Edition 7.3	J2X1-7616-07ENZ0(03)
January 2016, Edition 7.4	J2X1-7616-07ENZ0(04)
June 2016, Edition 7.5	J2X1-7616-07ENZ0(05)
September 2016, Edition 7.6	J2X1-7616-07ENZ0(06)

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Contents

Part 1 Command Reference

Chapter 1 Overview

This chapter provides an overview of the commands available in Resource Orchestrator.

The following types of commands are available:

- Resource management commands

  Refer to "1.1 Overview of Resource Management Commands".

- Operation management commands

  Refer to "1.2 Overview of Operation Management Commands".

1.1 Overview of Resource Management Commands

The following types of commands are available for resource management:

- Login Command

  rcxlogin (*1)

- Resource Operation Commands

  rcxadm addrset

  rcxadm chassis (*2)

  rcxadm disk

  rcxadm filesrvctl

  rcxadm firewall

  rcxadm folder

  rcxadm lserver

  rcxadm netconfig

  rcxadm netdevice

  rcxadm network

  rcxadm pool

  rcxadm server (*2)

  rcxadm slb

  rcxadm storage

  rcxadm tenant

  rcxadm tenant [for Basic Mode]

  rcxadm vstorage

- Image Operation Command

  rcxadm image (*2)

- L-Server Template Operation Command

  rcxadm template

- User Operation Commands

  rcxadm user

  rcxadm usergroup

  rcxadm user [for Basic Mode]

  rcxadm usergroup [for Basic Mode]

- Control and Environment Setup Commands

  deployment_service_uninstall (*1)

  rcxadm agtctl (*1)

  rcxadm authctl (*2)

  rcxadm certctl (*1)

  rcxadm config

  rcxadm dbctl

  rcxadm deployctl (*1)

  rcxadm imagemgr (*2)

  rcxadm iscsictl

  rcxadm lanctl (*1)

  rcxadm license (*1)

  rcxadm logctl

  rcxadm mgrctl (*2)

  rcxadm nicdefctl

  rcxadm servermgr

  rcxadm storagemgr (*2)

  rcxadm vmmgr

  rcxmgrctl

  rcxrepdef

  rcxstorage

  rcxvmdisk

  rcxvmdiskagt

  rcxadm vmhostctl

  macbindconfig

  rcxadm vdimgr

- Backup and restore the configuration definition information of Resource Orchestrator Commands

  rcxbackup [for Basic Mode]

  rcxchkmismatch [for Basic Mode]

  rcxkeydefbackup [for Basic Mode]

  rcxkeydefrestore [for Basic Mode]

  rcxlogtruncate [for Basic Mode]

  rcxmgrbackup

  rcxmgrrestore

  rcxrepair [for Basic Mode]

  rcxreserveid

  rcxrestore [for Basic Mode]

  scwbackup [for Basic Mode]

  scwrestore [for Basic Mode]

*1: An existing Virtual Edition command.
*2: This is an extended Virtual Edition command.

User accounts with administrative privileges within the operating system can execute all commands. Other user accounts can execute the commands within the allowed scope by logging in beforehand using the rcxlogin command.

Executing privileged commands within a script requires the user to be logged in with administrative privileges for the operating system. Otherwise, the rcxlogin command should first be run with the -save option to grant access to privileged commands from scripts.
Refer to "2.1 rcxlogin" for details.

With Resource Orchestrator, you can restrict the privileges of users by setting combinations of resources that can be accessed and operations that can be performed (roles).
For details on user accounts and roles, refer to "5.1 Restricting Access Using Roles" in the "Design Guide CE". For details on the relationships between each command and subcommand, refer to "Appendix A GUI/CLI".

Note

Multibyte characters cannot be used for files or storage folders used by the commands available in Resource Orchestrator.

Information

If, in Windows Server 2008 or later, a user account with administrative privileges that does not have the user name "Administrator" starts up a command prompt from the menu, commands executed in that prompt cannot be executed with administrative privileges.
Right-click the command prompt in the menu, select [Run as administrator] from the displayed menu to start up the command prompt, and run the required command from there.

Point

Commands available on the admin server are all located under the following folder.

[Windows Manager]
Installation_folder\SVROR\Manager\bin

[Linux Manager]
/opt/FJSVrcvmr/bin

1.2 Overview of Operation Management Commands

The types of Operation Management Commands are as follows:

- L-Platform Template Management Commands

  cfmg_addimageinfo

  cfmg_addnetinfo

  cfmg_addsoft

  cfmg_addtemplate

  cfmg_deleteimageinfo

  cfmg_deletenetinfo

  cfmg_deletesoft

  cfmg_deletetemplate

  cfmg_listimageinfo

  cfmg_listnetinfo

cfmg_listsoft

cfmg_listtemplate

cfmg_listvmimage

cfmg_listvnet

cfmg_showtemplate

cfmg_updateimageinfo

- L-Platform Management Commands

cfmg_deletelplatform

cfmg_deletelserver

cfmg_deletesysdata

cfmg_deletevdiparams

cfmg_importlserver

cfmg_listhostnamecounter

cfmg_resethostnamecounter

cfmg_syncdiskinfo

cfmg_updatevdiconnectinfo

cfmg_updatevdiparams

listUnapprovalLplatform

recoverAllService

recoverService

- Accounting Commands

ctchg_chgschedule

ctchg_getmeterlog

currencyset

productmaintain

- Role Customize Command

rcxadm role

- Maintenance Commands

cmdbrefresh

ctmg_collectinfo

ctmg_resetbackuperror

inst_collectinfo

- L-Platform APIs Commands (Operations on L-Platform Templates)

GetLPlatformDescriptorAttributes

GetLPlatformDescriptorConfiguration

GetPoolList

GetRulesetConfiguration

ListDiskImage

ListFirewallRuleset

ListLPlatformDescriptor

ListNetworkResource

ListServerType

ListSLBRuleset

- L-Platform APIs Commands (Operations on L-Platform Systems)

CreateLPlatform

CreateNetwork

DestroyLPlatform

DestroyNetwork

GetLPlatformAttributes

GetLPlatformConfiguration

GetLPlatformStatus

GetOperationResult

ListLPlatform

ListNetworkInfo

MoveLPlatform

OperateSLB

StartLPlatform

StartTenantLServers

StopLPlatform

StopTenantLServers

UpdateFirewallConfiguration

UpdateSLBConfiguration

- L-Platform APIs Commands (Operations on Server)

AddPatch

CancelError

ChangeDiskSize

CreateImage

CreateLServer

CreateNic

CreateSnapshot

DestroyLServer

DestroyNic

DestroyPatch

DestroySnapshot

ExpandSysvolSize

GetLServerAttributes

GetLServerConfiguration

GetLServerInitialPassword

GetLServerStatus

GetSnapshotHistory

ListLServer

ListSnapshot

RestoreLServer

StartLServer

StopLServer

UpdateIPAddress

UpdateLServerAttribute

UpdateLServerConfiguration

- L-Platform APIs Commands (Operations on Additional Disks)

AttachDisk

CreateDisk

DestroyDisk

DetachDisk

ListDisk

1.2.1 Exit Status and Messages

Check the Exit status for the results of Commands.

If the exit status is 0, the command terminated normally. If the exit status is not 0, the command ended abnormally and a message is displayed. Refer to the description of each command for details.

Refer to "Messages" for details.

Type	Type of Message
L-Platform Template Management Commands	Messages Starting with TPLC
L-Platform Management Commands	
Accounting Commands	Messages Starting with ctchg Messages Starting with meter
Maintenance Commands	Messages Starting with BKRS Messages Starting with BRPG Messages Starting with DELP Messages Starting with DRC Messages Starting with TPLC
L-Platform APIs Commands	Messages Starting with PAPI

1.2.2 How to Check Exit Status

Exit Status can be checked after the commands are executed.

Exit Status checking method examples are shown below.

[Windows Manager]

```
C:\Users\Administrator> Installation_folder\RCXCFMG\bin\cfmg_listhostnamecounter
C:\Users\Administrator> echo %errorlevel%
0
C:\Users\Administrator>
```

[Linux Manager]

```
$ su -
Password: Super user's password
# /opt/FJSVcfmg/bin/cfmg_listhostnamecounter
# echo $?
0
#
```

Note

If the admin server is Linux, ensure that the environment variable LANG is "en_US.UTF-8" when executing L-Platform Template Management Commands.

Chapter 2 Login

This chapter explains the command used to log in to Resource Orchestrator.

2.1 rcxlogin

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxlogin** - Logs in to Resource Orchestrator

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxlogin - Logs in to Resource Orchestrator

Format

rcxlogin [-save] *user_name*

Description

rcxlogin is the command used to authenticate users in Resource Orchestrator.

If you are using commands for which administrative privileges are required, first use this command to log in as a user with administrative privileges.
If a user already has administrative privileges within the operating system, it is not necessary for that user to execute this command in order to use Resource Orchestrator commands.

If a user has no administrative privileges, to use the commands explained in "Chapter 3 Resource Operations" through "Chapter 8 L-Server Template Operations", log in with the rcxlogin command beforehand.

user_name

Specify a user ID that has been registered in Resource Orchestrator. You will then be asked to enter the password of the specified user.
If the correct password is entered, a new command prompt will be displayed showing that the authentication succeeded.
If an invalid password or user ID is entered, an error message is displayed.

To log off, execute the exit command. To log in as a different user without logging off, re-execute the rcxlogin command.

Option

-save (optional)

Saves the entered password. This password is remembered only for the user account (within the operating system) used to execute this command. Once a password has been saved for a given user account, this command can then be executed from the same account without being asked for a password again.
Saving the password also allows scripts to use commands for which administrative privileges are required.
Refer to "Automation Using Scripts" in the "Examples" section for details.

- Saving the password makes it possible to log in to Resource Orchestrator just by logging in to the operating system user account for which the password was saved. When using this function, ensure that strict control is exercised over this user account on the admin server.
- In a clustered manager configuration, use the following procedure to save the password on both the primary and secondary cluster nodes.

  [Windows Manager]

1. Start the cluster service on the primary node.

   In the Failover Cluster Management tree, right-click [RC-manager] under [Services and Applications], and select [Bring this service or application online] from the popup menu.
   Confirm that all resources are turned online.

2. Run the rcxlogin -save *user_name* command on the primary node.

3. Move the manager "service or application" to the secondary node.

   Confirm that all resources are turned online on the secondary node.

4. Run the rcxlogin -save *user_name* command on the secondary node.

5. Move the manager "service or application" back to the primary node.

   Confirm that all resources are turned online on the primary node.

[Linux Manager]

1. Start the cluster service on the primary node.

   Use the cluster system's operation management view (Cluster Admin) and start the cluster service of the manager.

   Confirm that all resources are turned online.

2. Run the rcxlogin -save *user_name* command on the primary node.

3. Use the cluster system's operation management view (Cluster Admin) and switch to the secondary node.

   Confirm that all resources are turned online on the secondary node.

4. Run the rcxlogin -save *user_name* command on the secondary node.

5. Use the cluster system's operation management view (Cluster Admin) and switch to the primary node.

   Confirm that all resources are turned online on the primary node.

For a user account with OS administrative privileges, Resource Orchestrator commands can be executed freely without needing to save a password first.

Requirements

Permissions

Not required.

Location

Admin server

Examples

- Logging in Using Password Authentication

```
>rcxlogin userA <RETURN>
Password: password <RETURN>
```

- Automation Using Scripts

  To use commands requiring administrative privileges from within a script, thus allowing automated calls from external products, the user account's password must be registered in advance using the rcxlogin -save command.

  Within the script, the RCX_USER environment variable must be defined and set to the user ID of the account for which the password was saved.

  Once this variable is properly set, Resource Orchestrator commands can be executed using the previously saved password.

Note

The script must be executed by the operating system user account that was used to save the password on the admin server.

Example

Script (batch file) content:

[Windows Manager]

```
@echo off

set RCX_USER=userA
rem Write down commands that can be run with userA's privileges.
Installation_folder\SVROR\Manager\bin\rcxserver stop -name svr0001 -force
Installation_folder\SVROR\Manager\bin\rcxserver start -name svr0002
...
```

[Linux Manager]

```
#!/bin/sh

RCX_USER=userA
export RCX_USER
# Write down commands that can be run with userA's privileges.
/opt/FJSVrcvmr/bin/rcxserver stop -name svr0001 -force
/opt/FJSVrcvmr/bin/rcxserver start -name svr0002
...
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Chapter 3 Resource Operations

This chapter explains the commands used to manage resources in Resource Orchestrator.

3.1 rcxadm addrset

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm addrset** - address set resource operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm addrset - address set resource operations

Format

```
rcxadm addrset create -name name -type {MAC|WWN|GIP} -file file -pool pool [-exclude
address[,address[,...]]] [-label label] [-comment comment] [-nowait]
rcxadm addrset modify -name name -file file.xml [-nowait]
rcxadm addrset list [-verbose] [-format {text|xml}] [-extend lock]
rcxadm addrset show -name name [-format {text|xml}] [-extend lock]
rcxadm addrset move -name name [-to pool] [-nowait]
rcxadm addrset delete -name name [-nowait]
```

Description

rcxadm addrset is the command used to manage WWNs, MAC addresses, and global IP addresses.

For details on the conditions under which it is necessary to create address set resources and register them in address pools, refer to "14.6 Address Set Resources" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

GIP address set resources are used for handling the global IP addresses. For a GIP address set resource, configure a unicast global IP address which can be configured for firewalls and SLBs.

Configure an IP between 1.0.0.0 and 255.255.255.254, excluding the loopback addresses (127.0.0.0 - 127.255.255.255) and the multicast addresses (224.0.0.0 - 239.255.255.255).

Subcommands

create

Creates and registers an address set resource in the address pool.

modify

Modifies GIP address set resources. WWN or MAC address set resources cannot be used.

list

Displays a list of address set resources.

The following detailed information is displayed:

Table 3.1 List of Address Set Resource Information

Item Name	Description
NAME	Name of the address set resource
TYPE	Type of the address set resource (MAC, WWN, or GIP)
START-END	Start and end addresses of the address set resource

Item Name	Description
ATTRIBUTES (*)	Information when resources are locked during DR execution One of the following is displayed: - When resources are locked "locked(DR)" is displayed. - When resources are not locked "unlocked(DR)" is displayed.

* Note: This is displayed when -extend lock is specified for the option.

If the -verbose option is specified, in addition to the above information, the following information is displayed:

Table 3.2 List of Address Set Resource Information (verbose)

Item Name	Description
FREE	Number of unused addresses of the address set resource
USED	Number of the addresses of the address set resource in use
LABEL	Label of the address set resource

show

Displays details of address set resources.

The following detailed information is displayed:

Table 3.3 Detailed Information for Address Set Resources

Item Name	Description
NAME	Name of the address set resource
TYPE	Type of the address set resource (MAC, WWN, or GIP)
LABEL	Label of the address set resource
COMMENT	Comment on the address set resource information
START-END	Start and end addresses of the address set resource
EXCLUDE_ADDRESS	Excluded-addresses of the address set resource
RESERVE_ADDRESS	Addresses of the address set resource in use
FREE	Number of unused addresses of the address set resource
USED	Number of the addresses in use of the address set resource
ATTRIBUTES (*)	Information when resources are locked during DR execution One of the following is displayed: - When resources are locked "locked(DR)" is displayed. - When resources are not locked "unlocked(DR)" is displayed.

* Note: This is displayed when -extend lock is specified for the option.

move

Moves an address pool to the specified resource folder.

delete

Deletes an address pool. Address set resources contained in the address pool will also be deleted.

Options

-name *name*

- When the subcommand is "create"

  In *name*, specify the name of the target address set resource to perform an operation with.
  Specify a name that is different from the resource name (address set name) of the network resource or the other address set resource name.

- When the subcommand is something other than "create"

  In *name*, specify the name of the target address set resource to perform an operation with.
  To specify an address set resource that is stored in a tenant or a resource folder, it is also necessary to specify the tenant name or the resource folder name connected with a slash ("/").

-verbose

Specify when displaying detailed information.

-type

Specify WWN, MAC address, or GIP address.

-file *file*

To create WWN and MAC address set resources

When using the I/O Virtualization Option, specify the WWN in the enclosed CD-ROM, or the list file of the MAC address. When specifying a unique address, describe the following in the file, and specify the address.

- The first line is the starting point and the last line is the end point of the addresses managed by Resource Orchestrator.
- Enter the addresses in the following format:

  Specify the MAC addresses in hexadecimal form, separated by blank spaces (" ").

  Example

  A list file in which MAC addresses are "12 34 56 78 00 00" - "12 34 56 78 00 ff"

  ```
  12 34 56 78 00 00
  12 34 56 78 00 ff
  ```

  Specify the WWN addresses in hexadecimal form, separated by blank spaces (" "). [Physical Servers]

  Example

  A list file in which WWN addresses are "20 00 00 17 42 50 00 00" - "20 00 00 17 42 50 00 ff"

  ```
  20 00 00 17 42 50 00 00
  20 00 00 17 42 50 00 ff
  ```

- The number of MAC/WWN addresses that can be specified within the range from the starting point to the end point of the address is 1-65536.
- Specifiable MAC address ranges may differ depending on server virtualization software. For details, refer to the server virtualization software manual. [Xen] [KVM] [Citrix Xen] [OVM for x86 3.x]

To create GIP address set resources

Describe the following in the file, and specify the address.

- The first line is the starting point and the last line is the end point of the addresses managed by Resource Orchestrator.

- Enter the addresses in the following format:

  Global IP addresses: specify in decimal format, separated by periods (".").

  Example

  A list file in which global IP addresses are "192.168.10.1" - "192.168.10.5"

  ```
  192.168.10.1
  192.168.10.5
  ```

-file *file.xml*

In *file.xml*, specify the XML file that defines the global IP address set resources.

For details on the XML file definition, refer to "15.5 Address Set Resources".

-exclude

MAC address, WWN address

Of the WWNs and MAC addresses given in the list file on the CD-ROM enclosed with the I/O Virtualization Option, specify an address that has been allocated using ROR VE or VIOM and is not used in management by Resource Orchestrator.

Global IP Address

Specify the IP addresses to exclude in decimal format, separated by periods (".").

-pool *pool*

For *pool*, specify the name of the resource pool to register an address set resource in.

For the resource pool allocated in the resource folder, specify the resource folder name using slashes ("/").

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the address set resource specified in the subcommand to complete its execution.

-label *label*

In *label*, specify the label for the address set resource.

-comment *comment*

In *comment*, specify any comments for the address set resource.

-to *pool*

Specify the destination address pool in *pool*. If omitted, address set resources will not be moved.

-format text|xml

Specify the display format. You can specify text or xml format.

When -format is omitted, it is displayed in text format.

-extend lock

Specify when displaying additional information.

Examples

- To display the list of address set resource information:

```
>rcxadm addrset list <RETURN>
NAME       TYPE  START                   END
----       ----  -----                   ---
```

```
macdata1   WWN   20:00:00:17:42:00:00:20  20:00:00:17:42:00:10:ff
wwndata1   MAC   00:e5:35:0c:34:50        00:e5:35:0c:44:ff
```

- To display the detailed information of address set resources (WWNs):

```
>rcxadm addrset show -name wwndata <RETURN>
name: wwndata1
type: WWN
label: wwn1
comment: wwn-test-data-1
start-end:20: 01:00:17:42:50:00:00 - 20:01:00:17:42:50:00:0f
exclude_address:
reserve_address: 20:01:00:17:42:50:00:00
free: 15
used: 1
```

- To display the detailed information of address set resources (MAC addresses):

```
>rcxadm addrset show -name macdata1 <RETURN>
name: macdata1
type: MAC
label: mac1
comment: mac-test-data1
start-end: 00:17:42:4f:00:00 - 00:17:42:4f:00:f0
exclude_address:
reserve_address: 00:17:42:4f:00+00
free: 240
used: 1
```

- To display the list of locked address set resource information:

```
>rcxadm addrset list -extend lock <RETURN>
NAME                    TYPE START                 END                   ATTRIBUTES
----                    ---- -----                 ---                   ----------
macdata1                MAC  00:e5:35:0c:34:50     00:e5:35:0c:44:ff     locked(DR)
wwndata1                  WWN  20:00:00:17:42:00:00:20 20:00:00:17:42:00:10:ff
locked(DR)
```

- To display the list of locked address set resource (WWN) detailed information:

```
>rcxadm addrset show -name wwndata1 -extend lock <RETURN>
name: wwndata1
type: WWN
label: wwn1
comment: wwn-data1
start-end: 20:00:00:17:42:00:00:20 - 20:00:00:17:42:00:10:ff
exclude_address:
reserve_address: 8:00:00 PM:5:42:00 PM:12:20 AM
free: 4319
used: 1
attributes: locked(DR)
```

- To display the list of locked address set resource (MAC address) detailed information:

```
>rcxadm addrset show -name macdata1 -extend lock <RETURN>
name: macdata1
type: MAC
label: mac1
comment: mac-data1
start-end: 00:e5:35:0c:34:50 - 00:e5:35:0c:44:ff
```

```
exclude_address:
reserve_address: 00:E5:35:0C:34:50
free: 4271
used: 1
attributes: locked(DR)
```

3.2 rcxadm chassis

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm chassis** - Chassis power control and display of chassis information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm chassis - Chassis power control and display of chassis information

Format

```
rcxadm chassis start -name resource [-nowait]
rcxadm chassis stop -name resource [-nowait] [-force]
rcxadm chassis show -name name
```

Description

rcxadm chassis is the command used to power on, power off, and manage blade chassis.

This function can only be used with chassis for PRIMERGY BX servers.

Subcommands

start

Powers on the target chassis.

stop

Powers off the target chassis.

show

Displays the detailed information for chassis.

The following detailed information is displayed:

Table 3.4 Detailed Information for Chassis

Item Name	Description
Name	Chassis name
Model	Model
IPAddress	IP address
Status	Status
ServerBlades	The number of server blades
LANSwitchBlades	The number of LAN switch blades
Server[*n*]	Server name The slot number is displayed in *n*.
L-Server[*n*]	L-Server name The slot number is displayed in *n*.

Item Name	Description
L-Server[*n*][Status]	L-Server status The slot number is displayed in *n*.

Options

-name *resource*

Specify the name of the target chassis in *resource*.

-nowait (optional)

Use this option to return directly to the command prompt without waiting for the command to complete its execution.

Specify the following options when using the stop subcommand:

-force (optional)

Use this option to forcibly stop a chassis.

The following options can be specified for the show subcommand:

-name *name*

In *name*, specify the chassis name to display the detailed information for.

Requirements

Permissions

One of the following permissions is required:

- OS Administrator
- Resource Orchestrator Privileged User

Location

Admin server

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Note

- When powering off a chassis, all management blades contained in the target chassis will be gracefully shut down. This function requires ServerView Agents to be installed on all server blades in the chassis.
- After starting a chassis, it may take some time until it is possible to power on server blades. When powering on server blades after starting a chassis, wait several minutes before doing so.
- Server blade BIOS settings can be configured to automatically start up when powering on the chassis. Refer to the server blade manual for details about such settings.

Example

- To display the details of chassis information:

```
>rcxadm chassis show -name Chassis01
<RETURN>
Name: Chassis01
Model: SQ715M00205
IPAddress: 192.168.10.100
Status: normal
ServerBlades: 2
LANSwitchBlades: 2
Server[1]: BX600-1
L-Server[1]: -
L-Server[1][Status]: -
Server[2]: BX600-2
L-Server[2]: Lserver01
L-Server[2][Status]: normal
```

3.3 rcxadm disk

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm disk** - disk resource operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm disk - disk resource operations

Format

```
rcxadm disk register -file file.xml
rcxadm disk unregister -name name
rcxadm disk modify -name name {{[-label label] [-comment comment]} | -file file.xml}
rcxadm disk list [-verbose [-extend attr[,attr[,...]]]]
rcxadm disk show -name name [-extend attr[,attr[,...]]]
rcxadm disk move -name name -to pool [-nowait]
```

Description

rcxadm disk is the command used to perform operations on disk resources. The following disk resources are the resources to be allocated to the L-Server.

- Virtual disks of VM guests
- LUNs of ETERNUS, EMC CLARiiON, and EMC VNX
- EMC Symmetrix DMX
- EMC Symmetrix V+MAX devices
- LUNs of NetApp
- Virtual Devices of FalconStor NSS

  However, Virtual Devices composed of two or more Physical Device are not disk resources.

Disk resources provide virtual disks to L-Servers.

Subcommands

register

[KVM]
Creates a disk resource for a virtual L-Server and registers the disk resource in a storage pool.

In the following cases, an error will occur and the settings will not be modified.

- The specified tenant does not exist
- The specified physical resource pool does not exist
- The specified file does not exist
- Errors or inconsistencies exist in the xml file
- The disk name is already registered in Resource Orchestrator
- The IP addresses of VM hosts are not registered in Resource Orchestrator
- The same device path is registered in Resource Orchestrator for the same VM host

Disk resources for virtual L-Servers can be registered in a storage pool, regardless of whether the Thin Provisioning attribute is applied to that storage pool. It is recommended to register disk resource in a storage pool that has the same attributes as the disk allocation method in order to standardize the operation so the disk allocation method can be specified when selecting storage pools such as VMware.

[Solaris Zones (Solaris 10)]
In a Solaris 10 global zone, this creates a disk resource for a virtual L-Server and registers the disk resource in a storage pool.

In the following cases, an error will occur and the settings will not be modified.

- The specified tenant does not exist
- The specified physical resource pool does not exist
- The specified file does not exist
- Errors or inconsistencies exist in the xml file
- The specified mount point overlaps with other specified mount points
- The specified mount point overlaps with the mount point registered in the specified global zone

Disk resources for virtual L-Servers can be registered in a storage pool, regardless of whether the Thin Provisioning attribute is applied to that storage pool. It is recommended to register disk resource in a storage pool that has the same attributes as the disk allocation method in order to standardize the operation so the disk allocation method can be specified when selecting storage pools such as VMware.

Note

Do not mount LUNs that are shared between multiple global zones or the LUNs for the zone path used by virtual L-Servers by selecting them from the other global zone. Data may be damaged when deploying the virtual L-Server using the disk for the corresponding LUN, due to conflicting LUN access.

Information

Overlapping mount points exist in the following case.

Example

When the mount point is /work/zones/ror-zone, the example of overlapping mount points is as follows.

```
/work/zones/ror-zone/zone1
/work/zones
```

An example of non-overlapping mount points is as follows.

```
/zones/ror-zone
/work/zones1/ror-zone
```

[OVM for SPARC]
Creates a disk resource for a virtual L-Server and registers the disk resource in a storage pool.

In the following cases, an error will occur and the settings will not be modified.

- The specified tenant does not exist
- The specified physical resource pool does not exist
- The specified file does not exist
- The virtual disk service information of disk resources shared between VM hosts is different

Disk resources for virtual L-Servers can be registered in a storage pool, regardless of whether the Thin Provisioning attribute is applied to that storage pool. It is recommended to register disk resource in a storage pool that has the same attributes as the disk allocation method in order to standardize the operation so the disk allocation method can be specified when selecting storage pools such as VMware.

unregister

[KVM] [Solaris Zones (Solaris 10)] [OVM for SPARC]
Releases the registration of a disk resource for a virtual L-Server.

The registration in the storage pool cannot be canceled. When a disk resource has been registered in a storage pool, cancel registration of the disk resource from the storage pool using the rcxadm pool command, and then cancel registration of the disk resource using this subcommand.
In the following cases, an error will occur and the settings will not be modified.

- The specified disk resource does not exist
- The specified disk resource is not a raw device or a partition
- The disk resource for deletion is registered in the storage pool

[Hyper-V]
Unregisters a disk resource of automatically created LUNs.

The registration in the storage pool cannot be canceled. When the disk resource has been registered in a storage pool, cancel registration of the disk resource using this subcommand after canceling registration of the disk resource from the storage pool using the rcxadm pool command. In the following cases, an error will occur and the operation will be aborted:

- The specified disk resource is not an automatically created LUN that is being retained
- The specified disk resource is used for an L-Server.
- The disk resource for deletion is registered in the storage pool

modify -name *name* {[-label *label*] [-comment *comment*]}

Changes labels and comments of disk resources.

modify -name *name* -file *file*.xml

[KVM] [Solaris Zones (Solaris 10)] [OVM for SPARC]
Modifies the properties of a disk resource for a virtual L-Server.
The following operations can be performed:

- Adding or deleting of a VM host that uses the disk resource (for Solaris Zones, the global zone)

- Modifying of the device path
- Modifying of the size

In the following cases, an error will occur and the settings will not be modified.

- Pool elements are specified
- The specified disk resource does not exist
- The specified disk resource is not a device
- As a VM host has been deleted, there is an L-Server that is using the disk resource for deletion
- Errors or inconsistencies exist in the xml file
- The IP addresses of VM hosts are not registered in Resource Orchestrator
- The same device path is registered in Resource Orchestrator for the same VM host

The IP address of a VM host is only used to identify the VM host.
If the IP address is modified after the registration of raw device or partition information, specify the new IP address.
The IP address of the VM host cannot be modified with this command.
The disk resource name cannot be modified.
To move the disk resource between resource pools, use the rcxadm disk move command.

list

Displays a list of disk resource information.

The following detailed information is displayed:

Table 3.5 Disk Resource Information

Item Name	Description
NAME	Disk resource name
LABEL	Disk resource label
COMMENT (*1)	Disk resource comment
TOTAL	Total disk resource size

STATUS	Disk resource status
	One of the following is displayed:
	- For normal status
	"normal" is displayed.
	- For error status
	"error" is displayed.
	- For warning status
	"Warning" is displayed.
	- For one of the following conditions
	  - The status is unknown
	  - The disk resource corresponding to the LUN of the storage unit is used by a server other than a physical L-Server
	"unknown" is displayed.

VSTORAGE NAME (*1)	Virtual storage resource name that is the source for disk resource creation
SHARED (*1)	Shared status of disks One of the following is displayed: - Yes

Item Name	Description
	The status is displayed when the disk is used by multiple L-Servers. - No The status is displayed when the disk is not used by multiple L-Servers.
UNIT_NAME (*1)	Identifier of the physical storage unit resource where disk resources exist
VOLUME_ID (*1)	Volume identifier of the physical storage unit corresponding to disk resources
PRE_CREATED (*1)	One of the following is displayed: - Yes Displayed when the disk was created using storage management software beforehand. - No Displayed when the disk was created using Resource Orchestrator.
ATTRIBUTES (*1)	One of the following is displayed: - Thin Displayed when the thin provisioning attribute is applied. - Thick Displayed when the thick provisioning attribute is applied. - A hyphen ("-") Displayed for a disk resource using an iSCSI connection, or a disk resource for a virtual L-Server. If -verbose -extend lock is specified for the option, in addition to the above information, the following information is displayed, separated by commas (","): - locked(DR) (*2) This is displayed when resources are locked during DR execution. - unlocked(DR) (*2) This is displayed when resources are not locked.
LAST_L-SERVER (*1)	The name of the L-Server that was last used is displayed if the disk resource is not connected to any L-Server. If it is an L-Server located in the tenant or resource folder, the name of the tenant or resource folder is also displayed. The information in this item is not changed even if the name of the L-Server is changed or the L-Server is deleted after reducing disks in the L-Server.
STOREDIMAGE(version) (*3)	When the entities of image resources are stored on a disk resource, the image resource name is displayed including the resource folder name. The version number of the image resource is displayed for "version".

*1: This is displayed when -verbose is specified for the option.
*2: This is displayed when -verbose -extend lock is specified for the option.
*3: This is displayed when -verbose -extend image is specified for the option.

show

Displays the detailed information for a disk resource.

The following detailed information is displayed:

Table 3.6 Detailed Information for Disk Resources

Item Name	Description
NAME	Disk resource name
LABEL	Disk resource label
COMMENT	Disk resource comment
TOTAL	Total disk resource size
STATUS	Disk resource status One of the following is displayed: - For normal status "normal" is displayed. - For error status "error" is displayed. - For warning status "Warning" is displayed. - For one of the following conditions - The status is unknown - The disk resource corresponding to the LUN of the storage unit is used by a server other than a physical L-Server "unknown" is displayed.
VSTORAGE NAME	Virtual storage resource name that is the source for disk resource creation
SHARED	Shared status of disks One of the following is displayed: - Yes The status is displayed when the disk is used by multiple L-Servers. - No The status is displayed when the disk is not used by multiple L-Servers.
POOL_NAME	Name of the storage pool where disk resources have been registered
UNIT_NAME	Identifier of the physical storage unit resource where disk resources exist
VOLUME_ID	Volume identifier of the physical storage unit corresponding to disk resources
L-SERVER[*num*]	Name of the L-Server to which disk resources are being connected (*diskindex*) In *diskindex*, the index number corresponding to the disk element of the L-Server to which disk resources are being connected is set. When the disk resource is being shared among multiple L-Servers, the index number of the L-Server is set in *num*. The number is "0" or larger.
LAST_L-SERVER	The name of the L-Server that was last used is displayed if the disk resource is not connected to any L-Server. If it is an L-Server located in the tenant or resource folder, the name of the tenant or resource folder is also displayed. The name of the L-Server that was last used is displayed if the disk resource is not connected to any L-Server. The information in this item is not changed even if the name of the L-Server is changed or the L-Server is deleted after reducing disks in the L-Server.

Item Name	Description
PRE_CREATED	One of the following is displayed: - Yes Displayed when the disk was created using storage management software beforehand. - No Displayed when the disk was created using Resource Orchestrator.
ATTRIBUTES	One of the following is displayed: - Thin Displayed when the thin provisioning attribute is applied. - Thick Displayed when the thick provisioning attribute is applied. - A blank space (" ") Displayed for a disk resource using an iSCSI connection, or a disk resource for a virtual L-Server. If -extend lock is specified for the option, in addition to the above information, the following information is displayed, separated by commas (","): - locked(DR) (*1) This is displayed when resources are locked during DR execution. - unlocked(DR) (*1) This is displayed when resources are not locked.
Alias	If an alias has been set for the ETERNUS LUN corresponding to the disk resource, the alias name is displayed. This item is not displayed in the following cases. - If an alias has not been set for the ETERNUS LUN corresponding to the disk resource - If the disk resource is not an ETERNUS LUN If the alias name of the ETERNUS LUN corresponding to the disk separated from the virtual storage has been changed using the ETERNUS WebGUI, the alias name in the disk details will be updated a certain time later.
iSCSI[*num*] [STORAGE IQN]	IQN name of the storage port used by disk resources with which iSCSI connection is made The index number of the disk element is configured in *num*. The number is "1" or larger.
iSCSI[*num*] [STORAGE IPAddress]	IP address of the storage port used by disk resources with which iSCSI connection is made The index number of the disk element is configured in *num*. The number is "1" or larger.
iSCSI[*num*] [SERVER IQN]	IQN name of the server used by disk resources with which iSCSI connection is made The index number of the disk element is configured in *num*. The number is "1" or larger.
iSCSI[*num*] [SERVER IPAddress]	IP address of the server used by disk resources with which iSCSI connection is made

Item Name	Description
	The index number of the disk element is configured in *num*. The number is "1" or larger.
iSCSI[*num*] [port]	iSCSI communication port number used by disk resources with which iSCSI connection is made The index number of the disk element is configured in *num*. The number is "1" or larger.
iSCSI[*num*] [Authentication Method]	Authentication mode adapted to iSCSI communication used by disk resources with which iSCSI connection is made One of the following is displayed: - NONE Displayed when not using authentication for iSCSI communications. - CHAP Displayed when using CHAP authentication. - MutualCHAP Displayed when using mutual authentication. The index number of the disk element is configured in *num*. The number is "1" or larger.
FilePath	[Hyper-V] The file path corresponding to the path on VM management software is displayed when a disk resource that is created (and saved) from virtual storage has no connection with any L-Servers.
VmHost[*num*][IPAddress]	The IP address of the VM host specified when creating a disk resource for the virtual L-Server is displayed. The index number of the disk element is configured in *num*. The number is "0" or larger.
VmHost[*num*][Path]	The raw device, or the path or mount point of the partition specified when creating a disk resource for the virtual L-Server is displayed. The index number of the disk element is configured in *num*. The number is "0" or larger.
StoredImage(version) (*2)	When the entities of image resources are stored on a disk resource, the image resource name is displayed including the resource folder name. The version number of the image resource is displayed for "version".

*1: Displayed when -extend lock is specified for the option.
*2: Displayed when -extend image is specified for the option.

move

Moves disk resources to the specified resource pool. Only disk resources created in advance can be moved.

Options

-file *file*.xml

[KVM] [Solaris Zones (Solaris 10)] [OVM for SPARC]
In *file*.xml, specify the XML file that defines the disk resource information for a virtual L-Server.
When the register subcommand is specified, the disk resource information that is unregistered will be written to the XML file.
When specifying the modify subcommand, registered disk resource information that is already registered will be written to the XML file.

In the XML file specified when modify is specified, describe the VM host information (the lower level of information under the VmHost element in the XML file) for all VM hosts sharing disk resources of the modification targets.
Since the XML file used when register is specified is not saved, if the existing VM host information is unclear, check the VM host information by executing the rcxadm disk show command.
The relationship between the information output using the rcxadm disk show command and the VM host information in the XML file is as below.

Information Output by the rcxadm disk show Command	VM Host Information in the XML File
Values of VmHost[num][IPAddress]	ip attribute value in the VmHost element
Values of Name	name attribute value in the Disk element
Values of VmHost[num][Path]	path attribute value in the Disk element
Values of Total Size (excluding "GB")	size attribute value in the Disk element

For details on the XML file definition, refer to "15.4.1 Disk Resources [KVM]", "15.4.3 Disk Resources [Solaris Zones]", or "15.4.4 Disk Resources [OVM for SPARC]".
For details on the commands that help the creation of XML file definitions, refer to "5.24 rcxvmdisk" and "5.25 rcxvmdiskagt".

-pool *pool*

Specify the target resource pool name by level.
Resource_folder_name/*Resource_pool_name*

-disk *disk*

Specify the disk resource to delete.

Registration of a raw device disk resource or a partition disk resource for a virtual L-Server cannot be released using the rcxadm pool unregister command.

To release the registration, use the rcxadm disk unregister command.

-verbose

Specify when displaying detailed information.

-name *name*

In *name*, specify the name of the target disk resource to perform an operation with.

-to *pool*

Specify the destination resource pool in *pool*.
For the resource pool allocated in the resource folder, specify the resource folder name using slashes ("/").

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the disk resource specified in the subcommand to complete its execution.

-label *label*

In *label*, specify the new label.

-comment *comment*

In *comment*, specify the new comments.

-extend *attr*[,*attr*]

Specify when displaying additional information.

- -extend lock

  Specify this option to confirm whether the resource is locked during DR.

- -extend image

  Specify this option to confirm the resource name including the resource folder name of image resources stored on the disk resource.

Example

- To display the list of disk resource information:

```
>rcxadm disk list <RETURN>
NAME                              LABEL        TOTAL    STATUS
----                              -----        -----    ------
P192-168-0-201_R0x0000_V0x0004    -            15.0GB   normal
P192-168-0-201_R0x0000_V0x0006    -             6.0GB   normal
```

- To display a list of detailed disk resource information:

```
>rcxadm disk list -verbose <RETURN>
NAME            LABEL COMMENT TOTAL  STATUS VSTORAGE_NAME  SHARED UNIT_NAME     VOLUME_ID
PRE_CREATED ATTRIBUTES LAST_L-SERVER
----            ----- ------- -----  ------ -------------  ------ ---------     ---------
----------- ---------- ------
P192-168-0-201_V0x0004 -     -      15.0GB normal P192-168-0-201 No   192.168.0.201 0x0004
Yes Thin  /tenant01/lserver03
P192-168-0-201_V0x0006 -     -       6.0GB normal P192-168-0-201 No   192.168.0.201 0x0006
Yes Thin  -
```

- To display the detailed information for a disk resource:

```
>rcxadm disk show -name Physical-L-Server-0-disk0 <RETURN>
Name: Physical-L-Server-0-disk0
Label:
Comment:
Total Size: 10.0GB
Status: normal
Vstorage Name: P192-168-0-201_R0x0003
Shared: No
Pool Name: /StoragePool
Unit Name: DX90-1(192.168.0.201)
Volume Id: 0x0065
L-Server: /Physical-L-Server(0)
Pre Created: No
Attributes: Thin
Alias: Physical-L-00000
```

- To display the detailed information for a disk resource with which has an iSCSI connection:

```
>rcxadm disk show -name iSCSI-Disk-0 <RETURN>
Name: iSCSI-Disk-0
Label:
Comment:
Total Size: 10.0GB
Status: normal
Vstorage Name: iSCSI-vstorage
Shared: No
Pool Name: /StoragePool
Unit Name: iSCSI-storagemgr
Volume Id:
```

```
L-Server:
Pre Created: Yes
Attributes: -
iSCSI[0] [STORAGE IQN]: iqn.2011-03.com.fujitsu:iscsi:storage-0
iSCSI[0] [STORAGE IPAddress]: 192.168.0.1
iSCSI[0] [SERVER IQN]: iqn.2011-03.com.fujitsu:iscsi:server-01
iSCSI[0] [SERVER IPAddress]: 192.168.0.10
iSCSI[0] [port]: 3260
iSCSI[0] [Authentication Method]: CHAP
iSCSI[1] [STORAGE IQN]: iqn.2011-03.com.fujitsu:iscsi:storage-1
iSCSI[1] [STORAGE IPAddress]: 192.168.0.2
iSCSI[1] [SERVER IQN]: iqn.2011-03.com.fujitsu:iscsi:server-01
iSCSI[1] [SERVER IPAddress]: 192.168.0.11
iSCSI[1] [port]: 3260
iSCSI[1] [Authentication Method]: CHAP
```

- When checking locked resource information

```
>rcxadm disk list -verbose -extend lock <RETURN>
NAME                           LABEL  COMMENT TOTAL   ...   ATTRIBUTES        LAST_L-SERVER
----                           -----  ------- -----   ...   ----------        -------------
Tenant-001-S-0001-D            -      -       20.0GB  ...   Thick,locked(DR)  -
P192-168-0-206_R0x0000_V0x0006 -      -       20.0GB  ...   Thin,unlocked(DR) -

>rcxadm disk show -name L-Server-0-disk0 -extend lock <RETURN>
Name: L-Server-0-disk0
Label:
Comment:
...
Attributes: Thin,locked(DR)
```

3.4 rcxadm firewall

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm firewall** - display of firewall information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm firewall - display of firewall information

Format

rcxadm firewall list [{-ruleset|-extend network}]
rcxadm firewall log -name *name*
rcxadm firewall show -name *name* **[-extend network]**

Description

rcxadm firewall is the command used to display the information of firewalls.

Subcommands

list

Displays a list of firewalls.

The following detailed information is displayed:

Table 3.7 Firewall Information

Item Name	Description
NAME	Firewall name
RESOURCE_ID	Resource ID assigned to the firewall
TYPE	Type "Firewall" is displayed.
RULESET_NAME	Ruleset name used by the Auto-Configuration function
DEVICE_NAME	Network device name in use Up to 32 characters are displayed when -extend network is specified.
NETWORK_NAME	Network resource name in use This is only displayed when -extend network is specified.

Table 3.8 Firewall Ruleset Information

Item Name	Description
TYPE	Type "Firewall" is displayed.
RULESET_NAME	Ruleset name used by the Auto-Configuration function
MAX_SEGMENT	The maximum number of segments that can be defined
MAX_SERVER	The maximum number of servers that can be defined
DESCRIPTION	Descriptions of a ruleset

log

Displays up to 10 generations of the auto-configuration history for the network device.

The following detailed information is displayed:

Table 3.9 Firewall History Information

Item Name	Description
Name	Firewall name
Resource ID	Resource ID assigned to the firewall
Serial Number Per Device	Serial number for each network device being used This is only displayed when simple configuration mode is configured.
Type	Type "Firewall" is displayed.
Tenant Name	Name of the tenant where the firewall is deployed
L-Platform Name	Name of the L-Platform where the firewall is deployed
Ruleset Name	Ruleset name used by the Auto-Configuration function
ParameterFile Name	Parameter file name used by the ruleset
Device Name	Network device name in use
Vendor Name	Name of the vendor who provides the network device (firewall)
Product Name	Product name of the network device (firewall)
Model Name	Model name of the network device (firewall)

Item Name	Description
Status	Status of the network device (firewall)
History	History information of auto-configuration for the firewall (up to 10 generations) The following information is displayed for each generation: - Generation An integer from "00" is displayed. - Run Script Name The name of the script executed by auto-configuration is displayed. - Time The date and time for auto-configuration is displayed. - Result The results of auto-configuration are displayed.

show

Displays the detailed information for a network device.

The following detailed information is displayed:

Table 3.10 Detailed Information for Firewall

Item Name	Description
Name	Firewall name
Resource ID	Resource ID assigned to the firewall
Serial Number Per Device	Serial number for each network device being used This is only displayed when simple configuration mode is configured.
Type	Type "Firewall" is displayed.
Tenant Name	Name of the tenant where the firewall is deployed
L-Platform Name	Name of the L-Platform where the firewall is deployed
Ruleset Name	Ruleset name used by the Auto-Configuration function
ParameterFile Name	Parameter file name used by the ruleset
Device Name	Network device name in use
Vendor Name	Name of the vendor who provides the network device (firewall)
Product Name	Product name of the network device (firewall)
Model Name	Model name of the network device (firewall)
Status	Status of the network device (firewall)
Network Name	Network resource name in use This is only displayed when -extend network is specified.

Options

-name *name*

In *name*, specify the firewall name.

-ruleset

Use this option to display a list of rulesets.

-extend network

Specify when specifying the name of the network resource in use.

Examples

- To display the list of firewall information:

```
>rcxadm firewall list <RETURN>
NAME                  RESOURCE_ID      TYPE       RULESET_NAME              DEVICE_NAME
----                  -----------      ----       ------------              -----------
Firewall1             FW-001           Firewall   FW_RULE1                  IPCOM01
Firewall2             FW-002           Firewall   FW_RULE2                  IPCOM02
```

- To display the list of firewall information (when specifying the -extend network):

```
>rcxadm firewall list -extend network <RETURN>
NAME                  RESOURCE_ID      TYPE       RULESET_NAME              DEVICE_NAME
NETWORK_NAME
----                  -----------      ----       ------------              -----------
------------
Firewall1             FW-001           Firewall   FW_RULE1                  IPCOM01
NetworkResource1
Firewall2             FW-002           Firewall   FW_RULE2                  IPCOM02
NetworkResource2

NetworkResource3
```

- To display the list of firewall rulesets:

```
>rcxadm firewall list -ruleset <RETURN>
TYPE       RULESET_NAME    MAX_SEGMENT  MAX_SERVER  DESCRIPTION
----       ------------    -----------  ----------  -----------
Firewall   FW_RULE1        1            20          HTTP(80) pass
Firewall   FW_RULE2        3            50          HTTP(80)/HTTPS(443) pass
```

- To display the detailed information for a firewall:

```
>rcxadm firewall show -name firewall1 <RETURN>
Name: firewall1
Resource ID: FW-001
Serial Number Per Device: 1
Type: Firewall
Tenant Name: TenantA
L-Platform Name: L-Platform1
Ruleset Name: FW_RULE1
ParameterFile Name: default_param01.prm
Device Name: IPCOM01
Vendor Name: Fujitsu
Product Name: IPCOMEXSC
Model Name: IPCOMEX2000A_SC
Status: Normal
```

- To display the detailed information of firewalls (using user customization mode)(when specifying -extend network):

```
>rcxadm firewall show -name firewall1 -extend network <RETURN>
Name: firewall1
```

```
Resource ID: FW-001
Type: Firewall
Tenant Name: TenantA
L-Platform Name: L-Platform1
Ruleset Name: FW_RULE1
ParameterFile Name: default_param01.prm
Device Name: IPCOM01
Vendor Name: Fujitsu
Product Name: IPCOMEXSC
Model Name: IPCOMEX2000A_SC
Status: Normal
Network Name: NetworkResouce1
```

- To display the detailed information of firewalls (using simple configuration mode)(when specifying -extend network):

```
>rcxadm firewall show -name firewall1 -extend network <RETURN>
Name: firewall1
Resource ID: FW-001
Serial Number Per Device: 1
Type: Firewall
Tenant Name: TenantA
L-Platform Name: L-Platform1
Ruleset Name: FW_RULE1
ParameterFile Name: default_param01.prm
Device Name: IPCOM01
Vendor Name: Fujitsu
Product Name: IPCOMEXSC
Model Name: IPCOMEX2000A_SC
Status: Normal
Network Name: NetworkResource1
```

- To display the history information of a firewall.

```
>rcxadm firewall log -name firewall1 <RETURN>
Name: firewall1
Resource ID: FW-001
Serial Number Per Device: 1
Type: Firewall
Tenant Name: TenantA
L-Platform Name: L-Platform1
Ruleset Name: FW_RULE1
ParameterFile Name: default_param01.prm
Device Name: IPCOM01
Vendor Name: Fujitsu
Product Name: IPCOMEXSC
Model Name: IPCOMEX2000A_SC
Status: Normal

History:
00 Run Script Name: create  Time: 2011/03/30 Wed 00:16:00  Result: normal
01 Run Script Name: modify  Time: 2011/03/30 Wed 10:31:00  Result: normal
02 Run Script Name: modify  Time: 2011/04/06 Wed 12:10:26  Result: normal
...
09 Run Script Name: modify  Time: 2011/04/27 Wed 08:45:10  Result: normal
```

Information

- When auto-configuration is set for redundancy configuration network devices, the information after Device Name is displayed for each network device in the detailed information or the history information.

- While the firewall is being created, if the detailed information or the history information is displayed, a hyphen "-" may be displayed for the information after Device Name.
- The serial number for each network device being used is only displayed for the network devices using simple configuration mode.

3.5 rcxadm folder

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm folder** - resource folder operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm folder - resource folder operations

Format

```
rcxadm folder create -file file.xml [-nowait]
rcxadm folder create -name name [-type type] [-label label] [-comment comment] [-nowait]
rcxadm folder list [-name name] [-type type] [-detail]
rcxadm folder show -name name [-type type]
rcxadm folder modify -name name [-type type] {[-new_name name] [-label label] [-comment comment]} [-
nowait]
rcxadm folder move -name name [-type type] [-to folder] [-nowait]
rcxadm folder delete -name name [-type type] [-nowait]
rcxadm folder start -name name [-nowait]
rcxadm folder stop -name name
rcxadm folder restart -name name [-nowait]
```

Description

rcxadm folder is the command used to manage resource folders. Use resource folder management to group resources when the number of resources managed by Resource Orchestrator becomes large or when you want to manage resources in work units. Since the resource folders can be arranged in a hierarchy, you can perform detailed categorization for resources.

Resources can be grouped using the resource folder management functions. Grouping resources enables users to perform operation of multiple resources together and improve operability.
Resource folders can be used with user/role management to ensure folder level security.

Resource folders are categorized into the following two types, depending on the resources to register:

- Orchestration

  Registers L-Servers, network resources, disk resources, and resource pools.

- Servers

  Registers server tree blade chassis and rack mount servers.

Subcommands

create

Creates a new resource folder. Use the -file option to create the specified resource folder with resources included. If the resource folder specified in the XML file already exists, only the specified resources are created.

list

Displays the list of resource folders and the resources and subfolders included in the resource folders.

It is possible to display the list excluding the resources being registered, using the configuration in the definition file for "folder operations". By default, resources being registered are displayed. For details on the definition file for "folder operations", refer to the "Folder Operation Definition File" described later.

- When specifying -name for the option

  Displays the list of the resources and subfolders included in the specified resource folder.

- When not specifying -name for the option

  Displays the list for the top-level resource folders.

The following detailed information is displayed:

Table 3.11 Resource Folder Information

Item Name	Description
TYPE	Type of resource folder, resource pool, or each resource
NAME	Name of the resource folder, resource pool, or each resource
FOLDER_TYPE (*)	Type of the folder One of the following is displayed: - For tenants "TENANT" is displayed. - For L-Platforms "LPLATFORM" is displayed. - Other folder types A hyphen ("-") is displayed.
LABEL	Label of the resource folder, resource pool, or each resource

* Note: When specifying -detail for the option, it is displayed.

show

Displays the detailed information of a resource folder.

The following detailed information is displayed:

Table 3.12 Detailed Information for Resource Folders

Item Name	Description
NAME	Resource Folder Name
LABEL	Resource folder label
COMMENT	Comment for the resource folder
FOLDER_TYPE	Type of the folder One of the following is displayed: - For tenants "TENANT" is displayed. - For L-Platforms "LPLATFORM" is displayed. - Other folder types No value is displayed.

modify

Modifies the following items of the specified resource folder:

- Resource Folder Name
- Label
- Comment
- Priority

move

Moves a resource folder to the specified resource folder. If the destination resource folder is not specified, the folder is moved to the home folder.

delete

Deletes a resource folder.

start

Starts an L-Server in a resource folder.

stop

Stops an L-Server in a resource folder.

restart

Restarts an L-Server in a resource folder.

Options

-file *file*.xml

In *file*.xml, specify the XML file that specifies the resource folder to create and the resources to include in the resource folder. For details on the XML file definition, refer to "15.8 Resource Folders".

-detail

Use this option to display the detailed information for a desired resource folder.

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the resource folder specified in the subcommand to complete its execution.

This option also executes subsequent operations for L-Servers to which resources are not allocated without waiting for resource allocation.

-name *name*

In *name*, specify the resource folder name. For the hierarchized resource folder, specify the resource folder name using slashes ("/").

Example

To specify SecondFolder directly below TopFolder:

/TopFolder/SecondFolder

-type *type*

In *type*, specify a resource folder type for the resource folder. Specify one of the following for the resource folder type:

- "server"
- "lserver"

If omitted, "lserver" is set.

-label *label*

In *label*, specify the label for the resource folder.

-comment *comment*

In *comment*, specify any comments for the resource folder.

-new_name *name*

In *name*, specify a new name for the target resource folder to perform an operation with.

-to *folder*

Specify the destination resource folder in *folder*. For the hierarchized resource folder, specify the resource folder name using slashes ("/"). When omitted, the folder is moved to the home folder.

When executed by a user who has multiple access scopes specified, it cannot be omitted. Specify a resource folder.

Folder Operation Definition File

To exclude the resources being registered when displaying the list of folders or tenants, define the setting in the following file so that the resources being registered would not be displayed. By default, resources being registered are displayed.

Location of the Definition File

[Windows Manager]
Installation_folder\SVROR\Manager\etc\customize_data

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data

Definition File Name

folder.rcxprop

Definition File Format

In the definition file, specify each line in the following format:

Key = *Value*

Item to Specify in the Definition File

Table 3.13 List of Items Specified

Key	Description	Remarks (Possible Values, Examples)
list_registering	Includes the resources being registered in the folder list and the tenant list displayed using the command. (optional)	- true (default) Displays the resources being registered. - false Does not display the resources being registered.

Example

- To display the list of resource folders and the resources and subfolders included in the resource folders:

```
>rcxadm folder list <RETURN>
TYPE                NAME                            LABEL
----                ----                            -----
Folder              TenantA                         -
Folder              TenantB                         -
Pool                ImagePool                       -
Pool                ImgPool                         -
```

```
Pool                NetworkPool                     -
Pool                StoragePool                     -
Pool                VMHostPool                      -
```

- To display a list of resource folders and the resources and subfolders included in those resource folders (with the -detail option):

```
>rcxadm folder list -detail <RETURN>
TYPE                NAME                            FOLDER_TYPE LABEL
----                ----                            ----------- -----
Folder              TenantA                         TENANT      -
Folder              TenantB                         TENANT      -
Pool                ImagePool                       -           -
Pool                NetworkPool                     -           -
Pool                StoragePool                     -           -
Pool                VMHostPool                      -           -
```

- To display the list of the resources and subfolders included in the specified resource folder:

```
>rcxadm folder list -name TenantA <RETURN>
TYPE                NAME                            LABEL
----                ----                            -----
Folder              testA                           -
LServer             test4                           -
```

- To display the detailed information for a resource folder:

```
>rcxadm folder show -name TenantA <RETURN>
name       : TenantA
label      :
comment    :
folder_type: TENANT
```

3.6 rcxadm lserver

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm lserver** - L-Server operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm lserver - L-Server operations

Format

rcxadm lserver create -file *file*.xml **[-nowait]**
rcxadm lserver delete -name *name* **[-allow deldisk] [-nowait]**
rcxadm lserver modify -name *name* **-file** *file*.xml **[-nowait]**
rcxadm lserver modify -name *name* **-disk** *disk* **-size** *size* **[-nowait]**
rcxadm lserver list
rcxadm lserver show -name *name* **[-format {text|xml}]**
rcxadm lserver start -name *name* **[-nowait]**
rcxadm lserver stop -name *name* **[-force] [-nowait]**
rcxadm lserver restart -name *name* **[-force] [-nowait]**
rcxadm lserver move -name *name* **[-to** *folder***] [-nowait]**
rcxadm lserver attach -name *name* **{-size** *size* **[-disk** *disk***] [-from {***pool***|***vstorage***}]|-disk** *disk***} [-exist] [-index** *index***] [-nowait]**
rcxadm lserver attach -name *name* **[-define] -net** *network_name* **[-ip** *ipaddress***] [-nowait]**
rcxadm lserver detach -name *name* **-disk** *disk* **[-online] [-system] [-force] [-allow deldisk] [-nowait]**

```
rcxadm lserver detach -name name [-define] -nic nic_index [-nowait]
rcxadm lserver migrate -name name [-to vmhost] [-mode {live|cold}] [-force] [-nowait]
rcxadm lserver setup -name name -type network [-dryrun]
rcxadm lserver set -name name -attr attr[,attr[...]] [-net network_name]
rcxadm lserver convert [-name name] -with with [-label label] [-comment comment] [-to folder] [-nowait]
rcxadm lserver revert -name name [-force] [-nowait]
```

Description

rcxadm lserver is the command used to perform L-Server management and operations.

If the VM guest is moved to another VM host as a result of performing operations on a VM guest, subsequent processes may fail.
Refer to "9.2.2 Functional Differences between Products" in the "Design Guide VE" for details.

Subcommands

create

Creates an L-Server.

- For Physical L-Servers

  Due to restrictions of the hardware to configure, a maximum of two commands to create physical L-Servers can be executed at the same time. When creating two or more physical L-Servers, wait some time after executing the command, and then execute the next command.

delete

Deletes an L-Server. The resources allocated to the L-Server are automatically released, and the L-Server definition is also deleted.

[OVM for SPARC]
An L-Server sharing a disk with another L-Server cannot be deleted.
For guest domains, delete the disk shared with another L-Server (guest domain) from the VM host. After that, check in the detailed information of the L-Server that the disk has been deleted, and then delete the L-Server.

modify

Modifies the resources comprising an L-Server.

[VMware] [Hyper-V]
Increases the disk capacity already allocated to an L-Server.

[VMware]

- Modifies the connection destination network used by a NIC of an L-Server, and the IP address being used.

  Multiple NICs can be specified in the XML file for modification.

  - When the target is an L-Server created using this product

    The NIC definition, IP address of the NIC of the VM guest, and the connection destination network are modified.

- When the target is only the configuration definition of a configured L-Server

  The connection destination network of the NIC definition, and the IP address are modified.

- When the target is an L-Server linked with a configured virtual machine

  - When the target NIC is not connected to a network resource

  A network resource is linked in the NIC definition, and an IP address is configured.
  The IP address of the NIC of the VM guest and the connection destination network are not modified.

  - When the target NIC is connected to a network resource

  The NIC definition, IP address of the NIC of the VM guest, and the connection destination network are modified.

Note

- When an IP address is modified, the IP address of the guest OS is not automatically reconfigured.

  Log in to the guest OS after modifying the IP address of the NIC, and manually configure the IP address displayed in the detailed information of the L-Server on the guest OS.
  Confirm that the modified NIC can communicate correctly with external devices after the IP address is set.

- Modification of an IP address and connection destination network is performed for the NIC corresponding to the MAC address specified in the XML file. Therefore, ensure a MAC Address is specified.

  The modification of a NIC will not be processed if the NIC specified for the MAC address in the XML file does not exist, or if multiple NICs are specified for the MAC address in the XML file.

- When the target NIC is connected to a network resource

  The modification of a NIC of a VM guest will not be processed if the MAC address specified for the NIC of the VM guest in the XML file does not exist, or if the MAC address is specified for multiple NICs of VM guests in the XML file.
  Only the IP address and connection destination network of the NIC definition are modified.

Point

Modification of the network of VM management software may cause differences in the network information of an L-Server and a VM guest. In such cases, perform one of the following operations to ensure the consistency of the network information of the L-Server and VM guest.

- When matching with VM management software

  Change the connection destination network of the L-Server to that of the VM guest.

- When matching with an L-Server

  Using the VM management software, change the network of the VM guest to be modified to that of the L-Server.

list

Displays a list of L-Servers.

The following detailed information is displayed:

- For Physical L-Servers

Table 3.14 Physical L-Server Information

Item Name	Description
NAME	L-Server name
TYPE	Server type
SPEC (*)	CPU performance, number of CPUs, and memory size
DISKS	Disk Size

Item Name	Description
IPADDRESSES	IP address
STATUS	L-Server operation status
RESOURCES	Resource allocation status

* Note: Not displayed when using rack mount servers on which agents have not been registered.

- For Virtual L-Servers

Table 3.15 Virtual L-Server Information

Item Name	Description
NAME	L-Server name
TYPE	Server type
SPEC	CPU performance, number of CPUs, and memory size [Solaris Zones] [Citrix Xen] Refer to *5 in "Table 3.17 Detailed Information for Virtual L-Servers".
DISKS	Disk Size When there are multiple disks, they are displayed separated by commas. If the disk capacity cannot be obtained, a hyphen ("-") is displayed.
IPADDRESSES	IP address When there are multiple IP addresses, they are displayed separated by commas.
STATUS	L-Server operation status
RESOURCES	Resource allocation status

show

Displays the detailed information for an L-Server.

The following detailed information is displayed:

Note

The number and display order of the items may be changed by enhancement of Resource Orchestrator.

- For Physical L-Servers

Table 3.16 Detailed Information for Physical L-Servers

Item Name	Description
Name	L-Server name
Label	Label
Comment	Comment
ServerType	Server type
OSType	Type of OS
CPUArch	CPU architecture
CPUPerf(SPEC) (*)	CPU performance specified (the performance of the CPU allocated to the physical server)
NumOfCPU(SPEC) (*)	Number of CPUs specified (the number of CPUs (Cores) allocated to the physical server)
MemorySize(SPEC) (*)	Memory size specified (the amount of memory allocated to the physical server)

Item Name	Description
Model	Model name of the server to allocate to L-Server This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated)
PhysicalServer	Physical server name This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated)
OriginalServer	The physical server or resource pool to allocate to L-Servers
LastServer	The physical server that last started the L-Server This is displayed when a physical L-Server status is one of the following: - Servers have been released (preserved)
ServerPool	The name of the pool in which the physical servers allocated to L-Servers are registered This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated)
Status	L-Server operation status
PowerStatus	L-Server power status
Resources	Resource allocation status
ControlledResources	Scope of controlled resources This is displayed for L-Servers linked to configured physical servers.
NumOfDisk	The number of disks
Disk[*num*]	The disk name to allocate to L-Servers The index number of the disk element is configured in *num*. The number is "0" or larger. This is displayed when disks have been allocated or disks to use have been specified for the L-Server.
DiskType[*num*]	The connection method of the disk to allocate to the L-Server The index number of the disk element is configured in *num*. The number is "0" or larger.
DiskSize[*num*]	The disk size to allocate to L-Servers The index number of the disk element is configured in *num*. The number is "0" or larger.
Shared[*num*]	Shared status of disks The index number of the disk element is configured in *num*. The number is "1" or larger. When the disk is used by multiple L-Servers, "Yes" is displayed. When the disk is not used by multiple L-Servers, "No" is displayed. This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated) - Servers have been released (preserved)
OriginalStorage[*num*]	Virtual storage or resource pool to create the disk to allocate to L-Servers

Item Name	Description
	The index number of the disk element is configured in *num*. The number is "0" or larger.
StoragePool[*num*]	The name of an allocated storage pool The index number of the disk element is configured in *num*. The number is "0" or larger. This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated) - Servers have been released (preserved)
NumOfNIC	Number of NICs
NIC[*num*]	The network resource name assigned to L-Servers The network element of index number is configured in *num*. The number is "0" or larger.
NIC[*num*][MACAddress]	MAC address of NIC
NIC[*num*][PhysicalNum]	The number of the physical NIC corresponding to the NIC of an L-Server The number is "0" or larger.
NIC[*num*][IPAddress]	IP address to allocate to L-Servers The network element of index number is configured in *num*. The number is "0" or larger.
NIC[*num*][*netlinknum*][IpAddress]	IP address
NIC[*num*][*netlinknum*][VlanMode]	VLAN mode
NIC[*num*][*netlinknum*][DNSServer]	DNS server address
NIC[*num*][*netlinknum*][DefaultGateway]	Default gateway address
NICGroup[*num*][*netlinknum*][IpAddress]	IP address
NICGroup[*num*][*netlinknum*][VlanMode]	VLAN mode
NICGroup[*num*][*netlinknum*][DNSServer]	DNS server address
NICGroup[*num*][*netlinknum*][DefaultGateway]	Default gateway address
NICGroup[*num*][*netlinknum*][NicLinks]	NIC number to be bound
Redundancy	Server redundancy to assign to L-Servers
Positioning	Physical location of the server to allocate to L-Servers
WWNN[*num*]	WWNN to assign to an L-Server The index number of the disk element is configured in *num*. The number is "0" or larger.
WWPN[*num*]	WWPN to assign to an L-Server

Item Name	Description
	The index number of the disk element is configured in *num*. The number is "0" or larger.
FCConnectionPattern	FC connection pattern file
AliveMonitoring	Alive monitoring setting status One of the following is displayed: - on This is displayed when alive monitoring is enabled. - off This is displayed when alive monitoring is disabled.
Priority	Priority order for L-Server creation or startup
ReserveResources	Retaining server resources
iSCSI	Name of the disk resource to allocate to the L-Server
iSCSI DISK Index	Index number of the disk to allocate to the L-Server
iSCSI IQN[*num*][IQN]	IQN name used for the disk connected to the L-Server using iSCSI The index number of the disk element is configured in *num*. The number is "1" or larger.
iSCSI IpAddress	IP address used for the disk connected to the L-Server using iSCSI
iSCSI port	iSCSI communication port number used for the disk connected to the L-Server using iSCSI
FCSinglePath	SAN Path Status When single-path is set, "true" is displayed.
UseInfraUser	L-Server that infrastructure administrators are authorized to operate (L-Server for Infrastructure Administrators) "allow" is displayed.
SpareServerForceOFF	When the resources in the spare server pool are exhausted, this option forcibly powers off servers for which forced power off is allowed When this setting is used, "yes" is displayed.
AllowForceOFF	When the resources in the spare server pool are exhausted, this option allows forced power off from another server When this setting is used, "yes" is displayed.
CNA[NumOfFunctions]	When using number expansion of functions of the onboard CNA, one of the following is displayed: When CNA is not configured or when a virtual L-Server is used, the number is not displayed. - 2 or 4 The number specified in [Number of functions per port] is displayed.

* Note: Not displayed when using rack mount servers on which agents have not been registered.

- For Virtual L-Servers

Table 3.17 Detailed Information for Virtual L-Servers

Item Name	Description
Name	L-Server name
Label	Label

Item Name	Description
Comment	Comment
Template	L-Server template name
ServerImage	Image name and version When the L-Server version cannot be distinguished, it will not be displayed.
Deploy Disk (*1)	Data disk deployment settings for images - When configuring the settings in the same configurations as those for images "all" is displayed.
ServerType	Server type
VMType	VM type
OSType	Type of OS
CPUArch	CPU architecture
CPUPerf (*5)	CPU performance When the limit is not set or not decided, a hyphen ("-") is displayed.
CPUReserve (*2)	The minimum number of CPU resources to be allocated
CPUShare (*2)	The relative proportion for allocation of CPU resources
CPUWeight (*3)	The priority for allocation of CPU resources
NumOfCPU (*5)	Number of CPUs
MemorySize (*6)	Memory size
MemoryReserve (*2)	The minimum amount of memory resources to be allocated
MemoryShare (*2)	The relative proportion for allocation of memory resources
StartupRAM (*3)	Initial memory capacity to be allocated at startup
MemoryBuffer (*3)	Available memory to be reserved as a buffer
MemoryWeight (*3)	The priority for allocation of memory resources
DynamicMemory (*3)	Dynamic memory settings One of the following is displayed: - on Displayed when dynamic memory settings are enabled. - off Displayed when dynamic memory settings are disabled.
MaxDefinableMemory (*4)	Maximum memory size
VmHost	VM host name This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated)
VmGuest	VM name for an L-Server This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated)
OriginalServer	VM host or resource pool to create a virtual machine to allocate to L-Servers
LastServer	VM host that started the last L-Server virtual machine This is displayed when an L-Server status is one of the following:

Item Name	Description
	- Servers have been released (preserved)
VMHostPool	The name of the pool in which the VM hosts containing virtual machines allocated to L-Servers are registered This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated)
Status	L-Server operation status
PowerStatus	L-Server power status
Resources	Resource allocation status
ControlledResources	Scope of controlled resources The combination of servers, storage, and networks is displayed. This is displayed for L-Servers linked to configured virtual machines.
NumOfDisk	The number of disks
Disk[*num*]	The disk name to allocate to L-Servers The index number of the disk element is configured in *num*. The number is "0" or larger. This is displayed when disks have been allocated or disks to use have been specified for the L-Server.
DiskSize[*num*]	The disk size to allocate to L-Servers The index number of the disk element is configured in *num*. The number is "0" or larger. If the disk capacity is not decided, a hyphen ("-") is displayed.
Shared[*num*]	Shared status of disks The index number of the disk element is configured in *num*. The number is "1" or larger. The status is displayed when the disk is used by multiple L-Servers. This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated) - Servers have been released (preserved)
DiskType[*num*]	Virtual disk type of the disk to be allocated to the L-Server The index number of the disk element is configured in *num*. The number is "0" or larger. This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated) - Servers have been released (preserved)
DevicePath[*num*]	Device path of the disk to be allocated to the L-Server The index number of the disk element is configured in *num*. The number is "0" or larger. This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated) - Servers have been released (preserved)
OriginalStorage[*num*]	Virtual storage or resource pool to create the disk to allocate to L-Servers

Item Name	Description
	The index number of the disk element is configured in *num*. The number is "0" or larger.
StoragePool[*num*]	The name of an allocated storage pool The index number of the disk element is configured in *num*. The number is "0" or larger. This is displayed when an L-Server status is one of the following: - Resources have been allocated (allocated) - Servers have been released (preserved)
NumOfNIC	Number of NICs
NIC[*num*]	The network resource name assigned to L-Servers The network element of index number is configured in *num*. The number is "0" or larger.
NIC[*num*][IPAddress]	IP address to allocate to L-Servers The network element of index number is configured in *num*. The number is "0" or larger.
NIC[*num*][MACAddress]	MAC address to allocate to the L-Server The network element of index number is configured in *num*. The number is "0" or larger.
Redundancy	Server redundancy to assign to L-Servers One of the following is displayed: - HA - None - VMware FT
SecondaryServer	VM host name on which a VMware FT secondary virtual machine operates If access to the VM host failed, a hyphen ("-") is displayed.
Positioning	Physical location of the server to allocate to L-Servers
AliveMonitoring	Alive monitoring setting status One of the following is displayed: - on This is displayed when alive monitoring is enabled. - off This is displayed when alive monitoring is disabled. - A hyphen ("-") This is displayed when alive monitoring is not performed from Resource Orchestrator.
Exclusion	Exclusion When an operation, in which a resource set to be operated exclusively is outside the range of their user access, is performed, only the resource name is displayed.
Priority	Priority order for L-Server creation or startup
OverCommit	Setting for overcommit Only displayed when overcommit settings are enabled.

Item Name	Description
ReserveResources	Retaining server resources
UseInfraUser	L-Server that infrastructure administrators are authorized to operate (L-Server for Infrastructure Administrators) "allow" is displayed.
Snapshot[*num*]	Snapshot collected from L-Servers The version, collected date, and comments are displayed.
ContainerPoolManaged (*7)	Management status of the container resource pool One of the following is displayed: - true Displayed when the resource pool used by the container is being managed by Resource Orchestrator. - false Displayed when the resource pool used by the container is not being managed by Resource Orchestrator.
VDI (*8)	Whether the VDI option is enabled or disabled for the L-Server is displayed. Displays one of the following: - true Displayed when the VDI option is enabled. - false Displayed when the VDI option is disabled. When using a Linux manager, "false" is displayed.
VDIServer (*8)	The VDI management server name set for the L-Server is displayed. This item is not displayed when the name of a VDI management server name is not set.
VDIPool (*8)	The VDI pool name set for the L-Server is displayed. This item is not displayed when a VDI pool name is not set.
VDIUser (*8)	The VDI user name set for the L-Server is displayed. This item is not displayed when a VDI user name is not set.
VDIServerConnectInfo[*num*] (*8)	VDI management server connection information is displayed. In *num*, the identification number of the connection information is displayed. The number is "0" or larger.

*1: When creating an L-Server that deploys cloning images, this item is only displayed when "all" is specified in "ServerImageLink".
*2: When values are set for VMware, it is displayed.
*3: When values are set for Hyper-V, it is displayed.
*4: In RHEL-KVM, the status of allocated resources is displayed as below.
- Resources have been allocated (allocated)
- Servers have been released (preserved)
*5: [Solaris Zones]

When one of following conditions is met, a hyphen ("-") is displayed for the number of CPUs or CPU performance for an L-Server.

- The CPU cap value is not configured in the non-global zone

- The non-global zone is not managed in the managed resource pool

When these conditions are not met, the values calculated by the following formula are displayed for the number of CPUs and CPU performance of an L-Server.

- Number of CPUs = *cap values of CPUs* (rounding up the number of decimal places)

- CPU performance = (*cap values of CPUs* / (*Number of CPUs* * 100)) * *physical CPU performance* (GHz)

When the cap values calculated using the CPU performance and the number of CPUs for L-Servers are the same as those configured for the non-global zone, the CPU performance and the number of CPUs for L-Servers are not updated, and the values are not changed from the configured values.

Example

When the CPU cap value is 720, and the physical CPU performance is 3.0 GHz

- Number of CPUs

720 / 100 (rounded up) = 8 (cores)

- CPU performance

(720 / (8 * 100)) * 3.0 = 2.7 (GHz)

When a hyphen ("-") is given for the number of CPUs and CPU performance, the amount of resources used by an L-Server is calculated using zero for the values.
When any numbers are given for CPUs and CPU performance, make calculations using those values.

[Citrix Xen]
When the following condition is met, a hyphen ("-") is displayed for the CPU performance for an L-Server.

- Links an L-Server with a configured virtual machine on XenCenter

When a hyphen ("-") is displayed for the CPU performance, the amount of CPU use is calculated as 0 for an L-Server.

*6: [Solaris Zones]

When the memory cap values are not configured in the non-global zone, a hyphen ("-") is displayed for the memory size of an L-Server. When cap values are configured, the cap values for the L-Server memory size are displayed

*7: In Solaris Containers, the status of allocated resources is displayed as below.

- Resources have been allocated (allocated)

- Servers have been released (preserved)

*8: [VMware]

Displayed when the VM type of the L-Server is VMware.

start

Powers on an L-Server.

stop

Powers off an L-Server.

[OVM for SPARC]
Powering off the virtual L-Servers that configure a Solaris Zone on a guest domain also affects the non-global zone configured on the Solaris Zone. Be sure to confirm affected resources before performing the operation.

restart

Restarts the L-Server.

[OVM for SPARC]
Restarting the virtual L-Servers that configure a Solaris Zone on a guest domain also affects the non-global zone configured on the Solaris Zone. Be sure to confirm affected resources before performing the operation.

move

Moves an L-Server to the specified resource folder.

attach

Connects a disk resource to an L-Server and enables it to be accessed.

[VMware] [Hyper-V] [KVM] [Solaris Zones] [OVM for SPARC] [OVM for x86 3.x] [Citrix Xen]
Adds a NIC to an L-Server.

Information

- When adding NICs, the index number of the NIC is configured using a consecutive number, starting from 0.

Note

- When an L-Server is powered on, the disk to be attached to must be recognized by the L-Server. Follow the procedure provided by the OS.
- When using physical L-Servers, disks cannot be attached to L-Servers that use iSCSI boot.
- When a NIC is added, automatic setting of the IP address on the guest OS is not performed.

  Log in to the guest OS after adding the NIC, and manually configure the IP address displayed in the detailed information of the L-Server on the guest OS.
  Confirm that the added NIC can correctly communicate with the external instrument after the IP address is configured.
  When adding two or more NICs, it is recommended to add them one by one.

[Solaris Zones]

- NICs can be added to L-Servers that have been linked to a non-global zone of a Solaris Zone.
- Up to eight NICs are supported.

[OVM for SPARC] [OVM for x86 3.x]

- NICs cannot be added when using an L-Server for which only the configuration definition has been created.
- Up to eight NICs are supported.
- When registering a guest domain for OVM for SPARC as a VM host, and also registering it as an L-Server, NICs cannot be added to L-Servers by specifying the admin IP addresses of VM hosts. This is because those IP addresses are used in the VM host.

[VMware] [Hyper-V]

- After adding NICs using this command, if restoration is executed using the virtual server snapshots, NIC inconsistency occurs between the virtual server NIC and the L-Server NIC. Ensure snapshots are collected after adding NICs.
- The addition of a NIC to an L-Server may fail when the VM host is in maintenance mode. Perform addition after releasing it from maintenance mode.

[KVM]

A MAC address is automatically selected from the accessible resources from the user that executed the rcxadm command. To select an address set resource included in a specific tenant, execute this command, after login using tenant administrator privileges.

[Citrix Xen]

- NICs cannot be added when using an L-Server for which only the configuration definition has been created.
- Up to seven NICs are supported.

detach

Releases a disk resource from an L-Server and disables it from being accessed.

Point

[OVM for SPARC]
A disk shared with another L-Server cannot be deleted.
For guest domains, delete the disk shared with another L-Server (guest domain) from the VM host.

[VMware] [Hyper-V] [KVM] [Solaris Zones] [OVM for SPARC] [OVM for x86 3.x] [Citrix Xen]
Deletes a NIC of an L-Server.

Note

- When deleting the disk while the physical L-Server is powered on, it is necessary to detach the disk to be deleted in advance.
- Delete the IP address of the local area connection of Windows before deleting a NIC when the guest OS is Windows.

  When a NIC is deleted with an IP address set, the settings of the local area connection where the IP address is allocated might remain in Windows.
  If a NIC is added in this state, there is a possibility that Windows may keep the old settings for the NIC and generate a local area connection using an old IP address that is used in a different guest OS.

[Solaris Zones]

- NICs can be deleted from L-Servers that have been linked to a non-global zone of a Solaris Zone.

[OVM for SPARC] [OVM for x86 3.x]

- NICs cannot be deleted when using an L-Server for which only the configuration definition has been created.

[VMware]
To delete a NIC while a VM guest is powered on, it is necessary to install VMware Tools on the guest in advance. If the detach command is executed without VMware Tools installed, the NIC will be deleted from the L-Server, but not from the VM guest. In this case, contact the infrastructure administrator and request to have the NIC deleted from the VM guest using VM management software.

[Hyper-V] [KVM]
When deleting a NIC, ensure that the L-Server is powered OFF. If the L-Server is powered ON, NIC deletion will fail.

[VMware] [Hyper-V]
After deleting NICs using this command, if restoration is executed using the virtual server snapshots, NIC inconsistency occurs between the virtual server NIC and the L-Server NIC. Ensure snapshots are collected after deleting NICs.

[Citrix Xen]

- NICs cannot be deleted when using an L-Server for which only the configuration definition has been created.
- Only NICs which have been added using NIC add operations can be deleted.

migrate

Changes the location of an L-Server to a specified host.

Specify either to perform a live migration, which changes the location of the L-Server without stopping it, or a cold migration, which changes the location of the L-Server after temporarily stopping it.
For physical L-Servers, specification is not possible.

[Solaris Zones (Solaris 10)]

- Only cold migration is possible.
- Specification is not possible when a spare server is configured for the VM host.

[OVM for SPARC]
Migrating the virtual L-Servers that configure a Solaris Zone on a guest domain also affects the non-global zone configured on the Solaris Zone. Be sure to confirm affected resources before performing the operation.
When the -to option is not specified, the L-Server does not migrate to VM host in which the L-Server (guest domain) which is sharing the disk allocated to the L-Server exists.

Note

Infrastructure administrators cannot perform cold migration of powered-on virtual L-Servers. Perform live migration or have a dual-role administrator perform cold migration.

setup

When using a physical L-Server, the network information is sent to a specified L-Server.

The information is stored as a file in the destination server.
The storage location and file are as follows:

- File Name

  net_info.conf

- Storage Location of the File

  [Windows]
  Agent_installation_folder\Agent\etc\net

  [Linux]
  /etc/opt/FJSVrcxat/net/

set

Configures specific parameters, for a physical L-Server.

When the -attr option is specified, the boot mode can be set.

convert

Links an L-Server with a configured virtual machine or physical server.

revert

Cancels the link between an L-Server and a configured physical server or virtual machine.

Note

- When the disk resource is a LUN that has been created in advance, a LUN for iSCSI boot, or a disk resource for a virtual L-Server, the data on the disk will not be deleted.
  When releasing a disk using delete or detach, it is recommended to delete the data on the disk.
  For details on the method for deleting the data on a disk, refer to cautionary notes in "14.5 Storage Resources" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

- To prevent a disk that has been saved after detachment from virtual storage from being re-used unintentionally in an L-Server, such disks cannot be automatically selected and are not selected by create or attach when using pool specification.
  To connect a disk that has been saved after separation from virtual storage when deleting the disk to an L-Server using create or attach, specify the disk explicitly.

Options

-file *file*.xml

In *file*.xml, specify the path of the XML file that defines the resources that comprise the L-Server.

When modifying the basic information or specifications of an L-Server, only elements to be modified can be specified in the XML file. When modifying an L-Server for which only the configuration definition has been created, unmodified information must be described also.

For details on the XML file definition, refer to "15.3 L-Servers".

[Xen]
When the VM type is "RHEL-Xen", the image name cannot be specified.

-format text|xml

Specify the display format. You can specify text or xml format.

When -format is omitted, it is displayed in text format.

When performing the following operation, specify the XML and obtain the information.

For XML, refer to "15.2 L-Server Template" or "15.3 L-Servers".

- When changing an L-Server using a command
- When creating an L-Server template from an existing L-Server
- When creating an L-Server with the same configuration as an existing L-Server using a command
- When backing up an existing configuration in preparation for forcibly canceling the link between the virtual L-Server and the virtual machine created using Resource Orchestrator and then importing it again

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the L-Server specified in the subcommand to complete its execution.

-name *name*

In *name*, specify the name of the target L-Server to perform an operation with.
To specify an L-Server that is located in a tenant or a resource folder, it is necessary to also specify the tenant name or the resource folder name connected with a slash ("/").

When specifying the convert subcommand, specify the name for the L-Server. For the characters that can be used for L-Server names, refer to the list of items specified in XML Definitions in "15.3.1 Definition Information for Physical L-Servers (XML)" and "15.3.2 Definition Information for Virtual L-Servers (XML)".

When specifying the convert subcommand and omitting the -name option, the L-Server name is set as follows.

- When linking a physical server to an L-Server
  - If the physical server name of the configured physical server is a possible value for the L-Server name described in "Table 15.3 List of Items Specified in XML Definitions for Physical L-Servers" in "15.3.1 Definition Information for Physical L-Servers (XML)"

    The physical server name will be set as the L-Server name.
  - If a value other than a possible value is used for the L-Server name

    An error will occur and the operation will be aborted.
- When linking a configured virtual machine to an L-Server
  - If the VM name of the configured virtual machine is a possible value for the L-Server name described in "Table 15.5 List of Items Specified in XML Definitions for Virtual L-Servers" in "15.3.2 Definition Information for Virtual L-Servers (XML)"

    The VM name will be set as the L-Server name.
  - If a value other than a possible value is used for the L-Server name

    An error will occur and the operation will be aborted.

-to *vmhost*

For virtual L-Servers, specify the name of the destination VM host in *vmhost*. The VM host must be registered in a VM pool.
If this option is not specified, a VM host is automatically selected from the VM pools.

Specify a destination VM host with available CPU capacity and memory. If there is insufficient CPU capacity or memory, migration between servers or starting of L-Servers may fail.

[OVM for SPARC]
When the following VM host is specified as the migration destination for a powered ON L-Server, the operation is dependent on the specifications of OVM for SPARC.

- A VM host that has a shared disk that is being shared with other L-Servers (guest domains) that are powered ON

When the following VM host is specified as the migration destination and cold migration is performed, the guest domain will fail to start after it is moved to the VM host that is the migration destination.

- A VM host that has a shared disk that is being shared with other L-Servers (guest domains) that are powered ON

-mode live|cold

For virtual L-Servers, specify the migration method.

- When Performing a Live Migration

  Specify "live".

- When Performing a Cold Migration

  Specify "cold".

This may not be able to be specified, depending on the power state of the VM guest.
When omitted, the appropriate type will be chosen depending on the state of the VM guest.

[KVM]
When -mode cold is specified for migration of a powered-on VM guest, migration may fail.
In that case, power off the VM guest and perform migration, then wait for a while before powering it back on.

-force

For stop/restart, use this option to forcibly stop or restart an L-Server without shutting down the operating system it is running on.

For detach, also use this option to release disk resources, ignoring any errors which occur when releasing disk resources for physical L-Servers. Specify this option only for physical L-Servers.

Specify when migrating to the destination VM host ignoring the error which occurs in cases where communication with the source VM host is not possible, using the migrate command. Specification is only possible when the VM type of the L-Server is "Solaris Containers" or "RHEL-KVM".

Specify this option when using the revert subcommand to forcibly cancel the link between the virtual L-Server and the virtual machine created using Resource Orchestrator.
Specify this option only for VMware virtual L-Servers.

Note

When using migrate, ensure that the source VM host is stopped. If specified when the source VM host is operating, a duplicate mount will occur, which may corrupt the data on the disk of the L-Server.

-to *folder*

Specify a resource folder to place an L-Server in for *folder*. For the hierarchized resource folder, specify the resource folder name using slashes ("/"). When omitted, the L-Server is placed in the home folder.

When executed by a user who has multiple access scopes specified, it cannot be omitted. Specify a resource folder.

-size *size*

In *size*, specify the disk capacity, in units of gigabytes. Up to one decimal place can be specified.

When extending disk size, specify a value larger than that of the current disk size. Even if the same values as the size of existing disks are specified, no errors occur.

[Hyper-V]
When values including numbers with a decimal point are specified for expansion of disk capacity, the numbers are automatically rounded up by SCVMM. Therefore, it is recommended to specify integers when increasing disk capacity.

-from *pool|vstorage*

Specify the name of the resource pool or virtual storage resource from which to take the disk capacity to allocate to the L-Server.

For a resource pool or a virtual storage resource located in the resource folder, specify the resource folder name using slashes ("/").

When omitted, resource selection is performed automatically with priority given to storage pools.

-disk *disk*

Specify the name of the disk resource to allocate to the L-Server, release from the L-Server, or to modify.

-index *index*

Specify the disk number of the disk resource. By default, the number of the last disk allocated plus one is used. The maximum value differs according to the server type.

-online

Use this option only when removing the disk from the L-Server while the server is running. If you remove a disk in use while the server is running, inconsistencies may occur in the data or the OS management information. Use this option after checking the status of the OS and applications.

[OVM for x86 2.2]
The disk cannot be removed while the L-Server is running.

-exist

Specify when connecting an already created LUN or a disk resource created (and saved) from virtual storage.

Specify this option only for physical L-Servers or virtual L-Servers with RHEL-KVM or Hyper-V.

When specifying this option for virtual L-Servers with Hyper-V, the -size option cannot be specified at the same time.

-dryrun

The network information file is output.

```
NIC0_MacAddress="xx:xx:xx:xx:xx:xx"

# Single NIC Information
SingleNics="0"
NIC0_NetworkLinks="0"

NIC0_0_VlanMode="untagged"
NIC0_0_IpAddress="192.168.24.124"
NIC0_0_Vlanid=1
NIC0_0_Netmask="255.255.255.0"
NIC0_0_DefaultGateway="192.168.24.254"
```

-attr *attr*

For physical L-Servers, set the boot mode and SAN path status.

- For boot mode, specify "-attr boot={default|pxe}".
  - When setting the boot mode to PXE

    Specify "pxe".
  - When setting the initial boot mode.

    Specify "default".
- When setting SAN path status, specify "-attr fcsinglepath={true|false}".
  - When setting a single-path to the SAN for the physical L-Server

    Specify "true".
  - When setting a multi-path to the SAN for the physical L-Server

    Specify "false".
  - If the SAN path status for the physical L-Server and the value specified in this option are the same

    The current settings are kept.
  - If the physical L-Server is powered on

    If this option is specified, an error will occur.

Both boot and fcsinglepath can be specified at the same time.

-net *network_name*

In *network_name*, specify the network resource name for PXE boot, or the network resource name to connect additional NICs to.

When PXE is set for the boot mode, perform PXE boot from the network of the specified network resource.

-allow deldisk

This option can only be specified for deldisk.

Specify this option when there are no problems even if disk contents are deleted by the following operations. Omitting this option will cause an operational failure when there is the possibility that disk contents will be deleted by these operations.

- Deleting an L-Server
- Releasing disk resources from an L-Server

-deny deldisk

This option can only be specified for deldisk.

Specify this option when the content of the disk is to be saved rather than deleting the disk resource from virtual storage, as the following procedure describes.

- Releasing disk resources from an L-Server

Specify this option only for physical L-Servers or virtual L-Servers with Hyper-V. This option and the -allow deldisk option cannot be specified at the same time.
When the disk resource is not a LUN created in advance, either -allow deldisk or -deny deldisk must be specified.

The option is only valid when detaching a disk. The disk resource cannot be saved permanently by using this option.
When this option is to be used to save the content of the disk rather than deleting the disk resource from virtual storage, the disk resource is automatically registered in the storage pool in which the virtual storage resource that is the origin of the disk resource is registered.

-type network

For physical L-Servers, specify in order to send network information to the L-Server that is specified for the -name option.

-label *label*

In *label*, specify the label for the L-Server.

-comment *comment*

In *comment*, specify the comments for the L-Server.

-with *with*

In *with*, specify the virtual machine or physical server linked to an L-Server.

Specify the resource folder name or the resource pool name connected with slashes ("/").

```
/Resource_folder_name/Resource_pool_name/VM_host_name/Virtual_machine_name
/Resource_folder_name/Resource_pool_name/Physical_server name
/Resource_pool_name/VM_host_name/Virtual_machine_name
/Resource_pool_name/Physical_server_name
```

-define

Specify when using NIC definitions.

[Solaris Zones] [OVM for SPARC] [Citrix Xen] [OVM for x86 3.x]
Always specify this option.

Note

The MAC address of a NIC is not displayed in the detailed information on the L-Server for the NIC that adds the NIC definition.

[VMware] [Hyper-V] [KVM]
This option cannot be specified.

-nic *nic_index*

Specify a network index to delete.

-ip *ipaddress*

Specify the IP address to allocate to the NIC. If omitted, an address is automatically allocated.

Example

- To display the list of L-Servers:

```
>rcxadm lserver list <RETURN>
NAME          TYPE       SPEC           DISKS          IPADDRESSES             STATUS   RESOURCES
----            ----         --------------  --------------  -----------               ------
---------
L-Server1      Virtual     1.0GHz,1,2.0GB  30.0GB,100.0GB  10.20.30.40,10.20.40.50  normal
allocated
L-Server2      Virtual     1.0GHz,1,2.0GB  30.0GB,100.0GB  10.20.30.41              stop
preserved
L-Server3      Virtual     1.0GHz,1,2.0GB  30.0GB,100.0GB  -                        stop
defined
L-Server11     Physical    2.3GHz,2,72.0GB 30.0GB          10.30.40.2               normal
allocated
L-Server12     Physical    2.3GHz,2,72.0GB 30.0GB          10.30.40.3               stop
preserved
L-Server13     Physical    2.3GHz,2,72.0GB 30.0GB          -                        stop
defined
```

- To display the detailed information for a virtual L-Server:

```
>rcxadm lserver show -name /TenantA/test4 <RETURN>
Name: test4
ServerType: Virtual
VMType: VMware
OSType: Microsoft Windows Server 2008 (32-bit)
CPUArch: IA
CPUPerf: 1GHz
CPUReserve: 0.7GHz
CPUShare: 1000
NumOfCPU: 1
MemorySize: 1 GB
MemoryReserve: 0.7 GB
MemoryShare: 1000
VmHost: vmhost
VmGuest: test4-62
Status: stop
PowerStatus: off
Resources: allocated
NumOfDisk: 1
Disk[0]: test4-0-disk0
DiskSize[0]: 4 GB
NumOfNIC: 1
NIC[0]: vnet1
NIC[0][IPAddress]: 192.168.1.2
NIC[0][MACAddress]: 00:50:56:91:09:21
Redundancy: None
Positioning: Fixed
Priority: 128
```

```
ReserveResources: true
OverCommit: true
```

- To display the detailed information for a physical L-Server (when created with CPU Performance, Number of CPU, and Memory Size specifications):

```
>rcxadm lserver show -name /TenantA/test5 <RETURN>
Name: test5
ServerType: Physical
...
CPUPerf(SPEC): 1.8GHz (2.0GHz)
NumOfCPU(SPEC): 1 (2)
MemorySize(SPEC): 8.0G B (12.0 GB)
PhysicalServer: BX920-1
PhysicalServerModel: PRIMERGY BX922 S4
...
CNA[NumOfFunctions]: 4
```

- To display the detailed information for a physical L-Server (when created with the Model Name specification):

```
>rcxadm lserver show -name /TenantA/test6 <RETURN>
Name: test6
ServerType: Physical
...

Model: PRIMERGY BX922 S4
CPUPerf(SPEC): - (2.0GHz)
NumOfCPU(SPEC): - (2)
MemorySize(SPEC): -(12.0 GB)
PhysicalServer: BX920-1
PhysicalServerModel: PRIMERGY BX922 S4
...
CNA[NumOfFunctions]: 4
```

- When adding NICs [Solaris Zones] [OVM for SPARC] [OVM for x86 3.x] [Citrix Xen]

```
>rcxadm lserver attach -name mylserver1 -define -net mynet1 -ip 192.168.3.2 <RETURN>
```

- When adding NICs [VMware] [Hyper-V] [KVM]

```
>rcxadm lserver attach -name mylserver1 -net mynet1 -ip 192.168.3.2 <RETURN>
```

- When deleting NICs [Solaris Zones] [OVM for SPARC] [OVM for x86 3.x] [Citrix Xen]

```
>rcxadm lserver show -name mylserver1 <RETURN>
.
..
NIC[0][IPAddress]: 192.168.33.1
NIC[1][IPAddress]: 192.168.33.2

>rcxadm lserver detach -name mylserver1 -define -nic 1 <RETURN>
```

- When deleting NICs [VMware] [Hyper-V] [KVM]

```
>rcxadm lserver show -name mylserver1 <RETURN>
.
..
NIC[0][IPAddress]: 192.168.33.1
NIC[1][IPAddress]: 192.168.33.2
```

```
>rcxadm lserver detach -name mylserver1 -nic 1 <RETURN>
```

- To modify the L-Server specifications:

```
rcxadm lserver modify -name web-lserver1 -file web-lserver1.xml
```

- To modify the L-Server disk size:

```
rcxadm lserver modify -name web-lserver1 -disk disk1 -size 20.0
```

3.7 rcxadm netconfig

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm netconfig** - network device batch operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm netconfig - network device batch operations

Format

```
rcxadm netconfig export -file file.xml
rcxadm netconfig import -file file.xml [-dryrun|-nowait]
```

Description

rcxadm netconfig is the command used to manage network devices in one operation.

Subcommands

export

Exports the network configuration information of all network devices registered in XML format.

import

Imports all network configuration information defined in the XML file.
For network device resources, they are created or modified according to the registration mode under the Netdevices element (the Mode element) defined in the network configuration information.
For link information, they are created or modified according to the registration mode under the Links element (the Mode element) defined in the network configuration information.

Information

- If importing is performed for network devices (with the status (unregistered)) detected by LAN switch searching, the import process is terminated and registration fails.

  For registration of network devices with the status unregistered, after deleting those network devices, either import the network configuration information file again or create new network devices.
  For creation and deletion of network devices, use the rcxadm netdevice command.
  For details on the rcxadm netdevice command, refer to "3.8 rcxadm netdevice".

- For a network device with the status "registered", when importing the XML definitions specifying "add" for the registration mode (the Mode element under the Netdevices element), the target network device is not modified. The importing process will be continued for other network devices defined in the XML definitions.

When performing import operations by specifying the XML definitions to use "modify" for the registration mode (the Mode element under the Netdevices element), update operations are performed for the network devices registered using the same IP address as the admin IP address (Netdevice ip).

- For already registered link information, when importing the XML definitions specifying "add" for the registration mode (the Mode element under the Links element), already registered link information is not modified. The importing process will be continued for other link information defined in the XML definitions. To determine whether the link information has been registered, check the combination of "Admin IP Address of Device (Device ip)" and "Connection Port (Port)".
  When importing the information specifying the XML definition using "modify" for the registration mode (the Mode element under the Links element), delete all registered link information, and then register the link information specified in the XML definitions.

Options

-dryrun|-nowait

-dryrun

Use this option to verify the XML file format that defines the network configuration information, without registering resources.

-nowait

Use this option to return the command without waiting for completion of the operation for the network configuration information specified in the subcommands.

-file *file*.xml

- For the Import Subcommand

  In *file*.xml, specify the XML file that defines all network resources for creation.

- For the Export Subcommand

  In *file*.xml, specify the destination file name for the XML file to be exported.

For details on the XML file definition, refer to "15.7.1 Creation".

Information

If an existing XML file name is specified for the -file option of the export subcommand, message number 65927 will be output and the export operation will fail.

3.8 rcxadm netdevice

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm netdevice** - network device operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm netdevice - network device operations

Format

```
rcxadm netdevice create -file file.xml [-nowait]
rcxadm netdevice delete -name name [-nowait]
rcxadm netdevice list
rcxadm netdevice modify -name name -file file.xml [-nowait]
rcxadm netdevice set -name name -attr {mode={active [-with_va]|maintenance}|auto_conf={true|false}}
[-nowait]
rcxadm netdevice show -name name
rcxadm netdevice refresh -name name [-recreate] [-nowait]
```

```
rcxadm netdevice cfbackup -name name [-type type] [-comment comment] [-redundancy] [-nowait]
rcxadm netdevice cfmodify -name name [-type config] -number number -comment comment [-nowait]
rcxadm netdevice cfmodify -name name -type environment -comment comment [-nowait]
rcxadm netdevice cfrestore -name name [-type type] [-nowait]
rcxadm netdevice cflist -name name
rcxadm netdevice cfexport -name name [-type config] -number number [-dir dir]
rcxadm netdevice cfexport -name name -type environment [-dir dir]
rcxadm netdevice cfclearerr -name name
```

Description

rcxadm netdevice is the command used to operate network devices.

Subcommands

create

Creates a network device.

- If two or more pieces of network device information are defined in the network configuration information definition file, the resource creation process is terminated and device registration fails.
  When registering two or more network devices for resources in one operation, use the rcxadm netconfig command.
- When the network devices to register are NS appliances, and if there are not enough NS option licenses registered in the ROR manager for the number of NS appliances to register, the message 62596 is output, and registration fails.
  Register the necessary number of NS option licenses with the ROR manager, and register the devices again.

delete

Deletes a network device.

list

Displays a list of network devices.

The following detailed information is displayed:

Table 3.18 Network Device Information

Item Name	Description
NAME	Network device name
IPADDRESS	Admin IP address for the network device
NETDEVICE_TYPES	Network device type When there is more than one, they are displayed separated by commas. For virtual appliances, the type is displayed with "(virtual)" added.
STATUS	Network device operation status One of the following is displayed: - For normal status "normal" is displayed. - For error status "error" is displayed.

Item Name	Description
	- For warning status "Warning" is displayed. - For unknown status "unknown" is displayed.
MAINTENANCE	Maintenance mode setting status for the network device One of the following is displayed: - When maintenance mode is set "ON" is displayed. - When maintenance mode is not set "OFF" is displayed.

modify

Modifies a network device.

set

For a network device, switch the maintenance mode setting or the auto-configuration target.

show

Displays the detailed information for a network device.

The following information is displayed:

Table 3.19 Detailed Information for Network Devices

Item Name	Description
Name	Network device name
SystemName	System name
IPAddress	Admin IP address
ProductName	Device name (product name)
ModelName	Model name
VendorName	Vendor name
Firmware	Firmware version
PresettingInfo	Details of pre-configuration of network devices - When creating an L-Platform including firewalls using the simple configuration mode, and performing pre-configuration as an available network device. "Simple" is displayed.
MaxDeployment	The number of the L-Platforms which can be deployed (total) This is only displayed when simple configuration mode is used.
Location	The location of the device is displayed.
Status	Network device operation status One of the following is displayed: - For normal status "normal" is displayed. - For error status

Item Name	Description
	"error" is displayed. - For warning status "Warning" is displayed. - For unknown status "unknown" is displayed.
StatusCause	If the operational status of the network device is one other than "normal" One of the following is displayed: - When there is no response for ping "Ping unreachable" is displayed. - When there is no response for SNMP "SNMP unreachable" is displayed. - When there is no response for NETCONF "NETCONF unreachable" is displayed. - When automatic configuration failed "auto configuration failed" is displayed. - When an error is detected in a switch in the domain of the Ethernet Fabric "Domain status error" is displayed. If the operational status is normal, "-" is displayed.
NetdeviceTypes	Network device type When there is more than one, they are displayed separated by commas. When the type is omitted, only the item name is displayed and the type is not displayed. For virtual appliances, the type is displayed with "(virtual)" added.
FabricType	Fabric type One of the following is displayed: - When using Converged Fabric "C-Fabric" is displayed. - When using VCS "VCS" is displayed. This is displayed only when the type of network device is "Fabric".
Maintenance	Maintenance mode setting status for the network device One of the following is displayed: - When maintenance mode is set "ON" is displayed. - When maintenance mode is not set "OFF" is displayed.
AutoConfiguration	Target status of automatic configuration

Item Name	Description
	Displays whether the network device can be selected as the target of auto-configuration. One of the following is displayed: - When the network device can be selected as a target of auto-configuration "true" is displayed. - When the network device cannot be selected as a target of auto-configuration "false" is displayed.
FabricId	Fabric ID This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric".
VCSId	VCS ID This is only displayed when the network device type is "Fabric" and the fabric type is "VCS".
PortProfile	Use of the AMPP function during automatic configuration for an Ethernet fabric One of the following is displayed: - When using the AMPP function "enable" is displayed. - When not using the AMPP function "disable" is displayed. This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric".
ManagementHost	Management Host The IP address and resource name of the management host (the physical server on which the IPCOM VX or NS Appliance operates) are displayed. They are only displayed for virtual appliances.
Redundancy	Group ID
Redundancy[GroupDevice]	Group device name When there is more than one, they are displayed separated by commas.
Port[*num*]	Port name In *num*, the index number of a port element is displayed. The number is an integer starting from "0".
Port[*num*][Link]	Port link status One of the following is displayed: - For link-up status "up" is displayed. - For link-down status "down" is displayed.

Item Name	Description
	- For unknown status "unknown" is displayed. In *num*, the index number of a port element is displayed. The number is an integer starting from "0".
Port[*num*][PhysicalState]	Port communication status This is displayed in the format of line speed/communication mode. The unit of line speed is in Mbps. For the communication mode, one of the following is displayed: - For full duplex line "F" is displayed. - For half duplex lines "H" is displayed. - For unknown status A hyphen ("-") is displayed. In *num*, the index number of a port element is displayed. The number is an integer starting from "0".
Port[*num*][Type]	Port type When the fabric type is "C-Fabric", one of the following is displayed: - For the port connected to a server "EP" is displayed. - For the port connected to another network device "CIR" is displayed. When the fabric type is "VCS", one of the following is displayed: - For the port connected to something other than VCS "Edge" is displayed. - For the port connecting VDXs in a VCS "ISL" is displayed. In *num*, the index number of a port element is displayed. The number is an integer starting from "0". This is displayed only when the type of network device is "Fabric".
Port[*num*][DistributionMode]	Packet distribution mode One of the following is displayed: - When performing distribution of S-TAG(TPID=88a8) "VLAN(S-TAG)" is displayed. - When performing distribution of MAC addresses "MAC" is displayed. - When performing distribution of C-TAG(TPID=8100) "VLAN(C-TAG)" is displayed. - When not performing distribution "no-distribution" is displayed.

Item Name	Description
	- When performing distribution of VLANs other than S-TAG(TPID=88a8) and C-TAG(TPID=8100) "VLAN(other)" is displayed. In *num*, the index number of a port element is displayed. The number is an integer starting from "0". This is only displayed for IPCOM VA.
Port[*num*][Stag]	S-TAG ID The ID of the S-TAG used for IPCOM VA port distribution is displayed. In *num*, the index number of a port element is displayed. The number is an integer starting from "0". It is only displayed when the packet distribution mode for IPCOM VA is "VLAN(S-TAG)".
Port[*num*][Ctag]	C-TAG ID The ID of the C-TAG used for the IPCOM VA port distribution is displayed. In *num*, the index number of a port element is displayed. The number is an integer starting from "0". It is only displayed when the packet distribution mode for IPCOM VA is "VLAN(C-TAG)".
Port[*num*][OtherVlan]	VLAN IDs other than S-TAG and C-TAG VLAN IDs other than the S-TAG and C-TAG used for IPCOM VA port distribution are displayed. In *num*, the index number of a port element is displayed. The number is an integer starting from "0". It is only displayed when the packet distribution mode for IPCOM VA is "VLAN(other)".
Vlan[*num*]	VLAN ID In *num*, the index number of a VLAN element is displayed. The number is an integer starting from "0".
Vlan[*num*][UntaggedPort]	Name of the port belonging to an Untagged port of VLAN ID In *num*, the index number of a VLAN element is displayed. The number is an integer starting from "0". When there is more than one, they are displayed separated by commas. Some VLANs which have been configured with an AMPP function for VCS fabrics may not be displayed.
Vlan[*num*][TaggedPort]	Name of the port belonging to a Tagged port of VLAN ID In *num*, the index number of a VLAN element is displayed. The number is an integer starting from "0". When there is more than one, they are displayed separated by commas.
Link[*num*][NeighborResourceName]	Name of the resource linked to the port number [*num*] In *num*, the index number of a port element is displayed. The number is an integer starting from "0".

Item Name	Description
Link[*num*][NeighborPort]	Name of the port of the resource linked to the port number [*num*] In *num*, the index number of a port element is displayed. The number is an integer starting from "0".
Link[*num*][NeighborNicIndex]	Name of the port of the resource linked to the port number [*num*] When the connection destination is a rack mount server and the port for display (NicIndex) is specified, the name of the port of the resource linked to the port number [*num*] is output. In *num*, the index number of a port element is displayed. The number is an integer starting from "0".
AllocatedResources[Firewall]	Firewall name assigned by auto-configuration When there is more than one, they are displayed separated by commas.
AllocatedResources[SLB]	Server load balancer name assigned by auto-configuration When there is more than one, they are displayed separated by commas.
AllocatedResources[Network]	Network resource name assigned by auto-configuration When there is more than one, they are displayed separated by commas.
LoginInfo[*num*][User]	User name of the account In *num*, the index number of an account element is displayed. The number is an integer starting from "0".
LoginInfo[*num*][IPAddress]	Destination IP address of the account In *num*, the index number of an account element is displayed. The number is an integer starting from "0".
LoginInfo[*num*][Port]	Destination port number of the account In *num*, the index number of an account element is displayed. The number is an integer starting from "0".
LoginInfo[*num*][Protocol]	Protocol name used by the account In *num*, the index number of an account element is displayed. The number is an integer starting from "0".
LoginInfo[*num*][Authority]	Account privileges One of the following is displayed: - For administrator authority "administrator" is displayed. - For user authority "user" is displayed. In *num*, the index number of an account element is displayed. The number is an integer starting from "0".
LoginInfo[*num*][Tenant]	Tenant name of the account The tenant name is displayed only when the type is "Firewall" or "SLB" and the tenant name has been configured. In other cases, the item name and tenant name are not displayed. In *num*, the index number of an account element is displayed. The number is an integer starting from "0".

Item Name	Description
LoginInfo[*num*][AuthType]	Management method of account authentication information One of the following is displayed: - When the information is managed within a network device "local password" is displayed. - When the information is managed within an external server "external server" is displayed. In *num*, the index number of an account element is displayed. The number is an integer starting from "0".
LoginInfo[*num*][LoginCheck]	Check results of account availability One of the following is displayed: - When the account can be used "Successful" is displayed. - When the account cannot be used "Failed" is displayed. - When the account has not been checked "Unchecked" is displayed. In *num*, the index number of an account element is displayed. The number is an integer starting from "0".
Ruleset[*num*]	Ruleset name In *num*, the index number of a ruleset element is displayed. The number is an integer starting from "0". When the ruleset is omitted, the item name and ruleset name are not displayed.
Ruleset[*num*][Info]	Description of a ruleset In *num*, the index number of a ruleset element is displayed. The number is an integer starting from "0". When the ruleset is omitted, the item name and description of the ruleset are not displayed.
SnmpCommunityName	SNMP community name
FaultMonitoringMethod	Method of fault monitoring One of the following is displayed: - When alive monitoring is performed using ping "ping" is displayed. - When the status is monitored using SNMP "SNMP" is displayed. - When the status is monitored using NETCONF "NETCONF" is displayed. When there are multiple monitoring methods employed, they are displayed separated by commas.
FaultMonitoringInterval(s)	Fault monitoring interval (unit: seconds)
FaultMonitoringRetry	Fault monitoring retry count

Item Name	Description
FaultMonitoringTimeout(s)	Fault monitoring timeout (unit: seconds)
RestoreHistory[Env][RestoreFileDate]	Time when the network device environment file was backed up If restoration has not been performed or the target file has been already deleted, "-" is displayed.
RestoreHistory[Env][RestoreExecDate]	Date when the network device environment file was backed up If restoration has not been performed, "-" is displayed.
RestoreHistory[Config][GenerationNumber]	Generation number of the network device configuration file If restoration has not been performed or the target file has been already deleted, "-" is displayed.
RestoreHistory[Config][RestoreFileDate]	Time when the restore network device configuration file to restore was backed up If restoration has not been performed, "-" is displayed.
RestoreHistory[Config][RestoreExecDate]	Date when the network device configuration file was backed up If restoration has not been performed, "-" is displayed.
VFAB[*num*][name]	VFAB name This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". In *num*, the index number of a VFAB element is displayed. The number is an integer starting from "0".
VFAB[*num*][id]	VFAB ID This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". In *num*, the index number of a VFAB element is displayed. The number is an integer starting from "0".
VFAB[*num*][Stag]	S-TAG of VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". In *num*, the index number of a VFAB element is displayed. The number is an integer starting from "0".
VFAB[*num*][mode]	VFAB operation mode This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". One of the following is displayed: - For host mode "host" is displayed. - For network mode "network" is displayed. In *num*, the index number of a VFAB element is displayed. The number is an integer starting from "0".
VFAB[*num*][vfabauto]	Auto-configuration for VFABs This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric".

Item Name	Description
	One of the following is displayed: - When performing auto-configuration "true" is displayed. - When not performing auto-configuration "false" is displayed. In *num*, the index number of a VFAB element is displayed. The number is an integer starting from "0".
VFAB[*num1*][Tenant][*num2*]	Name of a tenant using VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". Default VFAB element information is not displayed. In *num1*, the index number of a VFAB element is displayed. The number is an integer starting from "0". In *num2*, the tenant index number is displayed. The number is an integer starting from "0".
VFAB[*num1*][Port][*num2*]	Name of the port belonging to VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". In *num1*, the index number of a VFAB element is displayed. The number is an integer starting from "0". In *num2*, the index number of a port element is displayed. The number is an integer starting from "0".
VFAB[*num1*][Port][*num2*][Link]	Link status of the port belonging to VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". Displays one of the following: - For link-up status "up" is displayed. - For link-down status "down" is displayed. - For unknown status "unknown" is displayed. In *num1*, the index number of a VFAB element is displayed. The number is an integer starting from "0". In *num2*, the index number of a port element is displayed. The number is an integer starting from "0".
VFAB[*num1*][Port][*num2*][PhysicalState]	Communication status of the port belonging to VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". This is displayed in the format of line speed/communication mode. The unit of line speed is in Mbps. For the communication mode, one of the following is displayed:

Item Name	Description
	- For full duplex line "F" is displayed. - For half duplex lines "H" is displayed. - For unknown status A hyphen ("-") is displayed. In *num1*, the index number of a VFAB element is displayed. The number is an integer starting from "0". In *num2*, the index number of a port element is displayed. The number is an integer starting from "0".
VFAB[*num1*][Port][*num2*][Type]	Type of the port belonging to VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". - For the port connected to a server "EP" is displayed. - For the port connected to another network device "CIR" is displayed. - For the port sending and receiving using the IEEEdot1ad frame "CIR(dot1ad)" or "EP(dot1ad)" is displayed. In *num1*, the index number of a VFAB element is displayed. The number is an integer starting from "0". In *num2*, the index number of a port element is displayed. The number is an integer starting from "0".
VFAB[*num1*][Vlan][*num2*]	VLAN(C-TAG) ID in VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". In *num1*, the index number of a VFAB element is displayed. The number is an integer starting from "0". In *num2*, the index number of a VFAB element in VFAB is displayed. The number is an integer starting from "0".
VFAB[*num1*][Vlan][*num2*][UntaggedPort]	Name of the port belonging to an Untagged port of a VLAN ID in VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric". In *num1*, the index number of a VFAB element is displayed. The number is an integer starting from "0". In *num2*, the index number of a VFAB element in VFAB is displayed. The number is an integer starting from "0". When there are multiple index numbers, they are displayed separated by commas.
VFAB[*num1*][Vlan][*num2*][TaggedPort]	Name of the port belonging to a Tagged port of a VLAN ID in VFAB This is only displayed when the network device type is "Fabric" and the fabric type is "C-Fabric".

Item Name	Description
	In *num1*, the index number of a VFAB element is displayed. The number is an integer starting from "0". In *num2*, the index number of a VFAB element in VFAB is displayed. The number is an integer starting from "0". When there are multiple index numbers, they are displayed separated by commas.

refresh

Updates the configuration information of the network device.

cfbackup

Backs up network device files.

cfmodify

Modifies the comments displayed in COMMENT of the cflist command.

cfrestore

Restores network device files.

cflist

Displays the list of network device files that have already been backed up.

The following detailed information is displayed:

Table 3.20 Information of Device Configuration Files

Item Name	Description
NUMBER	Generation number of the network device configuration file In the lines where backup failed, "-" is displayed (*). In the bottom line, "env", which represents an environment file, is displayed.
BACKUPDATE	Date when the network device file was backed up
TRIGGER	Trigger for performing network device file backup One of the following is displayed: - create When the network device was registered - command When the rcxadm netdevice cfbackup command was executed - auto When the network device was automatically configured
L-PLATFORM/NETWORK	The name of the L-Platform on which automatic configuration was performed If the type is "L2-Switch", the name of the network resource is displayed. This information is only displayed when TRIGGER is "auto".
TENANT	The name of the tenant of the L-Platform on which automatic configuration was performed This information is only displayed when TRIGGER is "auto".
OPERATION	L-Platform operation

Item Name	Description
	One of the following is displayed: - create Creating an L-Platform or a network resource - modify Modifying an L-Platform or a network resource - delete Deleting an L-Platform or a network resource - connect Creating an L-Server - disconnect Deleting an L-Server - recovery A recovery process This information is only displayed when TRIGGER is "auto".
COMMENT	Specified comment

* Note: Error lines disappear at one of the following timings:

- When the next generation of the network device configuration file is deleted due to the maximum number of generations being exceeded
- When the rcxadm netdevice cfclearerr command is executed

cfexport

Exports network device files.

cfclearerr

Deletes the error history of backup operations of network device configuration files.

Options

-attr {mode={active [-with_va]|maintenance}|auto_conf={true|false}}

For a network device, switch the maintenance mode settings or the auto-configuration target.

-attr mode=active

Checks the status of the device. If the device is in the normal state, this option will change the operational status to "normal" and release maintenance mode.
If an error is detected during the status check of the device, failure to release maintenance mode is notified as the command execution result. In this case, it is necessary to take corrective action according to the message that is output, and perform release of maintenance mode again.

-with_va

Specify this to release the virtual appliances on the management host (IPCOM VX) when releasing the management host from maintenance mode.

-attr mode=maintenance

Places into maintenance mode.

-attr auto_conf=true

Use this option to select the network device as a target of auto-configuration.

-attr auto_conf=false

Use this option not to select the network device as a target of auto-configuration.

-file *file*.xml

In *file*.xml, specify the XML file that defines the network resource for creation.
For details on the XML file definition, refer to "15.7.1 Creation".

-name *name*

In *name*, specify the name of a network device.
If an unregistered network device name is specified for *name*, an error will occur.

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the network device specified in the subcommand to complete its execution.

-type *type*

In *type*, specify the file type.

config

Specify when network device configuration file operations are performed.

environment

Specify when network device environment file operations are performed.

When omitted, "config" is specified.

For the handling of the file names corresponding to each model, refer to "Table-Network Devices that are Supported by Device Configuration File Management" in "10.2.1 Mechanism of Backup and Restoration" in the "Operation Guide CE".

-redundancy

Specify when operating a network device of the same redundant configuration group as the one that the network device specified for *name* belongs to.

-number *number*

Specify the generation number when a network device configuration file is to be operated.
The generation number can be checked using the cflist subcommand.

-dir *dir*

Specify the directory to which the file specified for export will be output.

Network device configuration files are output in the following format.

Backup_date_and_time-Network_device_configuration_file_name

Example

20120921104043-running-config

If the file is an environment file, the file will be output using the filename of the target network device.

-comment *comment*

Specify the comment for the network device configuration file.
Specify a character string of up to 256 alphanumeric characters or symbols.

-recreate

Update the port information and link information of the network device specified in *name*.

- When it is necessary to update the port information specifying this option
  - When the number of ports of network devices is increased or decreased

  - When fabric IDs, domain IDs, switch IDs, or port types for Ethernet Fabric (Converged Fabric) are modified
  - When VCS IDs or RBridge IDs for Ethernet Fabric (VCS) are modified
- When it is necessary to update the link information specifying this option
  - When logical linkage between IPCOM VX and IPCOM VA is modified

If communication with the network device of the operation target is not possible, an error will occur.

Examples

- To display a list of network device information:

```
>rcxadm netdevice list <RETURN>
NAME                          IPADDRESS        NETDEVICE_TYPES        STATUS   MAINTENANCE
----                          ---------        --------               ------   -----------
cat4503.network.com           192.168.5.17     L2-Switch              normal   OFF
Firewall1                     192.168.5.1      Firewall               normal   OFF
Firewall2                     192.168.5.2      Firewall(virtual)      normal   OFF
NSappliance1                  192.168.5.3      Firewall(virtual)      normal   OFF
SLB1                          192.168.5.4      SLB                    normal   OFF
SLB2                          192.168.5.5      SLB                    normal   OFF
ipcomex1                      192.168.5.10     Firewall,SLB           normal   OFF
ipcomex2                      192.168.5.11     Firewall,SLB           normal   OFF
fabric1                       192.168.5.100    Fabric                 normal   OFF
```

- To display the detailed information for a network device (firewall):

```
>rcxadm netdevice show -name ns-appliance <RETURN>
Name: ns-appliance
SystemName: ns-appliance
IPAddress: 192.168.10.100
ProductName: NSAppliance
ModelName: NSAppliance
VendorName: Fujitsu
Firmware: E20L30 NF0001
PresettingInfo: Simple
MaxDeployment: 5
Location: NUMAZU_B1
Status: normal
StatusCause: -
NetdeviceTypes: Firewall (virtual)
Maintenance: OFF
AutoConfiguration: true
Redundancy:
Redundancy[GroupDevice]:
Port[0]: LAN0.0
Port[0][Link]: down
Port[0][PhysicalState]: - / -
Port[1]: LAN0.1
Port[1][Link]: down
Port[1][PhysicalState]: - / -
Port[2]: LAN0.2
Port[2][Link]: down
Port[2][PhysicalState]: - / -
Port[3]: LAN0.3
Port[3][Link]: up
Port[3][PhysicalState]: 1G / -
AllocatedResources[Firewall]:
AllocatedResources[SLB]:
AllocatedResources[Network]:
```

```
LoginInfo[0][User]: nuser1
LoginInfo[0][IPAddress]: 192.168.10.100
LoginInfo[0][Port]: 23
LoginInfo[0][Protocol]: telnet
LoginInfo[0][Authority]: user
LoginInfo[0][Tenant]:
LoginInfo[0][AuthType]: local password
LoginInfo[0][LoginCheck]: Unchecked
Ruleset[0]: _Simple_FW_setting_for_NS
Ruleset[0][Info]: Simple mode ruleset configuring 3 tier firewall system (scopeis within 3 tiers)
Ruleset[1]: _Simple_log_display_for_NS
Ruleset[1][Info]: Simple mode ruleset displaying logs
SnmpCommunityName: public
FaultMonitoringMethod: SNMP
FaultMonitoringInterval(s): 300
FaultMonitoringRetry: 3
FaultMonitoringTimeout(s): 30
RestoreHistory[Env][RestoreFileDate]: -
RestoreHistory[Env][RestoreExecDate]: -
RestoreHistory[Config][GenerationNumber]: -
RestoreHistory[Config][RestoreFileDate]: -
RestoreHistory[Config][RestoreExecDate]: -
```

- To display the detailed information for a network device (server load balancer):

```
>rcxadm netdevice show -name SLB1 <RETURN>
Name: SLB1
SystemName: SLB1
IPAddress: 192.168.5.4
ProductName: IPCOMEXIN
ModelName: IPCOM EX2000 IN
VendorName: Fujitsu
Firmware: E20L10
Location: NUMAZU_B1
Status: normal
StatusCause: -
NetdeviceTypes: SLB
Maintenance: OFF
AutoConfiguration: true
Redundancy: 2
Redundancy[GroupDevice]: SLB1,SLB2
Port[0]: LAN0.0
Port[0][Link]: up
Port[0][PhysicalState]: 1000M / F
Vlan[0]: 1
Vlan[0][UntaggedPort]: LAN0.1,LAN0.2
Vlan[0][TaggedPort]: LAN0.3
Link[0][NeighborResourceName]: SLB2
Link[0][NeighborPort]: LAN0.0
AllocatedResources[Firewall]:
AllocatedResources[SLB]: slb1
AllocatedResources[Network]:
LoginInfo[0][User]: admin
LoginInfo[0][IPAddress]: 192.168.5.4
LoginInfo[0][Port]: 8080
LoginInfo[0][Protocol]: remote_login
LoginInfo[0][Authority]: administrator
LoginInfo[0][Tenant]: TenantA
LoginInfo[0][AuthType]: local password
LoginInfo[0][LoginCheck]: Successful
Ruleset[0]: Rule1
Ruleset[0][Info]: SLB rule
SnmpCommunityName: public
```

```
FaultMonitoringMethod: SNMP
FaultMonitoringInterval(s): 300
FaultMonitoringRetry: 3
FaultMonitoringTimeout(s): 10
RestoreHistory[Env][RestoreFileDate]: 2012/08/02 3:43:15 PM
RestoreHistory[Env][RestoreExecDate]: 2012/08/02 3:54:15 PM
RestoreHistory[Config][GenerationNumber]:1
RestoreHistory[Config][RestoreFileDate]: 2012/08/05 3:20:07 PM
RestoreHistory[Config][RestoreExecDate]: 2012/08/05 3:31:24 PM
```

- To display the detailed information for a network device (Ethernet Fabric switch (Converged Fabric)):

```
>rcxadm netdevice show -name fabric1 <RETURN>
Name: fabric1
SystemName: fabric_1
IPAddress: 192.168.5.100
ProductName: Converged Fabric
ModelName: Converged Fabric
VendorName: Fujitsu
Firmware:V01.00
Location: NUMAZU_B1
Status: normal
StatusCause: -
NetdeviceTypes: Fabric
FabricType: C-Fabric
Maintenance: OFF
AutoConfiguration: true
FabricId: 1
PortProfile: enable
Redundancy:
Redundancy[GroupDevice]:
Port[0]: 3/1/0/2
Port[0][Link]: up
Port[0][PhysicalState]: 10G / F
Port[0][Type]: CIR
Port[1]: 3/1/0/4
Port[1][Link]: up
Port[1][PhysicalState]: 10G / F
Port[1][Type]: CIR
Link[0][NeighborResourceName]: ipcomex2500in-1
Link[0][NeighborPort]: LAN0.1
AllocatedResources[Firewall]:
AllocatedResources[SLB]:
AllocatedResources[Network]: network1,network2
LoginInfo[0][User]: user1
LoginInfo[0][IPAddress]: 192.168.5.100
LoginInfo[0][Port]: 22
LoginInfo[0][Protocol]: ssh
LoginInfo[0][Authority]: user
LoginInfo[0][Tenant]:
LoginInfo[0][AuthType]: local password
LoginInfo[0][LoginCheck]: Successful
SnmpCommunityName: public
FaultMonitoringMethod: SNMP
FaultMonitoringInterval(s): 300
FaultMonitoringRetry: 3
FaultMonitoringTimeout(s): 10
RestoreHistory[Env][RestoreFileDate]: -
RestoreHistory[Env][RestoreExecDate]: -
RestoreHistory[Config][GenerationNumber]: -
RestoreHistory[Config][RestoreFileDate]: -
RestoreHistory[Config][RestoreExecDate]: -
VFAB[0][name]: defaultVFAB
```

```
VFAB[0][id]: default
VFAB[0][Stag]: 2
VFAB[0][mode]: network
VFAB[0][vfabauto]: false
VFAB[0][Port][0]: 3/1/0/2
VFAB[0][Port][0][Link]: up
VFAB[0][Port][0][PhysicalState]: 10G/F
VFAB[0][Port][0][Type]: CIR
VFAB[0][Vlan][0]: 10
VFAB[0][Vlan][0][UntaggedPort]: 5/1/0/1
VFAB[0][Vlan][0][TaggedPort]: 3/1/0/1, 5/1/0/2
VFAB[1][name]: VFAB1
VFAB[1][id]: 1
VFAB[1][Stag]: 101
VFAB[1][mode]: host
VFAB[1][Tenant][0]: tenantG
VFAB[1][Tenant][1]: tenantH
VFAB[1][vfabauto]: true
VFAB[1][Port][0]: 3/1/0/4
VFAB[1][Port][0][Link]: up
VFAB[1][Port][0][PhysicalState]: 10G/F
VFAB[1][Port][0][Type]: CIR
VFAB[1][Vlan][0]: 40
VFAB[1][Vlan][0][UntaggedPort]: 5/1/0/3
VFAB[1][Vlan][0][TaggedPort]: 3/1/0/3, 5/1/0/4
```

- To display the detailed information for a network device (Management host (IPCOM VX)):

```
>rcxadm netdevice show -name ipcom_vx <RETURN>
Name: ipcom_vx
SystemName: vx2700-1
IPAddress: 192.168.1.74
ProductName: IPCOMVXHV
ModelName: IPCOMVX2700_HV
VendorName: Fujitsu
Firmware: E10L11 NF0001
Location: NUMAZU_B1
Status: normal
StatusCause: -
NetdeviceTypes: ManagementHost
Maintenance: OFF
AutoConfiguration: true
Redundancy:
Redundancy[GroupDevice]:
Port[0]: LAN0.0
Port[0][Link]: up
Port[0][PhysicalState]: 1G / -
Link[0][NeighborResourceName]: fabric1
Link[0][NeighborPort]: 3/2/0/11
Link[0][NeighborResourceName]: ipcomva1
Link[0][NeighborPort]: LAN0.0
AllocatedResources[Firewall]:
AllocatedResources[SLB]:
AllocatedResources[Network]:
LoginInfo[0][User]: user1
LoginInfo[0][IPAddress]: 192.168.1.74
LoginInfo[0][Port]: 23
LoginInfo[0][Protocol]: telnet
LoginInfo[0][Authority]: user
LoginInfo[0][Tenant]:
LoginInfo[0][AuthType]: local password
LoginInfo[0][LoginCheck]: Successful
SnmpCommunityName: public
```

```
FaultMonitoringMethod: SNMP
FaultMonitoringInterval(s): 300
FaultMonitoringRetry: 3
FaultMonitoringTimeout(s): 30
RestoreHistory[Env][RestoreFileDate]: -
RestoreHistory[Env][RestoreExecDate]: -
RestoreHistory[Config][GenerationNumber]: -
RestoreHistory[Config][RestoreFileDate]: -
RestoreHistory[Config][RestoreExecDate]: -
```

- To display the list of network device files:

```
>rcxadm netdevice cflist -name Firewall1 <RETURN>
NUMBER     BACKUPDATE          TRIGGER L-PLATFORM/NETWORK              TENANT
OPERATION  COMMENT
---------- ------------------- ------- ------------------------------
------------------------------- ---------- -------
0          2012/09/02 13:07:52 create  -                              -
-          -
1          2012/09/02 14:55:10 auto    Platform-A                     Tenant-A
create     test1
-          2012/09/02 15:55:20 auto    Platform-A                     Tenant-A
delete     test2
2          2012/09/02 15:56:15 command -                              -
-          -
env        2012/09/02 14:23:05 -       -                              -
-          -
```

3.9 rcxadm network

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm network** - network resource operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm network - network resource operations

Format

```
rcxadm network create -file file.xml [-nowait]
rcxadm network modify -name name -file file.xml [-nowait]
rcxadm network list [-extend lock]
rcxadm network show -name name [-format {text|xml}] [-verbose] [-extend lock]
rcxadm network move -name name -to pool [-nowait]
rcxadm network delete -name name [-nowait]
rcxadm network setup -name name -vmhost vmhost[,vmhost[,...]] [-nowait]
```

Description

rcxadm network is the command used to operate network resources.
Define network resources in the network used for a communication path using this command. IP address ranges to be allocated and subnet mask information can be managed.

Subcommands

create

Creates a network resource.

When the network device auto-configuration function is used, the script deployed for the configuration is executed and the network devices are automatically configured (network device definitions are added).

modify

Changes a network resource.

When the network device auto-configuration function is used, the script deployed for the configuration modification is executed and the network devices are automatically configured (network devices definitions are modified).

list

Displays a list of network resources.

The following detailed information is displayed:

Table 3.21 Network Resource Information

Item Name	Description
NAME	Network Resource Name
VLAN_ID	Network resource VLAN ID
SUBNET	Network resource subnet
LABEL	Network resource label
TYPE	Network resource type One of the following is displayed: - For an admin LAN "admin" is displayed. - For a public LAN or iSCSI LAN A blank space is displayed.
ATTRIBUTES (*)	Information when resources are locked during DR execution One of the following is displayed: - When resources are locked "locked(DR)" is displayed. - When resources are not locked "unlocked(DR)" is displayed.

* Note: This is displayed when -extend lock is specified for the option.

show

Displays the details for a network resource.

The following detailed information is displayed:

Table 3.22 Detailed Information for Network Resources

Item Name	Description
NAME	Network Resource Name
TYPE	Network resource type One of the following is displayed: - For an admin LAN

Item Name	Description
	"admin" is displayed. - For a public LAN or iSCSI LAN A blank space is displayed.
LABEL	Network resource label
AUTO	Automatic configuration for network resources One of the following is displayed: - When a network environment configured automatically is used "true" is displayed. - When a network environment configured manually is used "false" is displayed.
COMMENT	Network resource comment
VLAN_ID	Network resource VLAN ID
PHYSICAL_LAN_SEGMENT	Network resource physical LAN segment name If no physical LAN segment is set, no content is displayed.
AUTO_SWITCH_CONFIGURATION	Automatic configuration for network devices (L2 switches) One of the following is displayed: - When performing automatic configuration for network devices (L2 switches) "true" is displayed. - When not performing automatic configuration for network devices (L2 switches) "false" is displayed. When auto-configuration of network devices (L2 switches) is not configured, only the item name is displayed and the content of auto-configuration is not displayed.
RULESET_NAME	Name of the ruleset used for network resources When there is no ruleset registered, only the item name is displayed and the ruleset name is not displayed.
SUBNET	Network resource subnet
MASK	Network resource subnet mask
START - END	IP address range auto-configuration
EXCLUDE_ADDRESS_RANGE [*num*] (*1)	Exclusion range of IP addresses for auto-configuration For the scope of IP addresses automatically generated by DR switchover or failback, "DR" is displayed. In *num*, the index number of an IP address range to be excluded is displayed. The number is an integer starting from "0".
DEFAULT_GATEWAY	Default gateway If no default gateway is set, this item is not displayed.
VLAN_AUTO_SETTING	Automatic VLAN configuration for external connection ports One of the following is displayed:

Item Name	Description
	- When automatically performing VLAN configuration for external connection ports "true" is displayed. - When not automatically performing VLAN configuration for external connection ports "false" is displayed.
EXTERNAL_PORT_CHASSIS [*num*]	External port chassis name This item is displayed when a port of a LAN switch blade is specified. In *num*, the index number of an external connection port element is displayed. The number is an integer starting from "0".
EXTERNAL_PORT_SWITCH [*num*]	External port switch name In *num*, the index number of an external connection port element is displayed. The number is an integer starting from "0".
EXTERNAL_PORT_NUMBER [*num*]	External port port number This item is displayed when a physical port of a LAN switch blade is specified. In *num*, the index number of an external connection port element is displayed. The number is an integer starting from "0".
EXTERNAL_PORT_LAG [*num*]	Link aggregation port name of the external port This item is displayed when a port that is part of a link aggregation configuration, of a LAN switch blade, is specified. [changed] is displayed if the link aggregation group that was specified when the network resource was created or changed is removed. In *num*, the index number of an external connection port element is displayed. The number is an integer starting from "0".
EXTERNAL_PORT_NAME [*num*]	External Connection Port Name This item is displayed when a port of an Ethernet fabric switch is specified. In *num*, the index number of an external connection port element is displayed. The number is an integer starting from "0".
L_SERVER [*num*]	Name of the L-Server connected to the network resource, and the IP address being used In *num*, the index number of an L-Server connected to the network resource is displayed. The number is an integer starting from "0".
SLB [*num*] (*2)	The name and IP address of the server load balancer (SLB) connected to the network resource. In *num*, the index number of an SLB connected to the network resource is displayed. The number is an integer starting from "0".
VM_HOST [*num*] (*3)	Resource name of the VM host the network resource is deployed on In *num*, the index number of the VM host is displayed. The number is an integer starting from "0".
ATTRIBUTES (*4)	Information when resources are locked during DR execution One of the following is displayed: - When resources are locked "locked(DR)" is displayed.

Item Name	Description
	- When resources are not locked "unlocked(DR)" is displayed.

*1: "DR" is displayed when -extend lock is specified for the option.
*2: This is displayed when the network device is automatically deployed using simple configuration mode.
*3: This is displayed when -verbose is specified for the option.
*4: This is displayed when -extend lock is specified for the option.

move

Moves a network resource to the specified resource pool.

delete

Deletes a network resource.

When the network device auto-configuration function is used, the script deployed for the configuration deletion is executed and the network devices are automatically configured (network devices definitions are deleted).

setup

Performs auto-configuration of the network resource on the specified VM host.

Options

-file *file*.xml

In *file*.xml, specify the XML file that defines the network resource.
For details on the XML file definition, refer to "15.6.1 Creation".

-format text|xml

Specify the display format.

When -format is omitted, it is displayed in text format.

text

The information is displayed in text format.

xml

The information is displayed in XML format with XML tags.

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the network resource specified in the subcommand to complete its execution.

-name *name*

In *name*, specify the name of the target network resource to perform an operation with.
Specify a name that is different from the resource name of the address set resource.

-to *pool*

Specify the destination resource folder in *pool*.

For the hierarchized resource folder, specify the resource folder name using slashes ("/").

-verbose

Specify when displaying detailed information.

-vmhost *vmhost*[,*vmhost*[,...]]

Specify the network resource that is the target of auto-configuration using the resource name of a registered VM host.

When specifying multiple targets, separate the resource names of VM hosts using commas (",").

-extend lock

Specify when displaying additional information.

Example

- To display the list of network resource information:

```
>rcxadm network list -extend lock <RETURN>
NAME                            VLAN_ID SUBNET          LABEL
TYPE  ATTRIBUTES
----                            ------- ------          -----
----  ----------
net_aa1                         1234    20.10.10.0      net_label
admin locked(DR)
net_aa2                         1235    20.10.11.0      -
-     locked(DR)
```

- To display the detailed information for a network resource:

```
>rcxadm network show -name net_aa1 -extend lock <RETURN>
name: net_aa1
type: admin
label: net_label
auto: true
comment: net_comment
vlan_id: 1234
physical_lan_segment:
auto_switch_configuration: true
ruleset_name: rule1
attributes: unlocked(DR)
subnet: 20.10.10.0
mask: 255.255.255.0
start - end: 20.10.10.1 - 20.10.10.254
exclude_address_range[0]: 20.10.10.51 - 20.10.10.55
exclude_address_range[1]: 20.10.10.1 - 20.10.10.10
exclude_address_range[2]: 20.10.10.15 - 20.10.10.17 (DR)
exclude_address_range[3]: 20.10.10.20 - 20.10.10.20 (DR)
default_gateway[0]: 20.10.10.1
vlan_auto_setting: true
external_port_chassis[0]: bx900
external_port_switch[0]: bx900-lan1
external_port_number[0]: 41
external_port_chassis[1]: bx900
external_port_switch[1]: bx900-lan2
external_port_number[1]: 41
external_port_switch[2]: CFAB1
external_port_name[2]: EthernetPort(1/2/0/60)
l_server[0]: a (20.10.10.11)
```

3.10 rcxadm pool

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm pool** - resource pool operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm pool - resource pool operations

Format

```
rcxadm pool create -name name -type type [-priority priority] [-label label] [-comment comment] [-attr
{over_commit={true|false},[calculated_using={reserve|limit}]|thin={true|false}}] [-nowait]
rcxadm pool list [-reserve] [-extend attributes]
rcxadm pool list -name name [-template template_name] [-resource] [-info lserver] [-reserve] [-extend
attr[,attr[,...]]]
rcxadm pool show -name name
rcxadm pool register -name name {-resource resource_name|-from vstorage} -type resource_type [-force]
[-setup_network] [-nowait]
rcxadm pool unregister -name name {-resource resource_name|-from vstorage} -type resource_type [-
nowait]
rcxadm pool modify -name name {[-new_name new_name] [-priority priority] [-label label] [-comment
comment]} [-attr {over_commit={true|false},calculated_using={reserve|limit}}] [-nowait]
rcxadm pool move -name name [-to folder] [-nowait]
rcxadm pool delete -name name [-force] [-nowait]
```

Description

rcxadm pool is the command used to manage resource pools. A resource pool is a type of resource folder in the orchestration tree, which stores the resources to select when creating or adding an L-Server. A resource pool type is specified when creating a resource pool, and only resources of a specific type are stored in each type of resource pool.

Resource pools enable you to manage all the resources allocated when creating an L-Server.

Note

- When the disk resource is a LUN that has been created in advance, a LUN for iSCSI boot, or a disk resource for a virtual L-Server, deleting L-Servers or removing disks from an L-Server does not delete the content of disks.
  When using disk resources that are registered in global pools, perform operation carefully, as the disk resources will be allocated to other users.
- When using a LUN that has been created in advance, a LUN for iSCSI boot, or a disk resource for a virtual L-Server, it is recommended to operate the LUN in a local pool, and delete data on the disk during deletion of L-Servers or detachment of disks.
  For details on the method for deleting the data on a disk, refer to cautionary notes in "14.5 Storage Resources" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
- To operate disk resources used for iSCSI boot, use the iSCSI boot information operation command (rcxadm iscsictl).
  When deleting disk resources using this command, they are unregistered from the resource pools, but the disk resource information will remain.
  To delete the disk resource information, register the disk resources to resource pools again, and then delete them by executing the rcxadm iscsictl command.

Subcommands

create

Creates a resource pool.

list

Displays a list of resource pools.
The following detailed information is displayed:

- When specifying -extend attributes for the option

  Additional information is displayed.

- When not specifying -name for the option

  The information for all the resource pools that can be accessed is displayed.

  - For VM pools

    When a calculation for the available space for the VM pool used for overcommit is set with a reservation value, it will be reflected on the information output in the following item names:

    - CPU(*max*)

    - MEMORY(*max*)

    Table 3.23 VM Pool Information

Item Name	Description
NAME	VM pool name
TYPE	Resource pool type
PRIORITY	Priority
CPU(*max*)	The free size and the total size of the VM host CPUs In *max*, the maximum number of CPUs which can be allocated to a VM guest is displayed in "*Performance* GHz * *Cores*" format.
RESERVE-CPU (*1)	The CPU reservation size of the VM host For VM hosts for which the HA function provided by server virtualization software is available, the reserved capacity for a failover is displayed. For VM hosts for which the HA function is unavailable, or for operations with no reservation for failover, a hyphen ("-") is displayed.
MEMORY(*max*)	The free size and the total size of the VM host memory In *max*, the maximum memory that can be allocated to a VM host is displayed in "*Space* GB" format.
RESERVE-MEMORY (*1)	The memory reservation capacity of the VM host For VM hosts for which the HA function provided by server virtualization software is available, the reserved capacity for a failover is displayed. For VM hosts for which the HA function is unavailable, or for operations with no reservation for failover, a hyphen ("-") is displayed.
ATTRIBUTES (*2)	The calculation method for overcommit attributes and free space for VM pools. One of the following is displayed: - When calculating the free space with a reservation value, while overcommit is enabled "OverCommit=true,CalculatedUsing=reserve" is displayed. - When calculating the free space with the upper limit value, while overcommit is enabled "OverCommit=true,CalculatedUsing=limit" is displayed. - When overcommit is disabled "OverCommit=false" is displayed.

*1: When specifying -reserve for the option, this is displayed.

*2: When specifying -extend attributes for the option, this is displayed. Immediately after performing upgrade of an admin server from ROR V2.2.0 or V3.0.0, this item cannot be displayed even if the -extend attributes option is specified. To display this item, delete the definition file explained in "2.3.1.2 Definition Files for Display Control of VM Pool Attribute Information" in the "Release Notes".

- For Server Pools

Table 3.24 Server Pool Information

Item Name	Description
NAME	Server pool name
TYPE	Resource pool type
PRIORITY	Priority
SERVER	The total and unused number of physical servers

- For storage pools

Table 3.25 Storage Pool Information

Item Name	Description
NAME	Storage pool name
TYPE	Resource pool type
PRIORITY	Priority
CAPACITY(*max*)	The total size and the free size of the virtual storage memory For a storage pool to which the thin provisioning attribute is applied, it is displayed as follows: - Virtual storage free space When the allocated size exceeds the total size of the virtual storage resource, the excess is displayed with a minus sign ("-"). - *max* In *max*, the maximum value is displayed. If free space values of all of registered virtual storage are negative values, the lowest value (the highest number with a minus sign) will be displayed. [OVM for x86 2.2] For the free space of virtual storage resources, refer to "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE". The total size of virtual storage resources will not be displayed when the virtual storage resource is an OVM for x86 2.2 storage repository. In *max*, the maximum disk space that can be allocated to a virtual storage resource is displayed in "*Space*GB" format. [OVM for x86 2.2] For the maximum disk space that can be allocated to a virtual storage resource, refer to "Virtual Storage Resource Free Space" in "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE".
ATTRIBUTES (*)	One of the following is displayed: - For a storage pool to which the thin provisioning attribute is applied "Thin=true" is displayed. - For a storage pool to which the thin provisioning attribute is not applied "Thin=false" is displayed.

* Note: When specifying -extend attributes for the option, this is displayed.

- For Network Pools

Table 3.26 Network Pool Information

Item Name	Description
NAME	Network pool name
TYPE	Resource pool type
PRIORITY	Priority
VLANID	Total number and unused number of VLAN IDs
NETWORKDEVICE(in use)	Total number of network devices, and the number of in use network devices

- For address pools

Table 3.27 Address Pool Information

Item Name	Description
NAME	Address pool name
TYPE	Resource pool type
PRIORITY	Priority
ADDRESS	Total number and unused number of addresses

- For image pools

Table 3.28 Image Pool Information

Item Name	Description
NAME	Image pool name
TYPE	Resource pool type
PRIORITY	Priority
IMAGE	Number of images

- When specifying -name for the option

The specified resource pool and a list of the resources included in the resource pool are displayed.

- For VM pools

When a calculation for the available space for the VM pool used for overcommit is set with a reservation value, it will be reflected on the information output in the following item names:

- CPU(*max*)
- MEMORY(*max*)
- CPU(*FREE*)
- MEMORY(*FREE*)

Table 3.29 VM Pool Information

Item Name	Description
NAME	VM pool name
TYPE	Resource pool type
PRIORITY	Priority
CPU(*max*)	The free size and the total size of the VM host CPUs In *max*, the maximum number of CPUs which can be allocated to a VM guest is displayed in "*Performance* GHz * *Cores*" format.
RESERVE-CPU (*1)	The CPU reservation size of the VM host

Item Name	Description
	For VM hosts for which the HA function provided by server virtualization software is available, the reserved capacity for a failover is displayed. For VM hosts for which the HA function is unavailable, or for operations with no reservation for failover, a hyphen ("-") is displayed.
MEMORY(*max*)	The free size and the total size of the VM host memory In *max*, the maximum memory that can be allocated to a VM host is displayed in "*Space* GB" format.
RESERVE-MEMORY (*1)	The memory reservation capacity of the VM host For VM hosts for which the HA function provided by server virtualization software is available, the reserved capacity for a failover is displayed. For VM hosts for which the HA function is unavailable, or for operations with no reservation for failover, a hyphen ("-") is displayed.
PER-TEMPLATE (*2)	Number of L-Servers which can be created in the specified L-Server template definition
ATTRIBUTES (*3)	The calculation method for overcommit attributes and free space for VM pools. One of the following is displayed: - When calculating the free space with a reservation value, while overcommit is enabled "OverCommit=true,CalculatedUsing=reserve" is displayed. - When calculating the free space with the upper limit value, while overcommit is enabled "OverCommit=true,CalculatedUsing=limit" is displayed. - When overcommit is disabled "OverCommit=false" is displayed.

*1: When specifying -reserve for the option, this is displayed.
*2: When specifying -template for the option, this is displayed.
The number of possible L-Servers is displayed based on the VM type (VMtype) of the virtual L-Server template and the specified CPU architecture (CPUArch).
For details, refer to "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
*3: When specifying -extend attributes for the option, this is displayed.

Table 3.30 Resource Information Included in VM Pools

Item Name	Description
NAME	Resource name included in the resource pool
TYPE	Type of resources included in the resource pools
CPU(*FREE*)	The free size and the total size of the VM host CPUs Free space is displayed in *FREE*:
RESERVE-CPU (*1)	The CPU reservation size of the VM host For VM hosts for which the HA function provided by server virtualization software is available, the reserved capacity for a failover is displayed. For VM hosts for which the HA function is unavailable, or for operations with no reservation for failover, a hyphen ("-") is displayed.
MEMORY(*FREE*)	The free size and the total size of the VM host memory

Item Name	Description
	Free space is displayed in *FREE*:
RESERVE-MEMORY (*1)	The memory reservation capacity of the VM host For VM hosts for which the HA function provided by server virtualization software is available, the reserved capacity for a failover is displayed. For VM hosts for which the HA function is unavailable, or for operations with no reservation for failover, a hyphen ("-") is displayed.
STATUS	Resource status
CLUSTER (*1)	The name of a cluster that the VM host belongs to For the VM hosts not belonging to a cluster, a hyphen ("-") is displayed.
MAINTENANCE	Maintenance mode
PER-TEMPLATE (*2)	Number of L-Servers which can be created in the specified L-Server template definition

*1: When specifying -reserve for the option, this is displayed.
*2: When specifying -template for the option, this is displayed.
The number of possible L-Servers is displayed based on the VM type (VMtype) of the virtual L-Server template and the specified CPU architecture (CPUArch).
For details, refer to "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

- When specifying -resource for the option

Table 3.31 Resource Information Included in VM Hosts

Item Name	Description
NAME	Virtual machine name
TYPE	Resource types
VM_HOST	VM host
L-SERVER (*)	The linked L-Server name

* Note: When specifying -info lserver for the option, this is displayed.

Note

When calculating the number of L-Servers using reservation values, if an L-Server template for which the CPU reservation performance and the memory reservation capacity of "0" is specified, "0" will be displayed for the number of possible L-Servers for creation.

- For Server Pools

Table 3.32 Server Pool Information

Item Name	Description
NAME	Server pool name
TYPE	Resource pool type
PRIORITY	Priority
SERVER	The total and unused number of physical servers
PER-TEMPLATE (*)	Number of L-Servers which can be created in the specified L-Server template definition

* Note: When specifying -template for the option, this is displayed.

Table 3.33 Resource Information Included in Server Pools

Item Name	Description
NAME	Resource name included in the resource pool
TYPE	Type of resources included in the resource pools
MODEL	Physical server model name
CPU	Physical server CPU size
MEMORY	Memory size of a physical server
STATUS	Resource status
MAINTENANCE	Maintenance mode
L-SERVER (*1)	The linked L-Server name
PER-TEMPLATE (*2)	Number of L-Servers which can be created in the specified L-Server template definition

*1: When specifying -info lserver for the option, this is displayed.
*2: When specifying -template for the option, this is displayed.

- For Storage Pools

Table 3.34 Storage Pool Information

Item Name	Description
NAME	Storage pool name
TYPE	Resource pool type
PRIORITY	Priority
CAPACITY(*max*)	The total size and the free size of the virtual storage memory For a storage pool to which the thin provisioning attribute is applied, it is displayed as follows: - Virtual storage free space When the allocated size exceeds the total size of the virtual storage resource, the excess is displayed with a minus sign ("-"). - *max* In *max*, the maximum value is displayed. If free space values of all of registered virtual storage are negative values, the lowest value (the highest number with a minus sign) will be displayed. [OVM for x86 2.2] For the free space of virtual storage resources, refer to "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE". The total size of virtual storage resources will not be displayed when the virtual storage resource is an OVM for x86 2.2 storage repository. In *max*, the maximum disk space that can be allocated to a virtual storage resource is displayed in "*Space*GB" format. [OVM for x86 2.2] For the maximum disk space that can be allocated to a virtual storage resource, refer to "Virtual Storage Resource Free Space" in "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE".
PER-TEMPLATE (*1)	Number of L-Servers which can be created in the specified L-Server template definition

Item Name	Description
ATTRIBUTES (*2)	One of the following is displayed: - For a storage pool to which the thin provisioning attribute is applied "Thin=true" is displayed. - For a storage pool to which the thin provisioning attribute is not applied "Thin=false" is displayed.

*1: When specifying -template for the option, this is displayed.
Regarding the resources that can be used on the virtual L-Server, the number of possible L-Servers is displayed based on the VM type (VMtype) of the virtual L-Server template and the specified CPU architecture (CPUArch).
For details, refer to "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
*2: When specifying -extend attributes for the option, this is displayed.

Table 3.35 Resource Information Included in Storage Pools

Item Name	Description
NAME	Resource name included in the resource pool
TYPE	Type of resources included in the resource pools
CAPACITY(*FREE*)	The total size and the free size of the virtual storage memory [OVM for x86 2.2] For the free space of virtual storage resources, refer to "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE". The total size of virtual storage resources will not be displayed when the virtual storage resource is an OVM for x86 2.2 storage repository. Free space is displayed in *FREE*:
STATUS	Resource status
PER-TEMPLATE (*)	Number of L-Servers which can be created in the specified L-Server template definition

* Note: When specifying -template for the option, this is displayed.
Regarding the resources that can be used on the virtual L-Server, the number of possible L-Servers is displayed based on the VM type (VMtype) of the virtual L-Server template and the specified CPU architecture (CPUArch).
For details, refer to "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

- For Network Pools

Table 3.36 Network Pool Information

Item Name	Description
NAME	Network pool name
TYPE	Resource pool type
PRIORITY	Priority
VLANID	Total number and unused number of VLAN IDs
NETWORKDEVICE(in use)	Total number of network devices, and the number of in use network devices

Table 3.37 Resource Information Included in Network Pools

Item Name	Description
NAME	Resource name included in the resource pool
TYPE	Type of resources included in the resource pools

Item Name	Description
VLANID(*FREE*)	Total and unused number of VLAN IDs Unused numbers are displayed in *FREE*:
ADDRESS(*FREE*)	Total number and unused number of addresses Unused numbers are displayed in *FREE*:
STATUS	Network device status
NETDEVICE_TYPE	Network device type
RULESET	Ruleset name set for the network device When there is more than one, they are displayed separated by commas.
RESOURCE	Name of the resource that is using network devices When there is more than one, they are displayed separated by commas.
DEPLOYABLE_L-PLATFORM_NUMBER (*FREE*)	The number of L-Platforms which can be deployed (unused number and total number) The unused number is displayed in *FREE*: When not using NS Appliance in simple configuration mode, "- (-)" is displayed.

- For Address Pools

Table 3.38 Address Pool Information

Item Name	Description
NAME	Address pool name
TYPE	Resource pool type
PRIORITY	Priority
ADDRESS	Total number and unused number of addresses

Table 3.39 Resource Information Included in Address Pools

Item Name	Description
NAME	Resource name included in the resource pool
TYPE	Type of resources included in the resource pools
ADDRESS(*FREE*)	Total number and unused number of addresses Unused numbers are displayed in *FREE*:

- For Image Pools

Table 3.40 Image Pool Information

Item Name	Description
NAME	Image pool name
TYPE	Resource pool type
PRIORITY	Priority
IMAGE	Number of images

Table 3.41 Resource Information Included in Image Pools

Item Name	Description
NAME	Resource name included in the resource pool

Item Name	Description
VERSION	Version of the image
TYPE	Type of resources included in the resource pools
IMAGE_TYPE	Type of image
VM_TYPE	Virtual image VM type identifier information [VMware] vmware-vc [Hyper-V] ms-scvmm [KVM] RHEL-KVM [Solaris Zones] SolarisContainer [OVM for SPARC] OVM-SPARC [Citrix Xen] Citrix-Xen [OVM for x86 3.x] ovmm-x86
OS	OS type of the image
DISKS (*1)	The disk sizes of the cloning image are displayed, with the system disk size first, then data disk size. Hyphens("-") are displayed for the following cloning images: - A physical L-Server image - Images with the VM type of Xen, KVM, or Oracle VM
RELATION (*2)	Name of server management software linked to cloning images When VM type identifier information is something other than "Solaris Container" or "OVM-SPARC", a hyphen ("-") is displayed. [Solaris Zones] [OVM for SPARC] - When cloning images are linked to BladeLogic "BladeLogic" is displayed. - When there is no server management software linked to cloning images "None" is displayed.

*1: When -extend disksize is specified for an option, the item is displayed. Disk size may not be displayed immediately after updating Resource Orchestrator from V3.0 or an earlier version or immediately after performing recovery operations using Disaster Recovery. Wait for a short while and then perform the operation again.
For details on Disaster Recovery, refer to the "DR Option Instruction".
*2: The item is displayed only when -extend relation is specified for an option.

show

To display the detailed information for a resource pool.

The following detailed information is displayed: The displayed information varies depending on the attributes configured for the resource pool, and the status (existence, type) of resources in the resource pool.

Note

The number and display order of the items may be changed by enhancement of Resource Orchestrator.

- For VM Pools

  When a calculation for the available space for the VM pool used for overcommit is set with a reservation value, it will be reflected on the information output in the following item names:

  - FreeCPU
  - FreeMemorySize

Table 3.42 Detailed Information for VM Pools

Item Name	Description
Name	VM pool name
Type	Resource pool type
Priority	Priority
Label	Label
Comment	Comment
CPU(*max*)	The total size of the VM host CPUs In *max*, the maximum number of CPUs which can be allocated to a machine is displayed in "*Performance*GHz * *Cores*" format.
FreeCPU	The free size of VM host CPUs
ReserveCPU	The CPU reservation size of the VM host For VM hosts for which the HA function provided by server virtualization software is available, the reserved capacity for a failover is displayed. For VM hosts for which the HA function is unavailable, or for operations with no reservation for failover, a hyphen ("-") is displayed.
MemorySize(*max*)	The total size of the VM host memory In *max*, the maximum memory that can be allocated to a VM host is displayed in "*Space* GB" format.
FreeMemorySize	The free size of the VM host memory
ReserveMemorySize	The memory reservation capacity of the VM host For VM hosts for which the HA function provided by server virtualization software is available, the reserved capacity for a failover is displayed. For VM hosts for which the HA function is unavailable, or for operations with no reservation for failover, a hyphen ("-") is displayed.
OverCommit	It is displayed as follows: - When overcommit is enabled "true" is displayed. - When overcommit is disabled "false" is displayed.
CalculatedUsing	It is displayed as follows: - When calculating the free space using a reservation value "reserve" is displayed. - When calculating the free space using the upper limit value "limit" is displayed.

Item Name	Description
	Only displayed when overcommit is enabled.

- For Server Pools

Table 3.43 Detailed Information for Server Pools

Item Name	Description
Name	Server pool name
Type	Resource pool type
Priority	Priority
Label	Label
Comment	Comment
Server	Total number of physical servers
FreeServer	Number of unused physical servers

- For Storage Pools

Table 3.44 Detailed Information for Storage Pools

Item Name	Description
Name	Storage pool name
Type	Resource pool type
Priority	Priority
Label	Label
Comment	Comment
DiskSize(*max*)	Total virtual storage size For a storage pool to which the thin provisioning attribute is applied, it is displayed as follows: - *max* In *max*, the maximum value is displayed. [OVM for x86 2.2] If the virtual storage resource is a storage repository of OVM for x86 2.2, it is not displayed. In *max*, the maximum disk space which can be allocated to a virtual storage resource is displayed in "*Space*GB" format. [OVM for x86 2.2] For the maximum disk space that can be allocated to a virtual storage resource, refer to "Virtual Storage Resource Free Space" in "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE".
FreeDiskSize	Virtual storage free space For a storage pool to which the thin provisioning attribute is applied, it is displayed as follows: - Virtual storage free space When the allocated size exceeds the total size of the virtual storage resource, the excess is displayed with a minus sign ("-"). [OVM for x86 2.2] For the free space of virtual storage resources, refer to "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE".

Item Name	Description
Thin	It is displayed as follows: - For a storage pool to which the thin provisioning attribute is applied "true" is displayed. - For a storage pool to which the thin provisioning attribute is not applied "false" is displayed.

- For Network Pools

Table 3.45 Detailed Information for Network Pools

Item Name	Description
Name	Network pool name
Type	Resource pool type
Priority	Priority
Label	Label
Comment	Comment
VLANId	Total number of VLANIDs
FreeVLANId	Number of unused VLAN IDs
NetworkDevice	Total number of network devices
InUseNetworkDevice	Total number of network devices in use

- For Address Pools

Table 3.46 Detailed Information for Address Pools

Item Name	Description
Name	Address pool name
Type	Resource pool type
Priority	Priority
Label	Label
Comment	Comment
Address	Total number of addresses
FreeAddress	Number of unused addresses

- For Image Pools

Table 3.47 Detailed Information for Image Pools

Item Name	Description
Name	Image pool name
Type	Resource pool type
Priority	Priority
Label	Label
Comment	Comment
ImageCount	Number of images

register

Registers a resource to a resource pool.

unregister

Unregisters resources from resource pools.

modify

Modifies the name, label, comment, and priority of a resource pool.
Modifies the calculation method for overcommit attributes and free space for VM pools.

move

Moves a resource pool to the specified resource folder.
If the destination resource folder is not specified, the pool is moved to the home folder.

delete

Deletes a resource pool.

Options

-name *name*

In *name*, specify the name of the target resource pool to perform an operation with.

For the resource pool allocated in the resource folder, specify the resource folder name using slashes ("/").

-type *type*

In *type*, specify the resource pool type.

The following values can be specified:

Table 3.48 List of Resource Pool Types

type	Resource Pool Type
vm	VM pool
server	Server pool
storage	Storage pool
network	Network pool
address	Address pool
image	Image pool

-priority *priority*

In *priority*, specify a priority between 1 and 10. If omitted, "5" is set. You can specify the same priority as another pool, but it is not recommended, as the order for retrieving resources will not be guaranteed.

For the priority order, "1" is the highest and "10" is the lowest.

-label *label*

In *label*, specify the label for the resource pool.

-comment *comment*

In *comment*, specify any comments for the resource pool.

-attr *attr*

Specify the attributes for the resource pool. When specifying multiple attributes, separate them using commas.

- For VM Pools

  over_commit={true|false}

  Specify enabling/disabling of overcommit.

  - When enabling overcommit
    Specify "true".

- When disabling overcommit
  Specify "false".

calculated_using={reserve|limit}

Specify the calculation method for free space for the VM pools for which overcommit is enabled.

- When calculating the free space using a reservation value
  Specify "reserve".
- When calculating the free space using the upper limit value
  Specify "limit".

- For Storage Pools

thin={true|false}

Specify one of following items.

- When configuring Thin Provisioning attributes
  Specify "true".
- When not configuring Thin Provisioning attributes
  Specify "false".

Note

When performing upgrade of an admin server from ROR V2.2.0 or V3.0.0, this option cannot be specified if the migration procedure given in the configuration methods for the overcommit functions is not performed. Edit the definition files separately. For details, refer to "2.3.1.1 Overcommit Definition Files" in the "Release Notes".

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the resource pool specified in the subcommand to complete its execution.

-template *template_name*

In *template_name*, specify the name of an L-Server template that can be created.

-resource *resource_name*

In *resource_name*, specify the resource name.

-extend *attr*

Specify when displaying additional information. When specifying multiple attributes, separate them using commas.

- attributes

  Specify when displaying additional information. When using with the -name option, only storage pools or VM pools can be specified for the -name option.

- disksize

  Specify this option to display the disk size of the cloning image. This option can only be specified when an image pool is selected for the -name option.

- relation

  Specify when displaying the name of the server management software linked to the cloning image. This option can only be specified when an image pool is selected for the -name option.

-from *vstorage*

In *vstorage*, specify the name of a virtual storage resource.

Specify when adding the all disk resources in the specified virtual storage resource, to a resource pool.

-type *resource_type*

In *resource_type*, specify a type for the resource.

The following values can be specified:

Table 3.49 List of Resource Types

resource_type	Resource Types
vm_host	VM host
physical_server	Physical server
storage	Virtual storage
disk	LUN (disk) created in advance
network	Network
address_set	MAC address, WWN, GIP
cloning_image	Cloning image (physical)
vm_image	Cloning image (virtual)
netdevice	Network device

-new_name *new_name*

In *new_name*, specify a new name for the target resource pool.

-to *folder*

Specify the destination resource folder in *folder*.
If the destination resource folder is not specified, the pool is moved to the home folder.

When executed by a user who has multiple access scopes specified, it cannot be omitted. Specify a resource folder.

For the hierarchized resource folder, specify the resource folder name using slashes ("/").

-force

- When deleting a resource pool

  Use this option to forcibly delete a resource pool that includes resources.

  The operation is the same as for deleting the resources in a resource pool.

  The following resources registered in the resource pool will be unregistered:

  - VM Host Resources
  - Physical Server Resources
  - Virtual Storage Resources
  - Disk Resources
  - Network Devices
  - Physical Image Resources

- When registering resources in a resource pool

  Specify when registering a physical server with an operating system installed to a server pool.

  In other cases, do not specify.

-resource

Specify this option to display the elements of the resources registered in a resource pool.

This is valid when a VM pool is specified for the -name option.

-info lserver

Use this option to display the link between an L-Server and the resources or the elements of the resources registered in a resource pool.

This is valid when a VM pool or a server pool specified for the -name option.

-reserve

Specify this option to display the CPU and memory reservation capacities when the HA function is enabled on the VM host in a VM pool.

This is valid for VM pools when the -name option is specified with this option.

-setup_network

Specify this option when using the same network configuration as the other servers in a cluster.

This is valid when a VM pool is specified for the -name option.

Example

- To display the list of resource pools:

```
>rcxadm pool list -extend attributes <RETURN>
NAME                TYPE    PRIORITY CPU(max.)             MEMORY(max.)
----                ----    -------- ---------             ------------
/VMHostPool         VM      5        37.6/39.9(1.8GHz x 8)   23.3/26.6(8.0GB)

NAME                TYPE    PRIORITY SERVER
----                ----    -------- --------------
/ServerPool         Server  5        0/3

NAME                TYPE    PRIORITY CAPACITY(max.)         ATTRIBUTES
----                ----    -------- --------------         ------------
/StoragePool        Storage 5        449.7/3061.8(351.7GB)  Thin=false
/ThinStoragePool    Storage 5        449.7/3061.8(351.7GB)  Thin=true

NAME                TYPE    PRIORITY VLANID  NETWORKDEVICE(in use)
----                ----    -------- ------  ------
/NetworkPool        Network 5        0/0     10(5)

NAME                TYPE    PRIORITY ADDRESS
----                ----    -------- -------
/AddressPool        Address 5        249/257

NAME                TYPE    PRIORITY IMAGE
----                ----    -------- -----
/ImagePool          Image   5        10
```

When the calculation for the available space for a VM pool used for overcommit is set with a reservation value, in the case of the output example above, the following values will be the values calculated using the reservation value:

- 37.6 and (1.8 GHz x 8), which are displayed for CPU(max.)
- 23.3 and (8.0 GB), which are displayed for MEMORY(max.)

- To display the specified resource pool and a list of the resources included in the resource pool:

```
>rcxadm pool list -name /VMHostPool <RETURN>
NAME                TYPE    PRIORITY CPU(max.)             MEMORY(max.)
----                ----    -------- ---------             ------------
/VMHostPool         VM      5        37.6/39.9(1.8GHz x 8)   23.3/26.6(8.0GB)

NAME           TYPE     CPU(FREE)            MEMORY(FREE)   STATUS  MAINTENANCE
----           ----     ---------            ------------   ------  -----------
vmhost1        VMHost   1.9GHz x 4 (7.9GHz)  6.4GB (6.4GB)  normal  OFF
vmhost2        VMHost   1.9GHz x 8 (14.6GHz) 10.0GB (8.7GB) normal  OFF
vmhost3        VMHost   1.9GHz x 8 (14.9GHz) 10.0GB (8.0GB) normal  OFF
```

When the calculation for the available space for a VM pool used for overcommit is set with a reservation value, in the case of the output example above, the following values will be the values calculated using the reservation value:

- 37.6 and (1.8 GHz x 8), which are displayed for CPU(max.)
- 23.3 and (8.0 GB), which are displayed for MEMORY(max.)
- (7.9 GHz), (14.6 GHz), and (14.9 GHz), which are displayed for CPU(FREE)
- (6.4 GB), (8.7 GB), and (8.0 GB), which are displayed for MEMORY(FREE)

- To display the detailed information for a resource pool:

```
>rcxadm pool show -name /VMHostPool <RETURN>
Name: VMHostPool
Type: VM
Priority: 5
CPU: 3.2GHz(1.1GHz x 2)
FreeCPU: 2.2GHz
MemorySize: 7.7 GB(6.7 GB)
FreeMemorySize: 6.7 GB
```

When the calculation for the available space for a VM pool used for overcommit is set with a reservation value, in the case of the output example above, the following values will be the values calculated using the reservation value:

- 2.2 GHz, which is displayed for FreeCPU
- 6.7 GB, which is displayed for FreeMemorySize

- To display the specified VM pool, and the CPU and memory reservation capacities of the VM hosts in the pool:
  - Cluster configuration and admission control are enabled (policy: Percentage of cluster resources reserved as failover spare capacity (10%))

```
>rcxadm pool list -name VMHostPool -reserve <RETURN>
NAME                TYPE    PRIORITY CPU(max.)             RESERVE-CPU MEMORY(max.)      RESERVE-
MEMORY
----                 ----    -------- ---------              ----------- ------------
--------------
/VMHostPool         VM      5        5.4/11.1(1.2GHz x 2)  0.9GHz      19.2/27.4(8.4GB)  2.6GB

NAME         TYPE     CPU(FREE)            RESERVE-CPU MEMORY(FREE)   RESERVE-MEMORY STATUS
CLUSTER     MAINTENANCE
----         ----     ---------            ----------- ------------   -------------- ------
-------     -----------
vmhost1      VMHost   1.8GHz x 2 (1.2GHz)  0.3GHz      6.6GB (3.7GB)  0.6GB          normal
Cluster2    OFF
vmhost2      VMHost   1.8GHz x 2 (2.4GHz)  0.3GHz      10.4GB (8.4GB) 1.0GB          normal
Cluster2    OFF
vmhost3      VMHost   1.8GHz x 2 (1.8GHz)  0.3GHz      10.4GB (7.1GB) 1.0GB          normal
Cluster2    OFF
```

  - Cluster configuration and admission control are enabled (policy: Specify failover hosts (vmhost1))

```
>rcxadm pool list -name VMHostPool -reserve <RETURN>
NAME                TYPE    PRIORITY CPU(max.)             RESERVE-CPU MEMORY(max.)      RESERVE-
MEMORY
----                 ----    -------- ---------              ----------- ------------
--------------
/VMHostPool         VM      5        5.0/11.1(1.4GHz x 2)  3.7GHz      17.5/27.4(9.4GB)  6.6GB

NAME           TYPE     CPU(FREE)            RESERVE-CPU MEMORY(FREE)   RESERVE-MEMORY STATUS
CLUSTER     MAINTENANCE
----           ----     ---------            ----------- ------------   -------------- ------
```

```
-------     -----------
vmhost1        VMHost   1.8GHz x 2 (0.0GHz)  3.7GHz      6.6GB (0.0GB)  6.6GB          normal
Cluster2    OFF
vmhost2        VMHost   1.8GHz x 2 (2.8GHz)  0.0GHz      10.4GB (9.4GB) 0.0GB          normal
Cluster2    OFF
vmhost3        VMHost   1.8GHz x 2 (2.2GHz)  0.0GHz      10.4GB (8.1GB) 0.0GB          normal
Cluster2    OFF
```

- Cluster configuration and admission control are enabled (policy: The cluster tolerates host failures)

```
>rcxadm pool list -name VMHostPool -reserve <RETURN>
NAME               TYPE    PRIORITY CPU(max.)             RESERVE-CPU MEMORY(max.)      RESERVE-
MEMORY
----                ----    -------- ---------              ----------- ------------
--------------
/VMHostPool         VM      5        6.6/11.1(1.4GHz x 2)  0.0GHz      21.8/27.4(9.4GB)  0.0GB

NAME           TYPE     CPU(FREE)            RESERVE-CPU MEMORY(FREE)   RESERVE-MEMORY STATUS
CLUSTER     MAINTENANCE
----           ----     ---------            ----------- ------------   -------------- ------
-------     -----------
vmhost1        VMHost   1.8GHz x 2 (1.6GHz)  0.0GHz      6.6GB (4.3GB)  0.0GB          normal
Cluster2    OFF
vmhost2        VMHost   1.8GHz x 2 (2.8GHz)  0.0GHz      10.4GB (9.4GB) 0.0GB          normal
Cluster2    OFF
vmhost3        VMHost   1.8GHz x 2 (2.2GHz)  0.0GHz      10.4GB (8.1GB) 0.0GB          normal
Cluster2    OFF
```

- Cluster configuration and admission control are disabled

```
>rcxadm pool list -name VMHostPool -reserve <RETURN>
NAME               TYPE    PRIORITY CPU(max.)             RESERVE-CPU MEMORY(max.)      RESERVE-
MEMORY
----                ----    -------- ---------              ----------- ------------
--------------
/VMHostPool         VM      5        6.6/11.1(1.4GHz x 2)  -           21.8/27.4(9.4GB)  -

NAME           TYPE     CPU(FREE)            RESERVE-CPU MEMORY(FREE)   RESERVE-MEMORY STATUS
CLUSTER     MAINTENANCE
----           ----     ---------            ----------- ------------   -------------- ------
-------     -----------
vmhost1        VMHost   1.8GHz x 2 (1.6GHz)  -           6.6GB (4.3GB)  -              normal
Cluster2    OFF
vmhost2        VMHost   1.8GHz x 2 (2.8GHz)  -           10.4GB (9.4GB) -              normal
Cluster2    OFF
vmhost3        VMHost   1.8GHz x 2 (2.2GHz)  -           10.4GB (8.1GB) -              normal
Cluster2    OFF
```

- To display the specified VM pool, and a list of the VM hosts and virtual machines included in the pool:

```
>rcxadm pool list -name /VMHostPool -resource -info lserver <RETURN>
NAME               TYPE    PRIORITY CPU(max.)             MEMORY(max.)
----                ----    -------- ---------              ------------
/VMHostPool         VM      5        5.4/7.4(1.4GHz x 2)   5.3/9.5(4.6GB)

NAME           TYPE     CPU(FREE)            MEMORY(FREE)   STATUS  MAINTENANCE
----           ----     ---------            ------------   ------  -----------
VMHost1        VMHost   1.8GHz x 2 (2.5GHz)  2.9GB (0.7GB)  normal  OFF
VMHost2        VMHost   1.8GHz x 2 (2.9GHz)  6.6GB (4.6GB)  normal  OFF

NAME                   TYPE            VM_HOST              L-SERVER
----                   ----            -------              --------
```

```
Guest1                VirtualMachine  VMHost1             /L-Server1
Guest2                VirtualMachine  VMHost1             /folder/L-Server2
Guest3                VirtualMachine  VMHost1             -
Guest4                VirtualMachine  VMHost2             -
Guest5                VirtualMachine  VMHost2             -
```

- To display a list of address set resources contained in the specified address pool

```
> rcxadm pool list -name /AddressPool <RETURN>
NAME                TYPE    PRIORITY ADDRESS
----                ----    -------- -------
/AddressPool        Address 5        8872/8879

NAME                TYPE            ADDRESS(FREE)
----                ----            -------------
AAA                 MacAddressSet   15(15)
AppLAN1             WwnAddressSet   17(17)
macset1             MacAddressSet   4272(4270)
name                MacAddressSet   255(251)
wwnset1             WwnAddressSet   4320(4319)
gip                 GipAddressSet   15(15)
```

3.11 rcxadm server

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm server** - Managed server operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm server - Managed server operations

Format

rcxadm server start -name *resource* **[-nowait]**
rcxadm server stop -name *resource* **[-force] [-nowait]**
rcxadm server restart -name *resource* **[-force] [-nowait]**
rcxadm server switchover -name *resource* **[-spare** *spare_server***] [-nowait]**
rcxadm server failback -name *resource* **[-nowait]**
rcxadm server takeover -name *resource* **[-nowait]**
rcxadm server list [{[-type {physical|vmguest [-server_role]|all [-server_role]}] | [-spare] | [-bootagt] | [-target_disk]}]
rcxadm server migrate -name *guest_name* **-to** *vmhost* **[-mode {live|cold}] [-nowait]**
rcxadm server migrate -home [-name *vmhost***] [-nowait]**
rcxadm server set -name *resource* **-attr vmm_mode={maintenance|active}**
rcxadm server set -name *resource* **-attr {vmm_mode={maintenance|active}|vmware.maintenance={maintenance|active}}** [VMware]
rcxadm server set -name *resource* **-attr vmm_mode={maintenance|active|maintenance_with_move}**[Hyper-V] [Citrix Xen]
rcxadm server set -name *resource* **-attr bootagt={dos|winpe}**
rcxadm server set -name *resource* **-attr server_role={none|manager}**
rcxadm server set -name *resource* **-mode {active|maintenance}**
rcxadm server set -name *resource* **-attr target_disk=***disk_number*
rcxadm server unset -name *resource* **-target_disk**
rcxadm server show -name *resource* **-disk**
rcxadm server collect -name *resource* **-disk [-nowait]**
rcxadm server backup -name *resource* **-attr os=solaris (when using Fujitsu M10)**

Information

rcxserver is an abbreviated form of the rcxadm server command. Both forms provide the same subcommands and options, and produce the same results.

Point

[VMware]
There are following two formats of the command options for setting and releasing the VM maintenance mode of VM hosts:

a. rcxadm server set -name resource -attr vmm_mode=maintenance|active

b. rcxadm server set -name resource -attr vmware.maintenance=maintenance|active

Format b is only provided to support ServerView Resource Coordinator VE V2.1.0.

As this format may not be provided in future versions, it is recommended to use method a. if you are starting to use Resource Orchestrator.

Description

rcxadm server is the command used to control server resources. This function provides the following functionality:

- Display of server statuses (physical OS, VM host, or VM guest)
- Startup, shutdown, or restart of a designated server (physical server, physical OS, VM host, or VM guest)
- Switchover, failback, or takeover of a designated server (physical OS or VM host)
- VM guest migration
- VM maintenance mode settings for VM hosts
- Migration to VM Home Position
- Change the boot agent of the specified server (physical server)
- Collection and display of the disk information of the specified server (physical server)
- Configure and display of the image operation of the target disk of the specified server (physical server)
- Saving of OVM for SPARC configuration information as XML files
- Setting and releasing of maintenance mode of a specified server (a physical server/a physical server already allocated to an L-Server)

  For a physical server already allocated to an L-Server, only setting and releasing of maintenance mode is possible.
- Setting of the server role for VM guests

When stopping or restarting a VM host, any VM guests that are running will also be stopped.
Verify that stopping the affected VM guests will not cause any problems before stopping or restarting a VM host.

For details on the switchover, failback and takeover operations, refer to "Chapter 18 Settings for Server Switchover" in the "User's Guide VE".
For details on VM guest migrations, refer to "15.1 Migration of VM Guests between Servers" in the "User's Guide VE".
For details on VM maintenance mode settings, refer to "15.2 VM Maintenance Mode of VM Hosts" in the "User's Guide VE".
For details on server role settings of VM guests, refer to "9.10 Changing Server Roles" in the "User's Guide VE".

Subcommands

start

Starts the target server (physical server, physical OS, VM host, or VM guest).

stop

Stops the target server (physical server, physical OS, VM host, or VM guest).

restart

Restarts the target server (physical server, physical OS, VM host, or VM guest).

switchover

Switches over the target server (physical OS or VM host) with one of its spare servers.

failback

Switches back a server in switchover state (physical OS or VM host). The spare server that was switched over with is stopped, and the operating system will be restarted on the primary server.

takeover

Sets a post-switchover configuration as final, and allows the spare server to take over the role of the original primary server (physical OS or VM host). After takeover, both servers exchange their roles: the original spare server becomes the new primary server, while the original primary server becomes the new spare server.

list

Displays all registered servers (physical OS's, VM hosts, and VM guests).

The following properties are displayed for each server (when no options are specified).

Item Name	Description
PHYSICAL_SERVER	Physical server name
SERVER	Server name (physical OS or VM host)
ADMIN_IP	Admin LAN IP address
STATUS	Server status Displays one of the following: - normal - warning - unknown - stop - error - fatal For an explanation of possible server statuses, refer to "11.2 Resource Status" in the "Operation Guide CE".
MAINTENANCE	Current maintenance mode - If maintenance mode is set "ON" is displayed. - If maintenance mode is not set "OFF" is displayed. For details on the maintenance mode, refer to "Appendix C Maintenance Mode" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

migrate

Migrates a VM guest to a VM host on a different physical server.

set

Sets or releases VM maintenance mode for a given VM host.
Change the boot agent used when manipulating images.
Sets the server role of a VM guest.
Configures the image operation target disk.

unset

Releases the configuration of the image operation target disk.

show

Displays the information of a disk on which image operations can be performed.

collect

Collects the information of a disk on which image operations can be performed.
Restarts the target server (physical server, physical OS, VM host, or VM guest) to acquire the disk information.

backup

Saves configuration information of OVM for SPARC as XML files. When a server is powered on and its status is normal, its configuration information can be saved as an XML file.
XML files of OVM configuration information are saved in the following location on the control domain.

Storage Location of Saved Files

[Control Domain]
/etc/opt/FJSVrcvat/config

Definition File Name

ovm_config.xml

Options

The following option can be specified for subcommands other than the list subcommand:

-name *resource*

Specify the name of the target server in *resource*.

The following option can be specified when using subcommands other than the list, set, unset, or, show subcommand:

-nowait (optional)

Use this option to return directly to the command prompt without waiting for the command to complete its execution.

The following option can be specified for the stop and restart subcommands:

-force (optional)

Use this option to forcibly stop or restart a server without shutting down its operating system.

The following option can be specified for the switchover subcommand:

-spare *spare_server* (optional)

This defines the spare server (physical server) to be switched over with. If omitted, an appropriate server will be automatically selected from the list of spare servers already assigned to the target server.

The following options can be specified for the list subcommand:

-type {physical|vmguest [-server_role]|all [-server_role]}(optional)

This defines the type of server (physical servers, VM guests, all servers) to be listed up.
The following properties are displayed for each server. The option column shows the relationship between displayed properties and the option given in -type ("always" in the table below designates properties that are always displayed, independently from the option given in -type).

Item Name	Description	Options
PHYSICAL_SERVER	Physical server name	always
SERVER	Server name (for a Physical OS, VM host, or VM guest)	always
TYPE	Server type Displays one of the following: - native Physical OS - vm_host VM host - vm_guest VM guest	physical all
VM_HOST	VM host name For a VM guest, this shows the name of the VM host on which this VM guest operates.	vmguest all
ADMIN_IP	Admin LAN IP address	always
STATUS	Server status Displays one of the following: - normal - warning - unknown - stop - error - fatal For an explanation of possible server statuses, refer to "11.2 Resource Status" in the "Operation Guide CE".	always
MAINTENANCE	Current maintenance mode - If maintenance mode is set "ON" is displayed. - If maintenance mode is not set "OFF" is displayed. For details on the maintenance mode, refer to "Appendix C Maintenance Mode" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	physical all
SERVER_ROLE	Server role of the VM guest. One of the following is displayed: - none	vmguest -server_role all -server_role

Item Name	Description	Options
	No server role is set. - manager "Manager" is set for the server role. - - For items other than VM guests, "-" is displayed.	

-spare (optional)

When using spare servers, this shows the spare server(s) (physical server) assigned to each server.
The following properties are displayed for each server.

Item Name	Description
SERVER	Server name (physical OS or VM host)
PRIMARY	Primary server Name of the physical server that will be switched over with a spare server during a server switchover.
SPARE	Spare server Name of the spare server (switchover destination) assigned to the primary server. If multiple spare servers are assigned, the name of each spare server is displayed using commas (",") as a delimiters.
VLAN_SWITCH (*)	Network reconfiguration flag This flag defines whether network settings will be reconfigured during a server switchover. - When network settings are reconfigured during server switchover "ON" is displayed. - When network settings are not reconfigured during server switchover "OFF" is displayed.
AUTO_SWITCH	Auto-Recovery flag This flag defines whether Auto-Recovery is enabled. - When Auto-Recovery is enabled "ON" is displayed. - When Auto-Recovery is not enabled "OFF" is displayed.
ACTIVE	Active server Displays the name of the currently active physical server.
SWITCHOVER_STATE	Switchover state Displays the current switchover state. Displays one of the following: - normal Normal status (There are no switchover, failback, or takeover operations in progress). - switchover running A switchover operation is in progress.

Item Name	Description
	- switchover completed A switchover operation has been completed. - failback running A failback operation is in progress. - takeover running A takeover operation is in progress.

* Note: When a LAN switch blade is in IBP mode or Converged Fabric mode, the details of settings are displayed in this parameter.

-bootagt (optional)

Displays the information about the boot agent used when manipulating images.
The following properties are displayed for each server.

Item Name	Description
PHYSICAL_SERVER	Physical server name
BOOT_AGENT	Set boot agent Displays one of the following: - DOS - Windows PE

- target_disk (optional)

Displays the information related to the image operation target disk.
The following properties are displayed for each server.

Item Name	Description
PHYSICAL_SERVER	Physical server name
DISK_NUMBER	Disk number of the configured image operation target disk - When the image operation target disk is already configured "An integer equal to or greater than 1" is displayed. - When the image operation target disk is not configured "-" is displayed. - When the image operation target disk is already configured, and its information cannot be confirmed in the latest disk information "(lost)" is displayed.
DISK_SIZE	Size of the image operation target disk - When the image operation target disk is already configured The size in megabytes is displayed. - When the image operation target disk is not configured "-" is displayed.
PARTITION_COUNT	Number of partitions that exist on the image operation target disk - When the image operation target disk is already configured The number of partitions is displayed. - When the image operation target disk is not configured

Item Name	Description
	"-" is displayed.

- When disk information collection, image operations, or switchover using the backup and restore method is performed, the values of DISK_NUMBER may be modified based on the latest disk recognition order acquired by Resource Orchestrator.
- When disks that are the targets of operations cannot be checked, image operations are determined to be invalid by the pre-operation check of Resource Orchestrator, and the image operations cannot be performed. Perform collection of the disk information and configuration of the image operation target disk again.
- When using this option, if the physical server is a SPARC Enterprise, the information is not output in the list.

The following options can be specified for the migrate subcommand:

-name *guest_name*

Specify the name of the destination target VM guest in *guest_name*.

-to *vmhost*

Specify the name of the destination VM host in *vmhost*.

-mode {live|cold} (optional)

The type of migration method to perform is given for mode.
Depending on the power state of the VM guest to migrate, only one of those types may be available. When omitted, the appropriate type will be chosen depending on the state of the VM guest.
The following values can be specified.

live

Performs a live migration: migration of an active (powered-on) VM guest.

cold

Performs a cold migration: migration of an inactive (powered-off) VM guest.
The power status of the VM guest after migration will be the same as it was before migration.

[KVM]
When -mode cold is specified for migration of a powered-on VM guest, migration may fail.
In that case, power off the VM guest and perform migration, then wait for a while before powering it back on.

-home

Specify when performing migration to the VM Home Position.

-name *vmhost* (optional)

Specify the name of the operation target VM host in *vmhost*.

The following options can be specified for the set subcommand:

-attr vmm_mode=maintenance

-attr {vmm_mode={maintenance|active}|vmware.maintenance=maintenance [VMware]

Sets VM maintenance mode for the VM host.

-attr vmm_mode=active

-attr vmware.maintenance=active [VMware]

Releases VM maintenance mode for the VM host.

-attr vmm_mode=maintenance_with_move [Hyper-V] [Citrix Xen]

Sets VM maintenance mode for the target VM host and migrates the VM guest when set.

-attr bootagt={dos|winpe}

Changes the boot agent used when manipulating images to DOS or Windows PE.

When the managed server has the following configuration, this option must be specified before manipulating images to change the boot agent settings.

- When using Red Hat Enterprise Linux 6 or the Red Hat Enterprise Linux 7 ext4 file system and one of the following conditions applies, it needs to be changed to Windows PE.
  - SAN boot environment using HBA address rename
  - Rack mount or tower servers have been registered with "Disabled" selected for "Association with server management software (ServerView)"
- In a SAN boot environment using HBA address rename and where the following model or OS is used, it needs to be changed to Windows PE.
  - PRIMERGY BX960 S1
  - XenServer6 or later

This option cannot be specified for the following models:

- Fujitsu M10/SPARC Enterprise
- PRIMEQUEST

-attr server_role={none|manager}

Sets the server role of a VM guest.
When Resource Orchestrator is operating on a VM guest, setting "manager" limits the operations that stop the manager of Resource Orchestrator.
This prevents the Resource Orchestrator manager from being stopped unintentionally due to incorrect operations.

-attr target_disk=*disk_number*

In *disk_number*, specify the number of the disk configured as the image operation target disk.
An integer larger than 1 can be specified for the disk number.
Check which disk numbers can be specified using the rcxadm server show -name *resource* -disk command.
When using this option, it is only possible to specify the disk number of a physical server for which the disk information has been acquired in advance by execution of the rcxadm server collect -name *resource* -disk command.
When a backup of an admin server is restored, the actual disk configuration and the disk information may not match. Perform collection of the disk information and configuration of the image operation target disk again.

-name *resource*

For *resource*, specify a server name to place into or release from maintenance mode.

-mode active|maintenance

Specify whether the server is to be placed into or released from maintenance mode.

active

Release maintenance mode.

maintenance

Places into maintenance mode.

The following options can be specified for the unset subcommand:

-target_disk

Deletes the configuration of the image operation target disk for the specified server.

The following options can be specified for the show subcommand:

-disk

When the server is a physical server for which the disk information has already been acquired, the following information is displayed.

- Number of disks (Number of Disk: 0 or larger)
- Disk number (Equal to the number of disks, 1 or larger)
- Disk name (Hardware display name)
- Disk size unit: MByte
- Number of partitions
- Partition number (Equal to the number of partitions, 1 or larger)
- Partition type

  (One of PRIMARY, EXTENDED, LOGICAL, ESP, MSR, DATA, LINUXSWAP, WINRE, or UNKNOWN)
- File systems of partitions

  (One of FAT12, FAT16, NTFS, FAT32, LINUXSWAP, EXT2, EXT3, EXT4, DISKDUMP, REISERFS, VMFS, EXTENDED, or UNKNOWN)
- Partition size
- Usage area of partitions

When the disk information has not been acquired, no value is displayed.

The following options can be specified for the collect subcommand:

-disk

When a physical server is in the following configuration, it is necessary to acquire and configure the information of disks for which image operations are possible before starting image operations.

- When using a SAN data disk environment with a built-in disk boot

This option can only be executed while the physical server is in maintenance mode, and stopped. Start the physical server to acquire the disk information from, and stop it after acquiring the disk information.

When performing update of a physical server for which the disk information has already been acquired, save the disk information acquired during the latest update.

This option cannot be specified for the following models:

- SPARC Enterprise

The following option can be specified for the backup subcommand:

-name *resource*

Specify the name of the VM host (control domain).

-attr os=solaris

Sets Solaris for the target OS.

Requirements

Permissions

One of the following permissions is required:

- OS Administrator
- Resource Orchestrator Privileged User

Location

Admin server

Example

- To display a list of registered servers and their properties

```
>rcxadm server list <RETURN>
PHYSICAL_SERVER    SERVER         ADMIN_IP       STATUS    MAINTENANCE
---------------    ------         --------       ------    -----------
blade01            WebServer01    192.168.1.4    normal    ON
rackserver01       AppServer01    192.168.1.2    normal    OFF
rackserver02       DBServer01     192.168.1.6    stop      OFF
rackserver03       DBServer02     192.168.1.7    normal    ON
```

- To display spare server settings

```
>rcxadm server list -spare <RETURN>
SERVER      PRIMARY      SPARE                VLAN_SWITCH  AUTO_SWITCH ACTIVE
SWITCHOVER_STATE
------      -------      -----                -----------  ----------- ------
----------------
Server1     blade1-1     blade1-9             ON           ON          blade1-9
failback running
Server2     blade1-2     blade1-9,blade1-10   OFF          ON          blade1-2
normal
```

- To display a list of physical servers (including physical OS's and VM hosts)

```
>rcxadm server list -type physical <RETURN>
PHYSICAL_SERVER  SERVER        TYPE      ADMIN_IP        STATUS  MAINTENANCE
---------------  ------        ----      --------        ------  -----------
blade1-1         Server1       native    192.168.3.121   stop    ON
blade1-10        -             -         192.168.3.130   stop    -
blade1-2         Server2       native    192.168.3.122   normal  OFF
blade1-3         Server3       native    192.168.3.123   stop    ON
blade1-5         Server5       native    192.168.3.125   normal  ON
blade1-7         vmesx1        vm_host   192.168.3.127   normal  OFF
blade1-8         Server8       native    192.168.3.128   normal  OFF
blade1-9         -             -         192.168.3.129   stop    -
```

- To display a list of VM guests

```
>rcxadm server list -type vmguest <RETURN>
PHYSICAL_SERVER  SERVER  VM_HOST  ADMIN_IP       STATUS
---------------  ------  -------  -------------  ------
blade1-7         vm-1    vmesx1   192.168.3.127  normal
blade1-7         vm-2    vmesx1   192.168.3.127  normal

>rcxadm server list -type vmguest -server_role <RETURN>
PHYSICAL_SERVER  SERVER  VM_HOST  ADMIN_IP       STATUS  SERVER_ROLE
---------------  ------  -------  -------------  ------  ------------
blade1-7         vm-1    vmesx1   192.168.3.127  normal  manager
blade1-7         vm-2    vmesx1   192.168.3.127  normal  none
```

- To display a list of all server resources (including physical OS's, VM hosts, and VM guests)

```
>rcxadm server list -type all <RETURN>
PHYSICAL_SERVER  SERVER   TYPE     VM_HOST   ADMIN_IP       STATUS  MAINTENANCE
```

```
--------------  -------  -------  --------  -------------  ------  -----------
blade1-1        Server1  native   -         192.168.3.121  stop    ON
blade1-10       -        -        -         192.168.3.130  stop    -
blade1-2        Server2  native   -         192.168.3.122  normal  OFF
blade1-3        Server3  native   -         192.168.3.123  stop    ON
blade1-5        Server5  native   -         192.168.3.125  normal  ON
blade1-7        vmesx1   vm_host  -         192.168.3.127  normal  OFF
blade1-7        vm-1     vm_guest vmesx1    192.168.3.127  normal  OFF
blade1-7        vm-2     vm_guest vmesx1    192.168.3.127  normal  OFF
blade1-8        Server8  native   -         192.168.3.128  normal  OFF
blade1-9        -        -         -        192.168.3.129  stop    -
sparcm10-1      ovm      vm_host  -         192.168.3.131  normal  OFF
sparcm10-1      ovm-1    vm_guest  ovm      192.168.3.131  normal  OFF
sparcm10-1      ovm-2    vm_host   ovm      192.168.3.132  normal  OFF
sparcm10-1      ovm-2-1  vm_guest  ovm-2    192.168.3.132  normal  OFF

>rcxadm server list -type all -server_role <RETURN>
PHYSICAL_SERVER  SERVER   TYPE     VM_HOST   ADMIN_IP       STATUS  MAINTENANCE
SERVER_ROLE
--------------  -------  -------  --------  -------------  ------  -----------
------------
blade1-1        Server1  native   -         192.168.3.121  stop    ON           -
blade1-10       -        -        -         192.168.3.130  stop    -            -
blade1-2        Server2  native   -         192.168.3.122  normal  OFF          -
blade1-3        Server3  native   -         192.168.3.123  stop    ON           -
blade1-5        Server5  native   -         192.168.3.125  normal  ON           -
blade1-7        vmesx1   vm_host  -         192.168.3.127  normal  OFF          -
blade1-7       vm-1     vm_guest vmesx1    192.168.3.127  normal  OFF         manager
blade1-7        vm-2     vm_guest vmesx1    192.168.3.127  normal  OFF          none
blade1-8        Server8  native   -         192.168.3.128  normal  OFF          -
blade1-9        -        -         -        192.168.3.129  stop    -            -
sparcm10-1      ovm      vm_host  -         192.168.3.131  normal  OFF          -
sparcm10-1      ovm-1    vm_guest  ovm      192.168.3.131  normal  OFF          none
sparcm10-1      ovm-2    vm_host   ovm      192.168.3.132  normal  OFF          -
sparcm10-1      ovm-2-1  vm_guest  ovm-2    192.168.3.132  normal  OFF          none
```

- To migrate an active VM guest

```
>rcxadm server migrate -name vm_guest01 -to vm_host02 -mode live <RETURN>
```

- To migrate an inactive VM guest

```
>rcxadm server migrate -name vm_guest01 -to vm_host02 -mode cold <RETURN>
```

- When displaying the information for the current boot agent

```
>rcxadm server list -bootagt <RETURN>
PHYSICAL_SERVER  BOOT_AGENT
--------------  ----------
blade1-1        DOS
blade1-10       Windows PE
blade1-2        DOS
```

- When displaying the information of a disk on which image operations can be performed

```
>rcxadm server show -name blade1-1 -disk <RETURN>
Number of Disk: 2

Disk Number: 1
  Disk Name: FUJITSU MBD2300RC SCSI Disk Device
  Disk Size: 1902400
  Number of Partition: 2
```

```
  Partition Number: 1
    Partition Type: PRIMARY
    Partition Filesystem: EXT3
    Partition Size: 1002400
    Partition Usage: 81000

  Partition Number: 2
    Partition Type: LOGICAL
    Partition Filesystem: EXT3
    Partition Size: 900000
    Partition Usage: 7500

Disk Number: 2
  Disk Name: FUJITSU ETERNUS_DXL SCSI Disk Device
  Disk Size: 100000
  Number of Partition: 1

  Partition Number: 1
    Partition Type: EXTENDED
    Partition Filesystem: EXT3
    Partition Size: 100000
    Partition Usage: 30000
```

- When displaying the information of disk configured as the image operation target

```
>rcxadm server list -target_disk <RETURN>
PHYSICAL_SERVER  DISK_NUMBER  DISK_SIZE        PARTITION_COUNT
---------------  -----------  ---------------- --------------
blade1-1          1            83710            0
blade1-10         -            -                -
blade1-2          2            23014000         13
blade1-3          (lost)       234700           3
```

- When saving the configuration information of OVM for SPARC as XML files

```
>rcxadm server backup -name m10-4s-1 -attr os=solaris <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Note

- A VM guest can be configured to automatically start or stop whenever its VM host starts up or shuts down. This can be achieved by setting up the VM guest's startup and shutdown options in the server virtualization software used.
  For more information, refer to the server virtualization software manual.

- As a result of power operation being performed on a VM guest, an error may occur if the VM guest is moved to another VM host and processes executed.
  Refer to "9.2.2 Functional Differences between Products" in the "Design Guide VE" for details.

- VM guests should be properly configured in order to use the "stop" or "restart" subcommands.
  Stopping or restarting a VM guest that was not properly configured will result in an error unless the -force option is specified.
  Refer to "9.2.1 Configuration Requirements" in the "Design Guide VE" for details.
- For PRIMEQUEST servers, the warning message will not be displayed, even if there is a chance that the switchover will not be correctly performed using Reserved SB settings.
- If ServerView Deployment Manager is used on the admin LAN, the switchover and failback subcommands cannot be used if the managed servers match any of the following conditions.
  For more details, refer to "I.2 Co-Existence with ServerView Deployment Manager" in the "Setup Guide CE".
  - Servers in local boot environments
  - Servers in SAN boot environments without VIOM profiles
- The changes to the boot agent are valid while the physical server is registered. After reregistering the physical server, change the boot agent using the command if necessary.

3.12 rcxadm slb

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm slb** - Server load balancer operations and information display

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm slb - Server load balancer operations and information display

Format

```
rcxadm slb list [{-ruleset [-category {config|operation|all}]|-extend network}]
rcxadm slb log  -name name
rcxadm slb show -name name [-extend network]
rcxadm slb operate -name name -ruleset ruleset_name [-param
parameter_name=value[,parameter_name=value]...]
```

Description

rcxadm slb is the command used to operate or display the information of server load balancers.

Subcommands

list

Displays the list of server load balancers.

The following detailed information is displayed:

Table 3.50 Server Load Balancer Information

Item Name	Description
NAME	The name of the server load balancer
RESOURCE_ID	Resource ID assigned to the server load balancer
TYPE	Type "SLB" is displayed.
RULESET_NAME	Ruleset name used by the Auto-Configuration function
DEVICE_NAME	Network device name in use

Item Name	Description
	Up to 32 characters are displayed when -extend network is specified.
NETWORK_NAME	Network resource name in use This is only displayed when -extend network is specified.

Table 3.51 Ruleset Information for Server Load Balancers

Item Name	Description
TYPE	Type "SLB" is displayed.
CATEGORY	For the ruleset for automatic configuration, "config" is displayed. For the ruleset for operations, "operation" is displayed.
RULESET_NAME	Ruleset name used by the Auto-Configuration function
MAX_SEGMENT	The maximum number of segments that can be defined
MAX_SERVER	The maximum number of servers that can be defined
DESCRIPTION	Descriptions of a ruleset

log

Displays up to 10 generations of history of automatic configuration and operations of network devices.

The following detailed information is displayed:

Table 3.52 History Information of Server Load Balancers

Item Name	Description
Name	The name of the server load balancer
Resource ID	Resource ID assigned to the server load balancer
Serial Number Per Device	Serial number for each network device being used This is only displayed when simple configuration mode is configured.
Type	Type "SLB" is displayed.
Tenant Name	Name of the tenant where the server load balancer is deployed
L-Platform Name	Name of the L-Platform where the server load balancer is deployed
Ruleset Name	Ruleset name used by the Auto-Configuration function
ParameterFile Name	Parameter file name used by the ruleset
Device Name	Network device name in use
Vendor Name	Vendor name of the network device (server load balancer)
Product Name	Product name of the network device (server load balancer)
Model Name	Model name of the network device (server load balancer)
Status	Status of the network device (server load balancer)
History	History information of auto-configuration for the server load balancer (up to 10 generations) The following information is displayed for each generation: - Generation An integer from "00" is displayed. - Run Script Name

Item Name	Description
	The name of the script executed by auto-configuration is displayed. - Time The date and time on which auto-configuration was performed is displayed. - Result The results of auto-configuration are displayed.
OperationHistory	History information of operations on the server load balancer (up to 10 generations) The following information is displayed for each generation: - Generation An integer from "00" is displayed. - Run Script Name The name of the script executed for operation is displayed. - Time The date and time on which the operation was performed. - Result The result of the operation is displayed.

show

Displays the detailed information for a network device.

The following detailed information is displayed:

Table 3.53 Detailed Information of Server Load Balancers

Item Name	Description
Name	The name of the server load balancer
Resource ID	Resource ID assigned to the server load balancer
Serial Number Per Device	Serial number for each network device being used This is only displayed when simple configuration mode is configured.
Type	Type "SLB" is displayed.
Tenant Name	Name of the tenant where the server load balancer is deployed
L-Platform Name	Name of the L-Platform where the server load balancer is deployed
Ruleset Name	Ruleset name used by the Auto-Configuration function
ParameterFile Name	Parameter file name used by the ruleset
Device Name	Network device name in use
Vendor Name	Vendor name of the network device (server load balancer)
Product Name	Product name of the network device (server load balancer)
Model Name	Model name of the network device (server load balancer)
Status	Status of the network device (server load balancer)
Network Name	Network resource name in use This is only displayed when -extend network is specified.

operate

Executes the scripts in the ruleset for operations and displays the result.

Options

-name *name*

In *name*, specify the name of the server load balancer.

-ruleset

For the list subcommand, specify when displaying the list of rulesets.

For the operate subcommand, specify the name of the ruleset for operations.

-category

Specify the type of the rulesets to display.

config

Specify when displaying the list of the rulesets for automatic configuration.

operation

Specify when displaying the list of rulesets for operations.

all

Specify when displaying all types of rulesets.

When -category is omitted, "config" is specified.

-param

Specify variable information to be passed to the scripts of the ruleset used for operations.

parameter_name=value

Specify in the format of "parameter name = value". To specify multiple parameters, separate them using commas (",").

-extend network

Specify when specifying the name of the network resource in use.

Example

- To display a list of server load balancers:

```
>rcxadm slb list<RETURN>
NAME                  RESOURCE_ID      TYPE       RULESET_NAME              DEVICE_NAME
----                  -----------      ----       ------------              -----------
L-NetDev2             LBEFGH-456       SLB        SLB_RULE11                SLB-1
L-NetDev4             LBMNOP-123       SLB        SLB_RULE21                SLB-2
L-NetDev11            LBUVWX-789       SLB        SLB_RULE31                SLB-3
```

- To display a list of server load balancers (when specifying -extend network):

```
>rcxadm slb list -extend network<RETURN>
NAME                  RESOURCE_ID      TYPE       RULESET_NAME              DEVICE_NAME
NETWORK_NAME
----                  -----------      ----       ------------              -----------
------------
L-NetDev2             LBEFGH-456       SLB        SLB_RULE11                SLB-1
LNetwork1
L-NetDev4             LBMNOP-123       SLB        SLB_RULE21                SLB-2
LNetwork2
```

```
L-NetDev11              LBUVWX-789       SLB        SLB_RULE31                SLB-3
LNetwork3
```

- To display a list of rulesets for automatic configuration of server load balancers:

```
>rcxadm slb list -ruleset<RETURN>
TYPE       CATEGORY        RULESET_NAME    MAX_SEGMENT  MAX_SERVER  DESCRIPTION
----       -----------     ------------    -----------  ----------  -----------
SLB        config          SLB_RULE1       -            50          HTTP(80) roundrobin
connection_limit=none
SLB        config          SLB_RULE2       -            50          HTTP(80) mini-conne
connection_limit=500
SLB        config          SLB_RULE3       -            100         HTTP(80) roundrobin
cookie_persistence
```

- To display a list of rulesets for operations on server load balancers:

```
>rcxadm slb list -ruleset -category operation<RETURN>
TYPE       CATEGORY        RULESET_NAME    MAX_SEGMENT  MAX_SERVER  DESCRIPTION
----       -----------     ------------    -----------  ----------  -----------
SLB        operation       SLB_OPE1        -            -           Separation of distribution
server
SLB        operation       SLB_OPE2        -            -           Incorporation of distribution
server
```

- To display detailed information of server load balancers:

```
>rcxadm slb show -name slb1<RETURN>
Name: slb1
Resource ID: SLB-001
Serial Number Per Device: 1
Type: SLB
Tenant Name: Tenant001
L-Platform Name: L-Platform1
Ruleset Name: slb_rule_01
ParameterFile Name: default_param.prm
Device Name: SLB-1
Vendor Name: Fujitsu
Product Name: IPCOM EX IN
Model Name: IPCOM EX2500IN
Status: Normal
```

- To display detailed information of server load balancers (when specifying -extend network):

```
>rcxadm slb show -name slb1 -extend network<RETURN>
Name: slb1
Resource ID: SLB-001
Serial Number Per Device: 1
Type: SLB
Tenant Name: Tenant001
L-Platform Name: L-Platform1
Ruleset Name: slb_rule_01
ParameterFile Name: default_param.prm
Device Name: SLB-1
Vendor Name: Fujitsu
Product Name: IPCOM EX IN
Model Name: IPCOM EX2500IN
Status: Normal
Network Name: LNetwork1
```

- To display the history information of server load balancers:

```
>rcxadm slb log -name slb1<RETURN>
Name: slb1
Resource ID: SLB-001
Serial Number Per Device: 1
Type: SLB
Tenant Name: Tenant001
L-Platform Name: L-Platform1
Ruleset Name: slb_rule_01
ParameterFile Name: default_param.prm
Device Name: SLB-1
Vendor Name: Fujitsu
Product Name: IPCOM EX IN
Model Name: IPCOM EX2500IN
Status: Normal

History:
00 Run Script Name: create  Time: 2011/03/30 Wed 00:16:00  Result: normal
01 Run Script Name: modify  Time: 2011/03/30 Wed 10:31:00  Result: normal
02 Run Script Name: modify  Time: 2011/04/06 Wed 12:10:26  Result: normal
:
09 Run Script Name: modify  Time: 2011/04/27 Wed 08:45:10  Result: normal

OperationHistory:
00 Run Ruleset Name: ope1    Time: 2011/03/30 Wed 10:33:00  Result: normal
01 Run Ruleset Name: ope2    Time: 2011/04/06 Wed 12:12:30  Result: normal
:
09 Run Ruleset Name: ope10   Time: 2011/04/27 Wed 08:47:10  Result: normal
```

Information

- When auto-configuration is set for redundancy configuration network devices, the information after Device Name is displayed for each network device in the detailed information or the history information.
- If the detailed information or the history information is displayed while a server load balancer is being created, a hyphen "-" may be displayed for the information after Device Name.

3.13 rcxadm storage

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm storage** - physical storage unit resource operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm storage - physical storage unit resource operations

Format

```
rcxadm storage list [-verbose]
rcxadm storage show -name name
rcxadm storage modify -name name {[-label label] [-comment comment]}
```

Description

rcxadm storage is the command used to perform operations on the physical storage unit resources managed by storage management software.

Subcommands

list

Displays a list of physical storage unit resource information.

The following detailed information is displayed:

Table 3.54 Physical Storage Unit Resource Information

Item Name	Description
NAME	Physical storage unit resource name
LABEL	Physical storage unit resource label
COMMENT (*)	Physical storage unit resource comment
IP ADDRESS	Physical storage unit resource IP address
STATUS	Physical storage unit resource status
MODEL (*1)	Physical storage unit resource model name
DEVICE ID (*)	Physical storage unit resource unit identifier

* Note: When specifying -verbose for the option, it is displayed.

show

Displays details of physical storage unit resource information.

The following detailed information is displayed:

Table 3.55 Detailed Information for Physical Storage Unit Resources

Item Name	Description
NAME	Physical storage unit resource name
LABEL	Physical storage unit resource label
COMMENT	Physical storage unit resource comment
MODEL	Physical storage unit resource model name
SERIAL NUMBER	Physical storage unit resource serial number
IP ADDRESS	Physical storage unit resource IP address
STATUS	Physical storage unit resource status
PORT NUMBER	Physical storage unit resource port number
MANAGEMENT SOFTWARE	Storage management software name
DEVICE ID	Physical storage unit resource unit identifier

modify

Changes labels and comments of physical storage unit resources.

Options

-name *name*

In *name*, specify the name of the target physical storage unit resource to perform an operation with.

-verbose

Specify when displaying detailed information.

-label *label*

In *label*, specify the new label.

-comment *comment*

In *comment*, specify the new comments.

Example

- To display a list of physical storage unit resource information:

```
>rcxadm storage list <RETURN>
NAME                    LABEL    IP ADDRESS       STATUS
----                    -----    ----------       ------
DX90-1                  -        192.168.0.201    normal
```

- To display the details of physical storage unit resource information:

```
>rcxadm storage list -verbose <RETURN>
NAME         LABEL    COMMENT  IP ADDRESS       STATUS   MODEL                DEVICE ID
----         -----    -------  ----------       ------   -----                ---------
DX90-1        -        -        192.168.0.201    normal   ETERNUSDXL(ET09E24A)
192.168.0.201
```

- To display the detailed information for a physical storage unit resource:

```
>rcxadm storage show -name DX90-1 <RETURN>
Name: DX90-1
Label:
Comment:
Model: ETERNUSDXL(ET09E24A)
Serial number: 1234567890
IP address: 192.168.0.201
Status: normal
Port number: 6
Management software: ETERNUS SF Storage Cruiser
DEVICE ID 192.168.0.201
```

3.14 rcxadm tenant

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm tenant** - Tenant operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm tenant - Tenant operations

Format

rcxadm tenant create -file *file.xml* **[-nowait]**
rcxadm tenant delete -name *name* **[-nowait]**
rcxadm tenant list [-name *name***]**
rcxadm tenant show -name *name*
rcxadm tenant modify -name *name* **{[-display_name** *display_name***] [-mail** *mail_address***] [-global** *pool*,...**]**

```
[-cut_off_date cut_off_date] [-accounting_mail accounting_mail_address] [-attr attr[,attr[...]]]} [-
nowait]
rcxadm tenant lockrsc -name name
rcxadm tenant unlockrsc -name name
```

Description

rcxadm tenant is the command used to perform tenant management and operations.

Subcommands

create

Creates a tenant.
Create a user group with the same name as that of the tenant. The role of the user group is tenant_admin, and the access scope is the tenant to be created.
The location that a tenant can be created in is the root folder.

delete

Delete the specified tenant and any tenants with the same name as that of the user group.

In the following cases, a tenant cannot be deleted.

- When creating an L-Platform under a tenant
- When a user belongs to a user group with the same name as that of the tenant

User groups and users are also deleted if the roles assigned to them are only targeting the tenant for deletion.

list

Displays a list of tenants.

It is possible to display the list excluding the resources being registered, using the configuration in the definition file for "folder operations". By default, resources being registered are displayed. For details on the definition file for "folder operations", refer to "3.5 rcxadm folder".

The following detailed information is displayed:

- When not specifying -name for the option

Table 3.56 Tenant Information (when omitting the -name option)

Item Name	Description
NAME	Tenant name
LABEL	Tenant label

- When specifying -name for the option

Table 3.57 Tenant Information (when specifying the -name option)

Item Name	Description
TYPE	Type of resource folder, resource pool, or each resource
NAME	Name of the resource folder, resource pool, or each resource
LABEL	Label of the resource folder, resource pool, or each resource

show

Displays the detailed information for a tenant.

The following detailed information is displayed:

Table 3.58 Detailed Information for Tenants

Item Name	Description
NAME	Tenant name
LABEL	Tenant label
COMMENT	Comment for a tenant
GLOBAL POOL	Global pool name

modify

Modifies one of the following. Specify at least one of the following items:

- Tenant Display Name
- E-mail Address
- Definition of the Global Pool
- Cut off Date
- Accounting Mail Address
- Tenant Configuration Information

lockrsc

Some operations are not possible for the following resources used by an L-Platform within a tenant.

- Network Resources
- Address Set Resources
- Disk Resources
- Virtual Storage Resources

For details on the operations that are restricted, refer to "2.3 Switchover Levels" in the "DR Option Instruction".

unlockrsc

Cancels the settings restricting operations configured for specific resources using the lockrsc option.

Options

-file *file.xml*

In *file.xml*, specify the XML file that defines the information related to one or more tenants to be registered. When an error occurs during registration of multiple tenants, no tenant registrations have been completed. Remove the cause of error, and execute the operation again.
For details on the XML file definition, refer to "15.12 Tenants".

-nowait

Use this option to return directly to the command prompt without waiting for the operation specified in the subcommand to complete its execution.

-name *name*

In *name*, specify the name of the target tenant to perform an operation with.

-display_name *display_name*

Specify a tenant display name for *display_name*.

-mail *mail_address*

Specify the e-mail address for the tenant administrator in *mail_address*.

-global *pool*

In *pool*, specify the resource pool name to be defined in a global pool of a tenant. If specifying a resource pool in a resource folder, specify the resource folder name using slashes ("/"). When specifying multiple resource pools, separate them using commas.

-cut_off_date *cut_off_date*

Specify the cut off date in *cut_off_date*.

-accounting_mail *accounting_mail_address*

Specify the destination e-mail address for the accounting information in *accounting_mail_address*.

-attr *attr*

Specify the tenant configuration information in *attr* using the following format: When specifying multiple pieces of information, separate them using commas.

```
name=value[,name=value,...]
```

For details on the *names* and *values* that can be specified, refer to "Table 15.22 Items of Tenant Configuration Information" in "15.12 Tenants".

Example

- When displaying a list of tenant information

```
>rcxadm tenant list <RETURN>
NAME                LABEL
----                -----
/Tenant01            -
/Tenant02            -

>rcxadm tenant list -name Tenant01 <RETURN>
TYPE                NAME                            LABEL
----                ----                            -----
Pool                AddressPool02                   -
Pool                ImagePool02                     -
Pool                NetworkPool02                   -
Pool                ServerPool02                    -
Pool                StoragePool02                   -
Pool                VMHostPool02                    -
LServer             lserver02                       l_server
2
```

- When displaying details of tenant information

```
>rcxadm tenant show -name TenantA <RETURN>
name        : tenantA
label       : tenant A
comment     : comment_A
global pool : /VMHostPool
global pool : /NetworkPool
global pool : /AddressPool
```

3.15 rcxadm vstorage

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm vstorage** - virtual storage resource operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm vstorage - virtual storage resource operations

Format

```
rcxadm vstorage list [-verbose [-extend lock]]
rcxadm vstorage show -name name [-extend lock]
rcxadm vstorage move -name name -to pool [-nowait]
rcxadm vstorage modify -name name [-label label] [-comment comment]
```

Description

rcxadm vstorage is the command used to perform operations on the virtual storage resources provided by storage management software and VM management software. Virtual storage is a storage resource that can be allocated part of a disk resource by specifying a size.

Virtual storage resources enable you to create disk resources to connect to L-Servers.

Subcommands

list

Displays a list of virtual storage resource information.

The following detailed information is displayed:

Table 3.59 Virtual Storage Resource Information

Item Name	Description
NAME	Virtual storage resource name
LABEL	Virtual storage resource label
COMMENT (*1)	Virtual storage resource comment
TOTAL	Total virtual storage resource size Raw Capacity of the RAID group/Storage Pool of the storage device is displayed for the virtual storage resources of EMC CLARiiON storage or EMC VNX storage. 0.0GB is displayed for the virtual storage resources of EMC Symmetrix DMX storage or EMC Symmetrix VMAX storage. [OVM for x86 2.2] If the virtual storage resource is a storage repository of OVM for x86 2.2, it is not displayed.
FREE	Virtual storage resource free space 0.0GB is displayed for the virtual storage resources of EMC Symmetrix DMX storage or EMC Symmetrix VMAX storage. When the allocated size that is created using Thin Provisioning and Automatic Storage Layering exceeds the total size of the virtual storage resources, the excessive size is displayed with a minus sign ("-"). For details on the virtual storage resources that Thin Provisioning and Automatic Storage Layering can be applied to, refer to "10.1.1 Allocating Storage" in the "Design Guide CE". [VMware] [Hyper-V] The excess size, with a minus sign ("-"), is displayed only when the storage resource is registered in a storage pool that thin provisioning has been applied to. In the following cases, the actual free space is displayed: - The storage resource is registered in a storage pool that thin provisioning is not applied to

Item Name	Description
	- The storage resource is not registered in a storage pool [OVM for x86 2.2] For the displayed value, refer to "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE".
USED (*1)	Virtual storage resource used space 0.0GB is displayed for the virtual storage resources of EMC Symmetrix DMX storage or EMC Symmetrix VMAX storage. For virtual storage resources that Thin Provisioning and Automatic Storage Layering are applied to, the virtually allocated space is displayed. [VMware] [Hyper-V] Virtually allocated space is displayed only when the storage resource is registered in a storage pool that thin provisioning has been applied to. In the following cases, actual amount of used space is displayed. - The storage resource is registered in a storage pool that thin provisioning is not applied to - The storage resource is not registered in a storage pool [OVM for x86 2.2] If the virtual storage resource is a storage repository of OVM for x86 2.2, it is not displayed.
STATUS	Virtual storage resource status
ATTRIBUTES (*1)	One of the following is displayed: - Thin Displayed when the thin provisioning attribute is applied. - Thick Displayed when the thick provisioning attribute is applied. - A hyphen ("-") Displayed for a disk resource that uses an iSCSI connection, or a virtual storage resource linked with a disk resource for a virtual L-Server. [VMware] [Hyper-V] One of the following is displayed: - A hyphen ("-") Displayed when the virtual storage resource is not registered in a storage pool. - Thin Displayed when the virtual storage resource is registered in a storage pool to which the thin provisioning attribute is applied. - Thick Displayed when the virtual storage resource is registered in a storage pool to which the thin provisioning attribute is not applied. If -verbose -extend lock is specified for the option, in addition to the above information, the following information is displayed, separated by commas (","): - locked(DR) (*2) This is displayed when resources are locked during DR execution. - unlocked(DR) (*2)

Item Name	Description
	This is displayed when resources are not locked.

*1: This is displayed when -verbose is specified for the option.
*2: This is displayed when -verbose -extend lock is specified for the option.

show

Displays the detailed information for a virtual storage resource.

The following detailed information is displayed:

Table 3.60 Detailed Information for Virtual Storage Resources

Item Name	Description
NAME	Virtual storage resource name
LABEL	Virtual storage resource label
COMMENT	Virtual storage resource comment
TOTAL SIZE	Total virtual storage resource size Raw Capacity of the RAID group/Storage Pool of the storage device is displayed for the virtual storage resources of EMC CLARiiON storage or EMC VNX storage. 0.0GB is displayed for the virtual storage resources of EMC Symmetrix DMX storage or EMC Symmetrix VMAX storage. [OVM for x86 2.2] If the virtual storage resource is a storage repository of OVM for x86 2.2, it is not displayed.
FREE SIZE	Virtual storage resource free space 0.0GB is displayed for the virtual storage resources of EMC Symmetrix DMX storage or EMC Symmetrix VMAX storage. When the allocated size that is created using Thin Provisioning and Automatic Storage Layering exceeds the total size of the virtual storage resources, the excessive size is displayed with a minus sign ("-"). For details on the virtual storage resources that Thin Provisioning and Automatic Storage Layering can be applied to, refer to "10.1.1 Allocating Storage" in the "Design Guide CE". [VMware] [Hyper-V] The excess size, with a minus sign ("-"), is displayed only when the storage resource is registered in a storage pool that thin provisioning has been applied to. In the following cases, the actual free space is displayed: - The storage resource is registered in a storage pool that thin provisioning is not applied to - The storage resource is not registered in a storage pool [OVM for x86 2.2] For the displayed value, refer to "8.5.9 Advisory Notes for OVM for x86 2.2 Usage" in the "Setup Guide CE".
USED SIZE	Virtual storage resource used space 0.0GB is displayed for the virtual storage resources of EMC Symmetrix DMX storage or EMC Symmetrix VMAX storage. For virtual storage resources that Thin Provisioning and Automatic Storage Layering are applied to, the virtually allocated space is displayed. [VMware] [Hyper-V] Virtually allocated space is displayed only when the storage resource is registered in a storage pool that thin provisioning has been applied to.

Item Name	Description
	In the following cases, actual amount of used space is displayed. - The storage resource is registered in a storage pool that thin provisioning is not applied to - The storage resource is not registered in a storage pool [OVM for x86 2.2] If the virtual storage resource is a storage repository of OVM for x86 2.2, it is not displayed.
STATUS	Virtual storage resource status
ATTRIBUTES	One of the following is displayed: - Thin Displayed when the thin provisioning attribute is applied. - Thick Displayed when the thick provisioning attribute is applied. - A blank space (" ") Displayed for a disk resource that uses an iSCSI connection, or a virtual storage resource linked with a disk resource for a virtual L-Server. [VMware] [Hyper-V] One of the following is displayed: - A blank space (" ") Displayed when the virtual storage resource is not registered in a storage pool. - Thin Displayed when the virtual storage resource is registered in a storage pool to which the thin provisioning attribute is applied. - Thick Displayed when the virtual storage resource is registered in a storage pool to which the thin provisioning attribute is not applied. If -extend lock is specified for the option, in addition to the above information, the following information is displayed, separated by commas (","): - locked(DR) (*) This is displayed when resources are locked during DR execution. - unlocked(DR) (*) This is displayed when resources are not locked.

* Note: The information is displayed when -extend lock is specified for the option.

move

Moves a virtual storage resource to the specified resource pool.

modify

Changes labels and comments of virtual storage resources.

Options

-name *name*

In *name*, specify the name of the target virtual storage resource to perform an operation with.

-to *pool*

Specify the destination resource pool in *pool*.

For the resource pool allocated in the resource folder, specify the resource folder name using slashes ("/").

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the virtual storage resource specified in the subcommand to complete its execution.

-label *label*

In *label*, specify the new label.

-verbose

Specify when displaying detailed information.

-comment *comment*

In *comment*, specify the new comments.

-extend lock

Specify when displaying additional information.

Example

- To display the list of the virtual storage resource information:

```
>rcxadm vstorage list <RETURN>
NAME                      LABEL    TOTAL        FREE         STATUS
----                      -----    -----        ----         ------
vCenterServer_Storage1    -        100.0GB      80.0GB        normal
vCenterServer_data02      -        100.0GB      40.0GB        normal
vCenterServer_data03      -        100.0GB      40.0GB        normal
vCenterServer_data04      -        100.0GB      20.0GB        normal
```

- To display the details of the virtual storage resource information:

```
>rcxadm vstorage list -verbose <RETURN>
NAME                    LABEL  COMMENT  TOTAL    FREE    USED    STATUS  ATTRIBUTES
----                    -----  -------  -----    ----    ----    ------  ----------
vCenterServer_Storage1  -      -        100.0GB  80.0GB  20.0GB  normal  Thin
vCenterServer_data02    -      -        100.0GB  40.0GB  60.0GB  normal  Thick
vCenterServer_data03    -      -        100.0GB  40.0GB  60.0GB  normal  Thick
vCenterServer_data04    -      -        100.0GB  20.0GB  80.0GB  normal  Thick
```

- To display the detailed information for a virtual storage resource:

```
>rcxadm vstorage show -name vCenterServer_Storage1 <RETURN>
Name: vCenterServer_Storage1
Label:
Comment:
Total Size: 100.0GB
Free Size: 80.0 GB
Used Size: 20.0 GB
Status: normal
Attributes: Thin
```

- When checking locked resource information

```
>rcxadm vstorage list -verbose -extend lock <RETURN>
NAME                    LABEL  COMMENT  TOTAL     FREE     USED     STATUS  ATTRIBUTES
```

```
----                 -----  -------  -----     ----     ----     ------  ------------------
P192-168-0-206_R0x0000 -      -        1024.0GB  100.0GB  924.0GB  normal  Thick,locked(DR)
P192-168-0-206_R0x0001 -      -       1024.0GB  100.0GB  924.0GB  normal  Thick,unlocked(DR)

>rcxadm vstorage show -name vCenterServer_Storage1 -extend lock <RETURN>

Name: vCenterServer_Storage1
Label:
Comment:
...
Attributes: Thin,locked(DR)
```

3.16 rcxadm tenant [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm tenant** - Tenant operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm tenant - Tenant operations

Format

```
rcxadm tenant list [-name name]
rcxadm tenant show -name name
rcxadm tenant create -file file.xml [-nowait]
rcxadm tenant modify -name name {[-new_name new_name] [-label label] [-comment comment] [-global
pool,...]} [-nowait]
rcxadm tenant delete -name name [-nowait]
rcxadm tenant move -name name [-to folder] [-nowait]
```

Description

rcxadm tenant is the command used to perform tenant management and operations.

Subcommands

list

Displays a list of tenants.

The following detailed information is displayed:

- When not specifying -name for the option

Table 3.61 Tenant Information (when omitting the -name option)

Item Name	Description
NAME	Tenant name
LABEL	Tenant label

- When specifying -name for the option

Table 3.62 Tenant Information (when specifying the -name option)

Item Name	Description
TYPE	Type of resource folder, resource pool, or each resource
NAME	Name of the resource folder, resource pool, or each resource
LABEL	Label of the resource folder, resource pool, or each resource

show

Displays the detailed information for a tenant.

The following detailed information is displayed:

Table 3.63 Detailed Information for Tenants

Item Name	Description
NAME	Tenant name
LABEL	Tenant label
COMMENT	Comment for a tenant
GLOBAL POOL	Global pool name

create

Creates a tenant.

modify

Modifies one of the following. Specify at least one of the following items:

- Tenant Name
- Label
- Comment Information
- Definition of the Global Pool

delete

Deletes a tenant.
When an L-Server is created in a tenant, deleting the tenant will also delete the L-Server.
For details on how to delete an L-Server, refer to the advisory notes of "3.6 rcxadm lserver".

User groups and users are also deleted if the roles assigned to them are only targeting the tenant for deletion. When user information is managed using a directory service, the user information will be deleted from the management information of Resource Orchestrator. The user information in the directory service is not deleted.

move

Moves a tenant to the specified resource folder. If the destination resource folder is not specified, the folder is moved to the home folder. It cannot be moved into a tenant.

Options

-file *file.xml*

In *file.xml*, specify the XML file that defines the information related to a tenant.
For details on the XML file definition, refer to "15.19 Tenants (for Basic mode)".

-nowait

Use this option to return directly to the command prompt without waiting for the operation specified in the subcommand to complete its execution.

-name *name*

In *name*, specify the name of the target tenant to perform an operation with. If a tenant created in a resource folder is specified, specify the resource folder name using slashes ("/").

-global *pool*

In *pool*, specify the resource pool name to be defined in a global pool of a tenant. If specifying a resource pool in a resource folder, specify the resource folder name using slashes ("/"). When specifying multiple resource pools, separate them using commas.

-new_name *new_name*

In *new_name*, specify the changed tenant name.

-label *label*

In *label*, specify the new label.

-comment *comment*

In *comment*, specify the comment for a tenant.

-to *folder*

In folder, specify the destination resource *folder*. For the hierarchized resource folder, specify the resource folder name using slashes ("/"). It cannot be moved to a tenant or a resource folder in a tenant.
When omitted, the server is moved to the home folder.
When executed by a user who has multiple access scopes specified, it cannot be omitted. Specify a resource folder.

Example

- When displaying a list of tenant information

```
>rcxadm tenant list <RETURN>
NAME                LABEL
----                -----
/Tenant01            -
/Tenant02            -

>rcxadm tenant list -name Tenant01<RETURN>
TYPE              NAME                          LABEL
----              ----                          -----
Pool               AddressPool02                    -
Pool               ImagePool02                      -
Pool               NetworkPool02                    -
Pool               ServerPool02                     -
Pool               StoragePool02                    -
Pool               VMHostPool02                     -
LServer            lserver02
l_server 2
```

- When displaying details of tenant information

```
>rcxadm tenant show -name TenantA <RETURN>
name        : tenantA
label       : tenant A
comment     : comment_A
global pool : /VMHostPool
global pool : /NetworkPool
global pool : /AddressPool
```

3.17 rcxadm filesrvctl

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm filesrvctl** - display of external server information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm filesrvctl - display of external server information

Format

```
rcxadm filesrvctl show -ip ipaddress
```

Description

rcxadm filesrvctl is the command used to display the information of external servers.

Subcommands

show

Displays the detailed information for an external server.

The following detailed information is displayed:

Table 3.64 Detailed Information for External Servers

Item Name	Description
Type	Outputs the type of the external server.
Port	Outputs the port number.
IpAddress	Outputs the IP address of the external server.
User	Outputs the account name of the external server.

Options

-ip *ipaddress*

In *ipaddress*, specify the IP address (IPv4 format) of the external server.

Example

- To display a list of external servers

```
>rcxadm filesrvctl show -ip 192.168.1.1 <RETURN>
Type: ftp
Port: 21
IpAddress: 192.168.1.1
User: guest
```

3.18 rcxadm vcdsrvctl

Name

[Windows Manager]
Installation_folder\SVROR\Manager\bin\rcxadm vcdsrvctl - configuration operation of the information of the server used for storing VCD

Format

```
rcxadm vcdsrvctl register -url url -user_name user_name  -passwd passwd
rcxadm vcdsrvctl unregister
rcxadm vcdsrvctl list
```

Description

rcxadm vcdsrvctl is the command for setting, deleting, and referencing the information of the server for storing VCD.

When changing the server for storing VCD, delete it and then perform settings again.

Subcommands

register

Configures the information of the server used for storing VCD.

unregister

Deletes the information of the server used for storing VCD.

list

Displays the information registered using the command.

Item Name	Description	Display Example
URL	The URL of the FTP server used for storing VCD	ftp://example.co.jp/iso
USER_NAME	The user name of the FTP server used for storing VCD	user01

Options

-url url

In "url", specify the URL of the FTP server used for storing VCD.

Specify this option even when changing from a well-known port.

Example

ftp://example.co.jp:777/iso/

Specify a character string starting with "ftp://", containing up to 256 characters using alphanumeric characters (upper/lower case), colons (":"), slashes ("/"), periods ("."), underscores ("_"), and hyphens ("-").

-user_name user_name

In "user_name", specify the user name of the FTP server used for storing VCD.

Specify a character string using up to 32 characters, including alphanumeric characters (upper or lower case), underscores ("_"), or hyphens ("-").

-passwd password

In "passwd", specify the password of the server used for storing VCD.

Specify a character string using up to 32 characters, including alphanumeric characters (upper or lower case), underscores ("_"), or hyphens ("-").

Requirements

Permissions

One of the following permissions is required:

- OS Administrator
- Resource Orchestrator Privileged User

Location

Admin server

Example

- Configuration of the information of the server for storing VCD

```
> rcxadm vcdsrvctl register -url ftp://example.co.jp/iso -user_name user1 -passwd pass1 <RETURN>
```

- Configuration results of the information of the server for storing VCD

```
> rcxadm vcdsrvctl list <RETURN>
  URL                              USER_NAME
  -------------------------------  ---------
  ftp://example.co.jp/iso          user1
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Chapter 4 Image Operations

This chapter explains the commands used to operate images managed in Resource Orchestrator.

4.1 rcxadm image

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm image** - system or cloning image operations of servers and L-Servers

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm image - system or cloning image operations of servers and L-Servers

Format

Operations for system images and cloning images of servers

```
rcxadm image backup -server resource [-comment comment] [-nowait] [-force]
rcxadm image restore -server resource [-version version] [-nowait]
rcxadm image create -server resource -name image [-comment comment] [-nowait]
rcxadm image deploy -server resource [:hostname][,resource[:hostname]]... -name image [-version
version] [-nowait]
rcxadm image delete -server resource -version version
rcxadm image delete -name image -version version
rcxadm image list -type {backup|cloning} {[-server resource]|[-name image]}
rcxadm image list -server [resource]
```

Operations for system images and cloning images of L-Servers

```
rcxadm image create -server resource -name image [-comment comment] [-to pool] [-storage storagename]
[-attr attr[,attr[,...]]] [-nowait]
rcxadm image snapshot -server resource [-comment comment] [-online] [-nowait]
rcxadm image backup -server resource [-comment comment] [-nowait] [-force]
rcxadm image delete -server resource -version version
rcxadm image delete -name image -version version
rcxadm image restore -server resource [-version version] [-nowait]
rcxadm image list -type cloning [-name image] [-detail] [-extend disksize,custom,storage,relation]
rcxadm image list -type snapshot [-server resource][-comment comment] [-online] [-detail]
rcxadm image move -name image -to pool [-nowait]
rcxadm image refresh -type type
```

Information

rcximage is an abbreviated form of the rcxadm image command. Both forms provide the same subcommands and options, and produce the same results.

Point

A list of system images can be obtained using one of the following two methods.

a. **rcxadm image list -type backup [-server** *resource***]**

b. **rcxadm image list -server [***resource***]**

Method b. is only supported only for compatibility purposes with Systemwalker Resource Coordinator Virtual Server Edition V13.2.0 and V13.3.0. As future versions may not support this method, it is recommended to use method a. instead.

Description

rcxadm image is the command used to perform operations involving system images and cloning images of servers and L-Servers.

- Operations of system images of servers (physical OS or VM host)

  Backup and restore operations are done by collecting a system image from a managed server (physical OS or VM host) and storing it on the admin server disk. This system image can later be restored to the same managed server.

- Operations of cloning images of servers (physical OS)

  Cloning is done by collecting a cloning image from a reference server, and storing it on the admin server disk. Cloning images can later be distributed to other servers (either individually or simultaneously to multiple servers). All image operations (backup, restore, and cloning) are performed remotely over the network.
  Before using this command, refer to the overview and sections about each operation mentioned in the following manuals.

  - "Chapter 16 Backup and Restore" in the "User's Guide VE"
  - "Chapter 12 Cloning [Physical Servers]" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"

If any one of the "backup", "restore", "create", or "deploy" subcommands is executed, the target server is automatically placed into maintenance mode until processing completes. Once complete, the server is set back to its original mode.

Operations for system images and cloning images of L-Servers

- A resource pool where images are stored can be specified with the -to option when creating an image. The virtual storage location for an image can be specified with the -storage option. Collection methods for virtual servers can be specified by using the -attr option.

  rcxadm image create -server *resource* **-name** *image* **[-comment** *comment***] [-to** *pool***] [-storage** *storagename***] [-attr** *attr***[,attr[,...]]] [-nowait]**

- An L-Server snapshot can be created with the snapshot subcommand.

  rcxadm image snapshot -server *resource* **[-comment** *comment***] [-online] [-nowait]**

- A system image of a physical L-Server can be backed up with the backup subcommand.

  rcxadm image backup -server *resource* **[-comment** *comment***] [-nowait] [-force]**

- An L-Server snapshot and the system image of a physical L-Server can be deleted with the delete subcommand.

  rcxadm image delete -server *resource* **-version** *version*

- Cloning images can be deleted using the delete subcommand.

  rcxadm image delete -name *name* **-version** *version*

- An L-Server snapshot and the system image of a physical L-Server can be restored with the restore subcommand.

  rcxadm image restore -server *resource* **[-version** *version***] [-nowait]**

- Cloning can be specified with the -type option when using the list command. Detailed information can also be output with the -detail option. Display information can be added with the -extend option.

  rcxadm image list -type cloning [-name *image***] [-detail] [-extend {disksize,custom}]**

- Storage can be specified with the -extend option when using the list command. If storage is specified, the image location type and the image location of the cloning image are displayed.

  rcxadm image list -type cloning [-name *image***] [-detail] [-extend storage]**

- relation can be specified with the -extend option when using the list command. If relation is specified, the name of the server management software linked to the cloning image is displayed.

  rcxadm image list -type cloning [-name *image***] [-detail] [-extend relation]**

- A snapshot can be specified with the -type option when using the list command. Detailed information can also be output with the -detail option.

  rcxadm image list -type snapshot [-server *resource***] [-detail]**

- Images registered in the orchestration tree can be moved between resource pools. The destination resource pool name can be specified with the -to option.

  rcxadm image move -name *image* **-to** *pool* **[-nowait]**

- Use the refresh subcommand to update the image.

  rcxadm image refresh -type *type*

Note

The number of cloning image versions that can be kept for a given cloning image (identified by its name attribute) is limited.

When collecting cloning images using the create subcommand will cause a number exceeding the maximum to be collected, an error will occur.

Check the version of the cloning image name to be collected using the list subcommand, delete any unnecessary cloning image versions using the delete subcommand, and then perform collection of cloning images.

The maximum number of versions of the cloning images is 3 by default.

For details on how to change the number of cloning images versions, refer to "5.9 rcxadm imagemgr".

Subcommand (Operations for system images and cloning images of servers)

backup

Backs up a system image from the specified server (physical OS or VM host) to the admin server.

restore

Restores a system image to the specified server (physical OS or VM host).

create

Collects a cloning image from the specified server (physical OS).

deploy

Deploys a cloning image to one or multiple servers (physical OS).

delete

- System image deletion

  Deletes a system image belonging to the specified server (physical OS or VM host).

- Cloning image deletion

  Deletes the specified cloning image.

list

System Image List

Displays a list of system images for the specified server.
The following properties are displayed for each server.

Item Name	Description
SERVERNAME	Name of the server (physical OS or VM host) from which the system image was backed up
VERSION	Version number of the system image

Item Name	Description
BACKUPDATE	Backup date and time of the system image
COMMENT	Comment describing the system image

Cloning Image Display

Displays a list of cloning images for the specified server.
The following properties are displayed for each server.

Item Name	Description
NAME	Name of the cloning image
VERSION	Version of cloning images
CREATIONDATE	Creation date and time of the cloning image
COMMENT	Comment describing the cloning image

Subcommand (Operations for system images and cloning images of L-Servers)

create

Collects a cloning image of the specified L-Server.

list

Displays the cloning images and snapshot images of the specified L-Server.

The following detailed information is displayed:

- For Cloning Images

Table 4.1 Cloning Image Information

Item Name	Description
NAME	Name of the cloning image
VERSION	Version of cloning images
CREATIONDATE	Creation date and time of the cloning image
COMMENT	Comment describing the cloning image

- For Snapshots

Table 4.2 Snapshot Information

Item Name	Description
SERVERNAME	Name of the server (physical OS/VM host) used to back up snapshot images
VERSION	Version of snapshot image
CREATIONDATE	Date and time of snapshot image collection
COMMENT	Comment for snapshot image

When the -detail option is specified, in addition to the information displayed by the list subcommand, the TYPE of the image or snapshot is displayed.

- For Cloning Images

Table 4.3 Detailed Information of Cloning Images

Item Name	Description
NAME	Name of the cloning image
VERSION	Version of cloning images

Item Name	Description
CREATIONDATE	Creation date and time of the cloning image
TYPE	VM type of a cloning image [VMware] VMware [Hyper-V] Hyper-V [Xen] Xen [KVM] RHEL-KVM [OVM for x86 2.2] Oracle VM [OVM for x86 3.x] OVM-x86 [Citrix Xen] Citrix-Xen
COMMENT	Comment describing the cloning image

- For Snapshots

Table 4.4 Detailed Information of Snapshots

Item Name	Description
SERVERNAME	Name of the server (physical OS/VM host) used to back up snapshot images
VERSION	Version of snapshot image
CREATIONDATE	Date and time of snapshot image collection
TYPE	VM type of a snapshot [VMware] VMware [Hyper-V] Hyper-V [Xen] Xen [Citrix Xen] Citrix-Xen [KVM] RHEL-KVM
COMMENT	Comment for snapshot image

When the -extend disksize option is specified, in addition to the information displayed by the list subcommand, the disk size of the image is displayed.

When specifying the -extend custom option, the information related to customization of the target images is added to the details displayed in the list.

Table 4.5 Detailed Information of Cloning Images

Item Name	Description
NAME	Name of the cloning image
VERSION	Version of cloning images

Item Name	Description
CREATIONDATE	Creation date and time of the cloning image
DISKS (*1)	The disk sizes of the cloning image are displayed, with the system disk size first, then data disk size. Hyphens("-") are displayed for the following cloning images: - A physical L-Server image - Images with the VM type of Xen, KVM, or Oracle VM
CUSTOM	Specify enabling/disabling of customization using cloning image - When enabling customization true - When disabling customization false Hyphens ("-") are displayed for the following cloning images: - Cloning images with a VM Type other than Citrix-Xen
SYSTEMTYPE	System type of the guest OS corresponding to the cloning image Hyphens ("-") are displayed for the following cloning images: - Cloning images with a VM type other than Citrix-Xen/OVM for x86.3.x - Cloning images for which false is configured for CUSTOM [OVM for x86 3.x] - Linux cloning images
COMMENT	Comment describing the cloning image
STORAGETYPE (*2)	Type of storage disk of a cloning image When the image type is one other than KVM, a hyphen ("-") is displayed. [KVM] The type of disk resource used to store cloning images is displayed. One of the following is displayed: - Virtual Disk - Raw Disk
STORAGE (*2)	The disk resource used to store cloning images When the image type is one other than KVM, a hyphen ("-") is displayed. [KVM] The disk resource used to store cloning images is displayed. One of the following is displayed: - /Resource folder name/tenant name/storage pool name/virtual storage name/disk name - /Tenant name/storage pool name/virtual storage name/disk name
RELATION (*3)	Name of server management software linked to cloning images When the image type is something other than "Solaris Containers" or "OVM-SPARC", a hyphen ("-") is displayed. [Solaris Zones] [OVM for SPARC] - When cloning images are linked to BladeLogic

Item Name	Description
	"BladeLogic" is displayed. - When there is no server management software linked to cloning images "None" is displayed.

*1: This is displayed when specifying the -extend disksize option. Disk size may not be displayed immediately after updating Resource Orchestrator from V3.0 or an earlier version or immediately after performing recovery operations using Disaster Recovery. Wait for a short while and then perform the operation again.
For details on Disaster Recovery, refer to the "DR Option Instruction".
*2: This is displayed when specifying the -extend storage option.
*3: The item is displayed only when -extend relation is specified for an option.

delete

In addition to the ROR VE functions, an L-Server snapshot can be deleted with the delete subcommand.

restore

In addition to the ROR VE functions, an L-Server snapshot can be restored with the restore subcommand.

snapshot

Collects a snapshot of the specified L-Server.
Setting is only possible for virtual L-Servers.

[KVM]
A snapshot of the virtual L-Server created in the KVM NAS environment can be collected.

move

Images registered in the orchestration tree are moved between resource pools.

refresh

Updates the image.

[Solaris Zones (Solaris11)]
Imports the image file stored in the cloning image storage folder on the manager as a cloning image.
When a new image file is detected, the file is registered as a cloning image in Resource Orchestrator.
When an image file has been registered as a cloning image in Resource Orchestrator and the image file itself is deleted, registration of the cloning image is canceled.
When the maintenance mode of a cloning image is enabled, the cloning image is not imported.

Option (Operations for system images and cloning images of servers)

The following option can be specified for the backup, restore, create, or deploy subcommands:

-nowait (optional)

Use this option to return directly to the command prompt without waiting for the command to complete its execution.

The following option can be specified for the backup, restore or delete subcommand:

-server *resource*

Specify the name of the target server (physical OS or VM host) in *resource*.

The following options can be specified for the deploy or delete subcommand:

-name *image*

Specify the name of the target cloning image in *image*.

-version *version* (optional)

Specify the version of the target cloning image to distribute in *version*.
This option can be omitted when deploying the latest cloning image version.

The following option can be specified for the backup subcommand:

-comment *comment* (optional)

Specify a *comment* to help identify the system image.
Enter a string no longer than 128 alphanumeric characters (either single or double-byte characters).
Note that percent signs ("%"), backslashes ("\") and double quotes (") cannot be used for *comment*.

Note

When using blank spaces in *comment*, enclose the whole character string, *comment*, in double quotes (").

-force (optional)

Forces execution of a server backup when the target server's status is one of the following:

- normal
- warning
- unknown
- error
- fatal

The following option can be specified for the restore subcommand:

-version *version* (optional)

Specify the version number of the system image to restore in *version*.
If omitted, the latest version of the system image will be restored.

The following options can be specified for the create subcommand:

-server *resource*

Specify the name of the target server (physical OS) in *resource*.

-name *image*

Specify a name to assign to the collected cloning image in *image*.
Enter a string that is no more than 32 characters long, where the first character is a letter and the remaining characters are alphanumeric characters or underscores ("_").

-comment *comment* (optional)

Specify a *comment* to help identify the cloning image.
Enter a string no longer than 128 alphanumeric characters (either single or double-byte characters).
Note that percent signs ("%"), backslashes ("\") and double quotes (") cannot be used for *comment*.

Note

When using blank spaces in *comment*, enclose the whole character string, *comment*, in double quotes (").

The following option can be specified for the deploy subcommand:

-server *resource*[[:*hostname*],...]

Specify the name of the server(s) (physical server) to deploy a cloning image to in *resource*.
Multiple server names can be specified using commas (",").
The name attributed to a server after deployment can be specified in *hostname*. This is done by adding a colon (":") and the *hostname* string behind each physical server's resource identifier string. If the *hostname* string is omitted, the post-deployment server name is set to the following.

- When a physical OS has not been registered

  Physical server (*resource*) name

- When a physical OS has been registered

  Physical OS name

Use the following syntax for the *hostname*.

[Windows]
A string of up to 63 characters, including alphanumeric characters, underscores ("_"), and hyphens ("-").
Hostnames made of only numbers are not allowed.

[Linux]
A string of up to 64 characters, including alphanumeric characters, hyphens ("-"), periods ("."), and underscores ("_").

Note

When using SUSE Linux Enterprise Server, server names including periods (".") cannot be configured for post-deployment server names of cloning images.

Information

As the physical OS name of a managed server refers to that server's hostname, it is recommended to use only characters specified in the RFC (Request For Comments) 952. Those characters are listed below.

- Alphanumeric Characters
- Hyphens ("-")
- Periods (".") [Linux]

The following options can be specified for the delete subcommand:

-version *version*

Specify the version number of the system image or cloning image to delete in *version*.

The following options can be specified for the list subcommand:

-type {backup|cloning}

Specify the type of image to list up.

- If "backup" is specified

  A list of system images is displayed.

- If "cloning" is specified

  A list of cloning images is displayed.

-server *resource*

Specify the name of the server (physical OS or VM host) for which to display system images in *resource*. This option should not be specified if the "-type" option has been set to "cloning".

- If the "-type" option is set

  Omitting this option will output a list of system images for all managed servers.

- If the "-type" option is not set

  The same list of system images (for all servers) can be output by specifying only the -server option without specifying a *resource* (this command usage differs from that of Systemwalker Resource Coordinator Virtual Server Edition V13.2.0 and V13.3.0. Refer to "Point" at the top of this section for details).

-name *image*

Specify the name of the cloning image to display in *image*.
If omitted, a list of all cloning images will be displayed.

Option (Operations for system images and cloning images of L-Servers)

-server *resource*

Specify the name of the target L-Server to operate in resource.

For the L-Server allocated in the resource folder, specify the resource folder name using slashes ("/").

Example

When specifying the L-Server directly under the TopFolder:

```
/TopFolder/L-Server_name
```

-nowait

Use this option to return directly to the command prompt without waiting for the operation specified in the subcommand to complete its execution.

-to *pool*

For *pool*, specify the name of the resource pool for storing the cloning image or the name of the destination resource pool.
If omitted, it is assumed that the resource pool with the highest priority from the resource pools with update rights has been specified.

For the resource pool located in the resource folder, specify the resource folder name using slashes ("/").

Example

When specifying the resource pool directly under the TopFolder:

```
/TopFolder/Resource_pool_name
```

-storage *storagename*

For *storagename*, specify the name of the virtual storage, the library shared folder, or the disk resource for storing the collected cloning image.
If omitted, it is assumed that the storage resource containing the L-Server for collecting cloning images has been specified.

[Hyper-V]
It is assumed that the name of the regulated shared library folder on the SCVMM server is specified.

[Xen]
If omitted when using RHEL5-Xen, virtual storage is automatically selected from the same storage pool as the virtual storage used by the target L-Server to collect from.

[OVM for x86 3.x]
This option is ignored even if it is specified. Virtual cloning images are stored in the storage repository in which an L-Server is stored.

-type cloning|snapshot

Specify the type of image. If you specify snapshot, a snapshot image is displayed.

-detail

Use this option to display the detailed information for a desired image.

-extend disksize,custom,storage,relation

Specify when displaying additional information.
If disksize is specified, the disk size of the cloning image is displayed.
If custom is specified, information on relation of customization of the cloning image is displayed.
If storage is specified, the image location type and the image location of the cloning image are displayed.
If relation is specified, the name of the server management software linked to the cloning image is displayed.

-comment *comment*

In *comment*, enter a comment that identifies the snapshot.
Enter a string no longer than 128 alphanumeric characters (either single or double-byte characters).
Note that percent signs ("%"), backslashes ("\") and double quotes (") cannot be used for *comment*.

[Citrix Xen]
Note that percent signs ("%"), backslashes ("\"), double quotes (") and single quotes (') cannot be used for *comment*.

Note

When using blank spaces in *comment*, enclose the whole character string, *comment*, in double quotes (").

-online

Specify when executing a snapshot, regardless of the status of the L-Server.

[Citrix Xen] [KVM]
When using Citrix Xen and KVM in a NAS environment, this option cannot be used.

-name *image*

Specify a name to assign to the collected cloning image in *image*.

When the subcommand is list, delete, or move, specify the following:

- When the cloning image is registered in the resource pool

  Specify the path name including the resource folder name.

- When the cloning image is not registered in a resource pool

  Specify the cloning image name

-version *version*

In *version*, specify the version of the cloning image or snapshot.

-attr *attr*

When collecting a cloning image, specify collection from the virtual server. When specifying multiple attributes, separate them using commas.

disk=all

Specify this option to collect cloning images including data disks for L-Servers.

This option can be specified when the target L-Server satisfies all of the following conditions:

- The server type is virtual
- The VM type is VMware or Hyper-V

custom={true|false}

Specify whether to use the VM guest's customization

- When using the VM guest's customization

  Specify "true".

- When not using the VM guest's customization

  Specify "false".

This option can be specified when the target L-Server satisfies all of the following conditions:

- The ROR manager is Windows
- The OS type is supported
- The server type is virtual
- The VM type is Citrix-Xen or OVM for x86 3.x

systemtype={32bit|64bit}

When using the VM guest's customization, specify the system type of the guest OS.

- When the guest OS is a 32 bit operating system

  Specify "32bit"

- When the guest OS is a 64 bit operating system

  Specify "64bit".

Specify this option when "true" is specified for the custom option.

This option cannot be omitted when "true" is specified for the custom option.

Point

Microsoft's Sysprep is used in customization of VM guests.

The response file used with Sysprep specifies "x86" or "amd64" for the cpuarch parameter.
Therefore, when the VM guest's customization is used, it is necessary to specify the parameter of cpuarch.
In ROR, the system type of guest OS is specified as "32bit" or "64bit".

[OVM for x86 3.x]
The operation differs depending on the OS type of the target L-Server for image collection.

- For Windows

  This option cannot be omitted.

- For Linux

  When this option is specified, this parameter is ignored.

The following options can be specified for the refresh subcommand:

-type

Specify the VM type for the image.

The specifiable VM type is shown below.

- SolarisContainers

Note

- When creating an image, a template is created in the server virtualization software with the following name:

  Table 4.6 Name in Server Virtualization Software

Server Virtualization Software	Name in Server Virtualization Software
VMware Hyper-V Citrix Xen OVM for x86 2.2 OVM for x86 3.x	*Cloning_image_name*[*_index*]*@version_number*

  When creating a template in the server virtualization software, do not use a name with the above format.

- When creating a template from a VM guest in the server virtualization software, set the system disk of the VM guest as indicated below.

  Table 4.7 Settings for System Disks

Server Virtualization Software	System Disk
VMware	Disk with SCSI controller: 0, ID:0
Hyper-V	Device, Primary channel (0)
Citrix Xen	userdevice:0
OVM for x86 2.2	- When the L-Server is an HVM (Hardware Virtualized Machine) hda - When the L-Server is a PVM (Para-Virtualized Machine) xvda
OVM for x86 3.x	Slot 0

- Use the following methods to collect cloning images:

  - Collect cloning images from physical servers after an OS has been installed
  - Collect cloning images from physical L-Servers after an OS has been installed
  - Collect cloning images from virtual L-Servers after an OS has been installed
  - Collect cloning images from templates of server virtualization software
  - Register the server management software (BMC BladeLogic Server Automation) package

  Ensure that each of the cloning images collected using any of the above methods has a unique name in the same image pool.

Information

For details on the image type, refer to "14.7 Image Resources" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

For details on the cloning image of the physical server, refer to "Chapter 12 Cloning [Physical Servers]" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

[VMware] [Hyper-V]
For a cloning image name, enter a character string beginning with an alphabetic character and containing up to 32 alphanumeric characters and underscores ("_").

[Xen] [KVM]
For a cloning image name, enter a character string beginning with an alphabetic character and containing up to 22 alphanumeric characters and underscores ("_").

Requirements

Permissions

One of the following permissions is required:

- OS Administrator
- Resource Orchestrator Privileged User

Location

Admin server

Usage example (Operations for system images and cloning images of servers)

- To create a system image backup

```
>rcxadm image backup -server blade07 -comment "Database Server-2" <RETURN>
```

- To restore a system image to a managed server

```
>rcxadm image restore -server blade07 -version 2 <RETURN>
```

- To delete a system image

```
>rcxadm image delete -server blade07 -version 2 <RETURN>
```

- To display a list of all system images

```
>rcxadm image list -type backup -server blade07 <RETURN>
SERVERNAME    VERSION    BACKUPDATE             COMMENT
----------    -------    ----------             -------
blade07       2          2007/11/01-10:06:35    Database Server-1
blade07       3          2007/11/12-15:16:55    Database Server-2
```

- To display a list of all system images

```
>rcxadm image list -type backup <RETURN>
SERVERNAME    VERSION    BACKUPDATE             COMMENT
----------    -------    ----------             -------
blade01       2          2007/11/01-10:06:35    Application Server-1
blade01       3          2007/11/12-15:16:55    Application Server-2
blade05       2          2007/12/01-10:06:35    File Server-1
blade05       3          2007/12/12-15:16:55    File Server-2
blade07       2          2007/01/31-20:46:25    Database Server-1
```

- To collect a cloning image

```
>rcxadm image create -server blade01 -name AppImage -comment "Windows" <RETURN>
```

- To deploy a cloning image

```
>rcxadm image deploy -server blade08:db02,blade09 -name AppImage -version 2 <RETURN>
```

- To delete a cloning image

```
>rcxadm image delete -name AppImage -version 2 <RETURN>
```

- To display a list of image versions for a given cloning image

```
>rcxadm image list -type cloning -name AppImage <RETURN>
NAME        VERSION    CREATIONDATE           COMMENT
----        -------    ------------           -------
AppImage    1          2008/11/12-16:54:05    Windows
AppImage    2          2008/11/13-10:16:53    Windows+patch
```

- To display a list of all cloning images

```
>rcxadm image list -type cloning <RETURN>
NAME        VERSION    CREATIONDATE           COMMENT
----        -------    ------------           -------
AppImage    1          2008/11/12-16:54:05    Windows
AppImage    2          2008/11/13-10:16:53    Windows+patch
DBImage     1          2008/11/13-13:21:38    Redhat
DBImage     2          2008/11/14-04:39:27    -
```

Usage example (Operations for system images and cloning images of L-Servers)

- To display a cloning image:

```
>rcxadm image list -type cloning <RETURN>
NAME                    VERSION CREATIONDATE        COMMENT
----                    ------- ------------        -------
/ImagePool/test2k3R2    1       2011/04/19-21:30:37 -
```

- To display the detailed information of a cloning image:

```
>rcxadm image list -type cloning -detail <RETURN>
NAME                    VERSION CREATIONDATE        TYPE     COMMENT
----                    ------- ------------        ----     -------
/ImagePool/test2k3R2    1       2011/04/19-21:30:37 VMware   -
```

- To display additional information of a cloning image:

```
>rcxadm image list -type cloning -extend disksize <RETURN>
NAME                    VERSION CREATIONDATE        DISKS                COMMENT
----                    ------- ------------        -----                -------
/ImagePool/test2k3R2    1       2011/04/19-21:30:37 30.0GB,20.0GB,50.0GB  -
```

- To display additional information of a cloning image (when using KVM NAS):

```
>rcxadm image list -type cloning -extend storage <RETURN>
NAME                    VERSION CREATIONDATE  DISKS COMMENT STORETYPE  STORAGE
----                    ------- ------------  ----- ------- ---------  -------
/Tenant/ImagePool/image1 1       2013/10/30-12:57 30.0GB - VirtualDisk /Tenant/StoragePool/VStorage/
image1-0-image1
```

- To display the list of snapshots:

```
>rcxadm image list -type snapshot <RETURN>
SERVERNAME              VERSION CREATIONDATE        COMMENT
```

```
----------               ------- ------------        -------
/test/TEST               1       2011/04/20-06:45:14 -
```

- To display the detailed information of a snapshot:

```
>rcxadm image list -type snapshot -detail <RETURN>
SERVERNAME               VERSION CREATIONDATE        TYPE     COMMENT
----------               ------- ------------        ----     -------
/test/TEST               1       2011/04/20-06:45:14 VMware   -
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Chapter 5 Control and Environment Setup

This chapter explains the commands used for control and environment setup of the manager and agents that comprise Resource Orchestrator.

5.1 deployment_service_uninstall

Name

- Manager

  [Windows Manager]
  *Installation_folder***SVROR\Manager\bin\deployment_service_uninstall.bat** - Uninstallation of the related services

  [Linux Manager]
  /opt/FJSVrcvmr/bin/deployment_service_uninstall.sh - Uninstallation of the related services

- Agent

  [Windows]
  *Installation_folder***Agent\bin\deployment_service_uninstall.bat** - Uninstallation of the related services

  [Linux]
  /opt/FJSVrcxat/bin/deployment_service_uninstall.sh - Uninstallation of the related services

Format

```
deployment_service_uninstall.bat
deployment_service_uninstall.sh
```

Description

deployment_service_uninstall is the command used to uninstall the related services from Resource Orchestrator.
When installing ServerView Deployment Manager in environments where Resource Orchestrator has been installed, run this command after installing Resource Orchestrator.
Please stop managers and agents before using this command.
After using this command, please start managers and agents.

For information on starting and stopping managers, refer to "2.1 Starting and Stopping Managers" in the "Operation Guide CE".
For information on starting and stopping agents, refer to "2.2 Starting and Stopping Agents" in the "Operation Guide CE".

Requirements

Permissions

OS Administrator

Location

Admin server, managed server

Example

- To uninstall the related services from manager

```
>deployment_service_uninstall.bat <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.2 rcxmigrate_oc

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxmigrate_oc** - Migrating overcommit configuration information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxmigrate_oc - Migrating overcommit configuration information

Format

```
rcxmigrate_oc
```

Description

enable_ui_setting is the command to migrate the information described in the overcommit definition file to the new configuration methods, when executing upgrade from ROR V2.3.0 or V3.0.0.

Only OS administrators can execute this command.

Point

- This command is used to migrate the overcommit configuration information.

  Do not use this command for any purpose other than migration.

- For details on how to migrate the configuration methods for the overcommit function, refer to "2.3.1.1 Overcommit Definition Files" in the "Release Notes".

- The modified settings cannot be enabled, even if modifying the overcommit definition files, after migrating the overcommit configuration information using this command.

  After migrating the overcommit setting information using this command, configure the overcommit settings, referring to "Chapter 20 Resource Pool Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

- If invalid pool names are contained in the overcommit definition file, those definitions are ignored and only the setting information of valid pool names are migrated.

5.3 rcxadm agtctl

Name

[Windows] [Hyper-V]
*Installation_folder***Agent\bin\rcxadm agtctl** - Agent control

[Linux] [VMware] [Xen] [KVM]
/opt/FJSVrcxat/bin/rcxadm agtctl - Agent control

[Solaris]
/opt/FJSVrcvat/bin/rcxadm agtctl - Agent control

Format

```
rcxadm agtctl start
rcxadm agtctl stop
rcxadm agtctl modify -manager ip
rcxadm agtctl snap [-dir directory] [-full]
```

Description

rcxadm agtctl is the command used to start and stop agents, collect troubleshooting data and modify the admin LAN IP address of the manager that is registered in the agent.

For information on starting and stopping agents, refer to "2.2 Starting and Stopping Agents" in the "Operation Guide CE".
For information on collecting troubleshooting data, refer to "1.2.1 Collecting Initial Troubleshooting Data" and "1.2.2 Collecting Exhaustive Troubleshooting Data" in the "Troubleshooting".
For information on changing the manager's admin LAN IP address, refer to "6.1 Changing Admin IP Addresses" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

Subcommands

start

Starts the Agent.

stop

Stops the Agent.

modify [Physical server] [Hyper-V]

Modifies the admin LAN IP address of the manager that is registered in the agent.

snap

Collects troubleshooting data from the managed server.

The collected data is stored in the following compressed files:

[Windows] [Hyper-V]
rcxtssnap_*server_name*.jar

[Linux] [Solaris] [VMware] [Xen] [KVM]
When collecting troubleshooting data, data is compressed on managed servers using the bzip2, the gzip, or the compress command. Depending on the command used, the name assigned to troubleshooting data will be one of the following.
Resource Orchestrator uses the command with the best compression ratio (bzip2 -> gzip -> compress) available on the managed server.

- When Compressing with bzip2

  rcxtssnap_*server_name*.tar.bz2

- When Compressing with gzip

  rcxtssnap_*server_name*.tar.gz

- When Compressing with compress

  rcxtssnap_*server_name*.tar.Z

Options

Specify the following options when using the modify subcommand:

-manager *ip*

Specify the new manager IP address.

The following options can be specified for the snap subcommand:

-dir *directory*(Optional)

Specify the folder used to store the collected data in *directory*.
If this option is omitted, the data will be stored in the following folder:

[Windows] [Hyper-V]
The folder defined by the TEMP environment variable

[Linux] [Solaris] [VMware]
/tmp

- When using full paths in the *dir* and the TEMP environment variable

  The length of the full path string must not exceed 100 characters. If more than 100 characters are used the troubleshooting data cannot be collected, and message number 67131 or message number 67265 will be displayed.

- When using relative paths in the *dir* and the TEMP environment variable

  When specifying a relative folder path, its equivalent full path must not exceed 100 characters (calculated using the Windows 8.3 format (*)). If the converted full path string exceeds 100 characters, the troubleshooting data will not be collected, and the "Message number 67131" will be displayed.

  * Note: This rule specifies that the file name can be a maximum of 8 characters, with a file extension of up to 3 characters

- The following symbols cannot be specified in the name of the folder in which the collected data is stored:

  """, "|", "*", "?", "/", "<", ">", ",", "%", "&", "^", "=", "!", ";"

[Windows] [Hyper-V]

- When specifying a folder using a relative path, specify the folder adding ".\" as the first characters.

  -dir .*folder_name*

-full (Optional)

Collects exhaustive managed server troubleshooting data. This data is required to isolate the cause of a problem which could not be identified from initial troubleshooting data alone.
This requires significantly more disk space for the generated data files. This option can be omitted when collecting troubleshooting data for an initial investigation (first diagnostic).

Requirements

Permissions

OS Administrator

Location

Managed server

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.4 rcxadm authctl

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm authctl** - user authentication directory service connection settings

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm authctl - user authentication directory service connection settings

Format

```
rcxadm authctl register {-host hostname|-ip ip_address} [-port port] -base base_dn -bind bind_dn [-
method {SSL|PLAIN}] {-passwd password|-passwd_file password_file} [-auth {serverview|ldap}]
rcxadm authctl unregister
rcxadm authctl show
rcxadm authctl modify {-host hostname|-ip ip_address} [-port port] -base base_dn -bind bind_dn [-
method {SSL|PLAIN}] {-passwd password|-passwd_file password_file} [-auth {serverview|ldap}]
rcxadm authctl export
rcxadm authctl diffcert
rcxadm authctl refreshcert -alias alias
rcxadm authctl sync
```

Description

rcxadm authctl is the command to operate the connection information of the directory server that retains user authentication information.

Only OS administrators can execute this command.

When using the following subcommands, stop the manager prior to command execution:

- register
- unregister
- modify
- refreshcert

Subcommands

register

Registers directory server connection information with Resource Orchestrator.
When directory server connection information is registered, user authentication is performed in the directory service. When executing this command, the directory server is not connected.
This command cannot be used when multiple sets of directory server connection information are registered.

unregister

Deletes the connection information of directory servers registered with Resource Orchestrator. User information registered in the directory server is not deleted; the connection information is only deleted from Resource Orchestrator.
This command cannot be used when multiple sets of directory server connection information are registered.

modify

Modifies the connection information of directory servers registered with Resource Orchestrator.
This command cannot be used when multiple sets of directory server connection information are registered.

show

The registered directory server connection information is displayed in the following format.

```
host1: Host name or IP address
host2: Host name or IP address
port: Port_number
base: base_dn
bind: Administrative_user_DN
method:
Encryption_communication_method
auth: Authentication_method
```

When directory server connection information for only one server is registered, only one host name (or IP address) is displayed.

export

Migrates the information from a directory server used with Resource Orchestrator V2.3.0, to the management information of Resource Orchestrator.

When user information is being managed using a directory service or Single Sign-On is performed with Resource Orchestrator V2.3.0, this task must be done before migration.

Migrate the following information to the management information:

- User group information and the users belonging to it
- Role definition
- Scope and role of access
- Resource information under the orchestration tree (the names and tree structure)

diffcert

Compares the certificates registered with ServerView Operations Manager and the Resource Orchestrator manager, and when the following difference exists, that certificate is displayed using a different name.

- Certificates that exist in the ServerView Operations Manager keystore, but not in the Resource Orchestrator manager's keystore
- Certificates that exist in the ServerView Operations Manager keystore and the Resource Orchestrator manager's keystore, but have conflicting fingerprints

This command cannot be used for the following configurations:

- ServerView Operations Manager has not been installed.

Difference of the CA certificate (keystore) is displayed using alias in the following format:

```
svs_cms
ldaphost.fujitsu.com
```

refreshcert

Imports the certificate of ServerView Operations Manager corresponding to the specified alias into Resource Orchestrator.

Specify the alias displayed by the diffcert command.

This command cannot be used for the following configurations:

- ServerView Operations Manager has not been installed

If a root CA certificate has been registered with ServerView Operations Manager, specify that root CA certificate.

To import the server certificate, specify the alias for the following certificate:

- Server certificate of ServerView Operations Manager
- Server certificate of the directory server to be used

  This is unnecessary when using the directory service provided with ServerView Operations Manager.

Note

The certificate is imported using the specified alias. The existing certificate is deleted in the following cases:

- There is a certificate which has the same alias
- There is a certificate which has the same content as the certificate to be imported

Point

When executing the command, create a copy of the keystore (truststore-cacerts) file for Resource Orchestrator in the following format. When a file with the same name already exists, it will be overwritten.

[Windows Manager]

- Source File

  Installation_folder\SVROR\Manager\runtime\jre6\lib\security\cacerts

- Destination File

  Installation_folder\SVROR\Manager\runtime\jre6\lib\security\cacerts.org

[Linux Manager]

- Source File

  /opt/FJSVrcvmr/runtime/jre6/lib/security/cacerts

- Destination File

  /opt/FJSVrcvmr/runtime/jre6/lib/security/cacerts.org

sync

Synchronizes the directory server connection settings of Resource Orchestrator with those of ServerView Operations Manager.

This command cannot be used for the following configurations:

- ServerView Operations Manager has not been installed.

Options

-host *hostname*

Specify the host name for the directory server to register using an FQDN or an IP address.

-ip *ip*

Specify the IP address of the directory server to register. This option is for compatibility. Use the -host option.

-port *port* (optional)

Specify the port number of the directory server to register. When omitted, the following port numbers are regarded as having been specified using the -method value.

```
SSL   : 636
PLAIN : 389
```

-base *base_dn*

Specify the search base of the directory server to register in DN format.

-bind *bind_dn*

Specify the administrative privilege user name of the directory server to register in DN format.

-method {SSL|PLAIN} (optional)

Specify the encryption communication method to use with the directory server to register. Specify one of following.

If this option is omitted, "SSL" is specified. If PLAIN is specified, encryption is not performed.

- SSL
- PLAIN

-passwd *password*

Specify the password for the administrative privilege user of the directory server to register.

-passwd_file *password_file*

Specify the administrative privilege user name of the directory server to register.

-auth (optional)

This option is used in Basic mode.

Specify the method for user authentication. Specify one of following items.

If omitted, "serverview" is set.

- serverview

  Operation using ServerView Operations Manager and Single Sign-On is performed.

- ldap

  Only user authentication using directory service is performed. Operation is not performed using Single Sign-On.

-alias *alias*

Specify the alias of the certificate to import into the CA certificate of Resource Orchestrator.

When using blank spaces or symbols in the specified string, enclose the whole string in double quotes (").

An alias which contains double quotes (") as character elements cannot be specified for this command. Remove any double quotes (") included in the alias before executing this command.

Example

- To display the registered directory server connection information:

```
>rcxadm authctl show <RETURN>
host1: ad1.fujitsu.com
host2: ad2.fujitsu.com
port: 636
base: dc=fujitsu,dc=com
bind: cn=manager,dc=fujitsu,dc=com
method: SSL
auth: serverview
```

5.5 rcxadm certctl

Name

- Manager

  [Windows Manager]
  *Installation_folder***SVROR\Manager\bin\rcxadm certctl** - SSL certificate operations

  [Linux Manager]
  /opt/FJSVrcvmr/bin/rcxadm certctl - SSL certificate operations

- Agent

  [Windows] [Hyper-V]
  *Installation_folder***Agent\bin\rcxadm certctl** - SSL certificate operations

  [Linux] [VMware] [Xen] [KVM]
  /opt/FJSVrcxat/bin/rcxadm certctl - SSL certificate operations

  [Solaris]
  /opt/FJSVrcvat/bin/rcxadm certctl - SSL certificate operations

Format

```
rcxadm certctl list
rcxadm certctl delete -alias alias
rcxadm certctl init
```

Description

rcxadm certctl is the command used to manage the certificates required for SSL communication between a manager and its agents.
For more information regarding this command, refer to "4.2 An Error Occurs during Cloning after the Manager is Reinstalled." in "Troubleshooting".

Note

The manager or agent must be stopped in order to use this command.
For information on stopping managers and their agents, refer to "5.14 rcxadm mgrctl" and "5.3 rcxadm agtctl".

Subcommands

list

Displays a list of current SSL certificates. Each certificate stored in the certificates data file is indexed by a unique alias (*). The example below shows how to display aliases using the list subcommand.

Example

```
Truststore:
----------

Keystore type: jks
Keystore provider: SUN

The keystore contains 4 entries.

client1 (*), May 10, 2007, trustedCertEntry,
Certificate fingerprints (MD5): 0F:4E:1C:DB:19:AE:3B:82:9D:74:93:6C:46:D8:7C:D2
...
```

delete

Deletes the data of the designated SSL certificate.

init

Initializes the file used to store SSL certificates data.

Options

The following option can be specified for the delete subcommand:

-alias *alias*

Specify the alias of the SSL certificate to delete in *alias*.

Requirements

Permissions

OS Administrator

Location

Admin server, managed server

Examples

- To display a list of SSL certificates currently used by the manager

```
>rcxadm certctl list <RETURN>
```

- To delete an SSL certificate used by the manager

```
>rcxadm certctl delete -alias alias <RETURN>
```

- To initialize the file used by the manager to store SSL certificates data

```
>rcxadm certctl init <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.6 rcxadm config

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm config** - import and export of configuration information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm config - import and export of configuration information

Format

```
rcxadm config import -dir directory
rcxadm config export -dir directory [[-noretry]|[-timeout value]]
```

Description

rcxadm config is the command to import or export configuration information.

Subcommands

import

Imports the configuration information.

In *dir*, specify the storage folder for the configuration information of the resource to be imported.

export

Exports the configuration information.

After executing the command, the following XML files are created in the folder specified using *dir*.

For details on the XML file, refer to "Chapter 15 XML Files".

- *dir*\l_server_templates.xml
- *dir*\l_servers.xml
- *dir*\image.xml
- *dir*\network_resources.xml
- *dir*\address_resource.xml
- *dir*\resource_folders.xml
- *dir*\users.xml
- *dir*\user_groups.xml
- *dir*\pools.xml
- *dir*\lnetdev.xml

Options

-dir *directory*

Specify the folder in which the configuration information for associating resources is stored.

-noretry

Use this option to return directly to the command prompt without waiting for the operation being executed on the admin server to complete its execution.
Export can only be performed when no other operation is being executed. If an operation is being executed, this command will return an error.

-timeout *value*

Use this option to wait the number of seconds specified in *value* for completion of the operation being performed on the admin server. If the operation is not completed within the specified time, this command will return an error.

If this option is omitted, the default value (3600 seconds) is set. When this option is specified, value can be specified between 1 and 172800 (2 days).

Use this option to return an error when the operation being executed on the admin server does not complete its execution after the expiration of the number of seconds specified in *value*.
Periodical export may not be able to start its process while the manager is executing a time-consuming operation such as L-Server creation. Specify this option to cancel the backup after the specified number of seconds has elapsed.

The following messages are output by the spacing for 600 seconds while it meets the operation.
INFO:Manager operation is still running

5.7 rcxadm dbctl

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm dbctl** - Management of the database for Resource Orchestrator

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm dbctl - Management of the database for Resource Orchestrator

Format

```
rcxadm dbctl modify -passwd
```

Description

rcxadm dbctl is the command used for management of the database for Resource Orchestrator.

Note

The manager must be stopped in order to use this command.
For information on stopping managers, refer to "5.14 rcxadm mgrctl".

Subcommands

modify

Changes the database configuration for Resource Orchestrator.

Options

-password

Changes the database password for Resource Orchestrator.
When the password of the OS user account (rcxdb) for use in connection with Resource Orchestrator has been changed, this command must be executed.
It is also possible to change the password for the OS user account (rcxdb) directly using this command.
When changing the password, enter the following interactively.

1. New Password
2. New Password for Confirmation

Note

For the password, enter a string including upper case alphabetic characters, lower case alphabetic characters, and numerals. The length of the string must be the length allowed by the OS of the admin server.

Requirements

Permissions

OS Administrator

Location

Admin server

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.8 rcxadm deployctl

Name

[Windows]
*Installation_folder***Agent\bin\rcxadm deployctl** - Encryption of license information definition files

Format

```
rcxadm deployctl passwd -encrypt
```

Description

rcxadm deployctl is the command used to encrypt the administrator password on managed servers running on Windows Server 2008 or later, after editing the license information definition file.
The license information definition file is created by installing the Resource Orchestrator Agent. With the cloning function, use this file to perform Windows license authorization.
For details on how to use this command, refer to "12.2 Collecting" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

Subcommands

passwd

Encrypts the administrator password that is included in the license information definition file.

Options

-encrypt

Always specify this option when encrypting the password.

Requirements

Permissions

OS Administrator

Location

Managed server

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.9 rcxadm imagemgr

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm imagemgr** - Image management settings

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm imagemgr - Image management settings

Format

```
rcxadm imagemgr info [-extend vm.clone.maintenance]
rcxadm imagemgr set -attr imagedir=dir
rcxadm imagemgr set -attr {backup|clone|vm.clone|vm.snapshot}.maxversion=value
rcxadm imagemgr set -attr vm.clone.maintenance={true|false}
```

Description

rcxadm imagemgr is the command used to change the image files folder location, or the maximum number of image versions that can be kept in Resource Orchestrator.

Operations for system images and cloning images of servers

For details on changing the maximum number of system image versions, refer to "6.3 Changing the Maximum Number of System Image Versions" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

For details on changing the maximum number of cloning image versions, refer to "6.4 Changing the Maximum Number of Cloning Image Versions (Physical Servers)" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

A new folder should be created when changing the location of the image file storage folder.

For details on changing the path for the image file storage folder, refer to "6.7 Changing the Image Folder Location" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

Operations for virtual images for L-Servers

vm.clone and vm.snapshot can be specified in attributes used for controlling the number of virtual image versions.

The maintenance mode of virtual cloning images can be configured and released.

The following is displayed:

- The number of virtual image versions
- The status of the maintenance mode of virtual cloning images.

Subcommand (Operations for system images and cloning images of servers)

info

Displays current image settings (the maximum number of image versions and the location of the image files folder).
The following properties are displayed for each server.

Table 5.1 info Subcommand Display Parameters

Item Name	Description
backup.maxversion	Maximum number of system image versions
clone.maxversion	Maximum number of cloning image versions
imagedir	Location of the image files folder

set

Sets a new location for the image files folder, or sets a new limit for the number of image versions.

Subcommand (Operations for virtual images of L-Servers)

info

Displays current image settings (system images, cloning images, virtual cloning images, the maximum number of snapshot versions, image file storage folder paths, and maintenance mode of virtual images).
The following properties are displayed for each server.

Table 5.2 info Subcommand Display Parameters

Item Name	Description
backup.maxversion	Maximum number of system image versions
clone.maxversion	Maximum number of cloning image versions
vm.clone.maxversion	Maximum number of virtual cloning image versions
vm.snapshot.maxversion	Maximum number of snapshot versions
imagedir	Location of the image files folder
vm.clone.maintenance (*)	The status of the maintenance mode of virtual cloning images.

* Note: This is displayed when -extend vm.clone.maintenance is specified for the option.

set

The maintenance mode of virtual cloning images is configured or released.

Option (Operations for system images and cloning images of servers)

The following options can be specified for the set subcommand:

-attr imagedir=*dir*

Specify a new location (path) for the image files folder in *dir*.
The specified folder path must match all of the following requirements.

- The specified path should be no more than 100 characters long
- The specified path should include none of the following characters

  """, "|", "*", "?", "/", "<", ">", ",", "%", "&", "^", "=", "!", ";"

  [Windows Manager]
  "/"

  [Linux Manager]
  "\"

- Only local folder paths are allowed (UNC paths are not permitted)
- Folders must be created beforehand
- When using blank spaces in the specified path, enclose the whole specified path in double quotes (")
- Do not add "\" to the end of the specified path
- The specified path should not point to any of the following folders

  [Windows Manager]
  Installation_folder\SVROR\Manager

  [Linux Manager]
  /opt/FJSVrcvmr

  /etc/opt/FJSVrcvmr

  /var/opt/FJSVrcvmr

- The specified folder is empty

  [Linux]
  If a partition (file-system) was specially created to store image files, this partition will include a "lost+found" folder, and therefore cannot be considered as empty.

  In that case, be sure to create and use a dedicated directory to store image files within that partition.

- The specified path should have proper security settings

  [Linux]
  For safer administration, it is recommended to use either the following permissions settings for each ancestor directory of the image files directory.

  - Give write permissions only to system administrators
  - Use the sticky bit to prevent other users from renaming or deleting image files

  If permissions are not set as above, this command may fail to change the image files folder location.

When changing the image files folder location, image files are copied to the new location, which may take some time to complete.

-attr {backup|clone}.maxversion=*value*

Changes the maximum number of image file versions.

- To change the maximum number of system image versions

  Specify backup.

- To change the maximum number of cloning image versions

  Specify clone.
  Specify a new maximum number of image file versions in *value*.
  Enter a numerical value between 1 and 10 in *value*.

Option (Operations for virtual images of L-Servers)

The following options can be specified for the info subcommand:

-extend vm.clone.maintenance

Specify this option to display the maintenance mode status of the virtual cloning image.

The following options can be specified for the set subcommand:

-attr {vm.clone|vm.snapshot}.maxversion=*max_version*

Specify the maximum number of image file versions.

- For the number of cloning image versions

  Specify "vm.clone".

- For the number of snapshot versions

  Specify "vm.snapshot".

In *max_version*, specify the maximum number of image file versions to change. The values that can be specified for *max_version* are any value between 1 and 10.

-attr vm.clone.maintenance={true|false}

The maintenance mode of virtual cloning images is configured or released.

- When configuring maintenance mode

  Specify "true".

- When releasing maintenance mode

  Specify "false".

Note

- It is not necessary to restart the services of managers of Resource Orchestrator after modifying the maintenance mode settings.
- When configuring maintenance mode of virtual cloning images, take caution regarding the following points:
  - When creating, modifying, or deleting cloning images in VM management software, the information is reflected on the ROR console after releasing maintenance mode of the virtual cloning images.
  - Even if server management software is updated, virtual cloning images are not updated.
  - Do not import DR.

    The information of virtual cloning images is not imported during DR import, import will fail.
    Import DR after releasing the maintenance mode of virtual cloning images.

Requirements

Permissions

OS Administrator

Location

Admin server

The manager should be stopped when changing the image files folder location. For information on stopping managers, refer to "2.1 Starting and Stopping Managers" in the "Operation Guide CE".

If the ROR console was opened, the Web browser should be refreshed after changing the maximum number of image file versions.

Usage example (Operations for system images and cloning images of servers)

- When specifying a path for the image files folder that includes no blank spaces

  [Windows Manager]
  When changing to C:\temp

```
>rcxadm imagemgr set -attr imagedir=C:\temp <RETURN>
```

  [Linux Manager]
  When changing to /home/tmp

```
# rcxadm imagemgr set -attr imagedir=/home/tmp <RETURN>
```

- When specifying a path for the image files folder that includes blank spaces

  [Windows Manager]
  When changing to C:\temp\Resource Orchestrator VE

```
>rcxadm imagemgr set -attr imagedir=C:\temp Resource Orchestrator VE" <RETURN>
```

  [Linux Manager]
  When changing to /home/tmp/Resource Orchestrator VE

```
# rcxadm imagemgr set -attr imagedir="/home/tmp/Resource Orchestrator VE" <RETURN>
```

Usage Example (Operations for virtual images of L-Servers)

- To display image management information

```
>rcxadm imagemgr info -extend vm.clone.maintenance <RETURN>
backup.maxversion: 3
clone.maxversion: 3
vm.clone.maxversion: 3
vm.snapshot.maxversion: 3
imagedir: C:\Program Files (x86)\Resource Orchestrator\SVROR\ScwPro\depot\
vm.clone.maintenance: false
```

- To configure maintenance mode of virtual cloning images

```
>rcxadm imagemgr set -attr vm.clone.maintenance=true <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.10 rcxadm iscsictl

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm iscsictl** - operation of iSCSI boot information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm iscsictl - operation of iSCSI boot information

Format

```
rcxadm iscsictl register -file file.xml
rcxadm iscsictl unregister -pool pool -disk disk
```

Description

rcxadm iscsictl is the command to operate iSCSI boot information.

Subcommands

register

Registers iSCSI boot information.

If iSCSI boot information already registered is specified, the registered information continues to exist.

If the registered information is changed, delete the iSCSI boot information using the unregister subcommand, and then register the iSCSI boot information by using the register subcommand again.

When registering an iSCSI boot disk in a storage pool, it is recommended that the same allocation method used for physical storage resources corresponding to the iSCSI boot disk (thin provisioning or thick provisioning), is used.
This setting does not affect the allocation methods which are set for the storage resource attribute in a storage pool.

unregister

Unregisters iSCSI boot information.

Options

-file *file*.xml

In *file*.xml, specify the XML file that defines the iSCSI boot information.

For details on the XML file definition, refer to "15.4.2 iSCSI Boot Information".

-pool *pool*

Specify the target resource pool name by level.

Resource_folder_name/Resource_pool_name

-disk *disk*

Specify the disk resource to delete.

When deleting disk resources used for iSCSI boot that have been unregistered from a resource pool, register the disk resource to a resource pool, then execute the rcxadm iscsictl unregister command to delete it.

5.11 rcxadm lanctl

Name

[Windows]
*Installation_folder***Agent\bin\rcxadm lanctl** - Network parameters configuration

[Linux]
/opt/FJSVrcxat/bin/rcxadm lanctl - Network parameters configuration

Format

```
rcxadm lanctl set
rcxadm lanctl unset
```

```
rcxadm lanctl enable
rcxadm lanctl disable
```

Description

rcxadm lanctl is the command used to configure network parameters for network interfaces on managed servers.

This command cannot be used on managed servers running SUSE Linux Enterprise Server as their operating system.

Subcommands

set

Applies the settings previously defined in the network configuration file to the managed server's network interfaces.
For more information regarding the network configuration file, refer to "17.6 Network Parameter Auto-Configuration for Cloning Images" in the "User's Guide VE".

unset

Clears the network parameters previously applied to the managed server's network interfaces via the set subcommand.

enable

Enables the network parameter auto-configuration function for cloning image deployment.

disable

Disables the network parameter auto-configuration function for cloning image deployment.

Requirements

Permissions

OS Administrator

Location

Managed server

Examples

- To apply the network parameters configuration

```
>rcxadm lanctl set <RETURN>
```

- To undo the network parameters configuration

```
>rcxadm lanctl unset <RETURN>
```

- To enable the network parameter auto-configuration function

```
>rcxadm lanctl enable <RETURN>
```

- To disable the network parameter auto-configuration function

```
>rcxadm lanctl disable <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.12 rcxadm license

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm license** - license control

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm license - license control

Format

```
rcxadm license add -lkey license_key
rcxadm license list
```

Description

rcxadm license is the command used to register licenses or to check the licenses already registered.

Subcommands

add

Registers a license.

list

To display a list of registered licenses.

Options

-lkey *license_key*

Specify a license key to be registered in *license_key*.

Requirements

Permissions

One of the following permissions is required:

- OS Administrator
- Resource Orchestrator Privileged User

Location

Admin server

Example

- To display a list of registered licenses.

```
>rcxadm license list <RETURN>
LICENSE_ NAME    NUMBER_OF_LICENSES  STATUS
--------------  ------------------  --------
Cloud Edition         10            Inactive
Virtual Edition       5             Active
DR option             0             -
NS option             0             -
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.13 rcxadm logctl

This section explains the command for operation logs of Resource Orchestrator.

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm logctl** - operation of operation logs of Resource Orchestrator

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm logctl - operation of operation logs of Resource Orchestrator

Format

```
rcxadm logctl start
rcxadm logctl stop
rcxadm logctl set -attr record_cycle=record_cycle
rcxadm logctl show
rcxadm logctl delete -from from_date {-duration duration | {-to to_date |-latest}}
rcxadm logctl delete -duration duration {-from from_date | {-to to_date |-latest}}
rcxadm logctl list -from from_date {-duration duration | {-to to_date |-latest}} [-format csv] [-
no_header] [-verbose]
rcxadm logctl list -duration duration {-from from_date | {-to to_date |-latest}} [-format csv] [-
no_header] [-verbose]
```

Description

rcxadm logctl is the command for operating operation logs of Resource Orchestrator.

Subcommands

start

Starts recording operation logs of Resource Orchestrator.

stop

Stops recording operation logs of Resource Orchestrator.

set

Sets and modifies the retention period of operation logs of Resource Orchestrator.

show

Displays the recording start date, retention period, retention folder, recording status (on/off), and the recording period.

Table 5.3 Information for Recorded Items

Items	Description
start_date	Start of recording (YYYY-MM-DD HH:MM:SS.XXX+/-hh:mm) A hyphen ("-") is set when the recording is stopped.
record_cycle	Retention period If the setting is not changed, "180" is set.
record_dir	Retention folder Operation logs are saved in the following folder: [Windows Manager] *Installation_folder***SVROR\Manager\var\operation** [Linux Manager] /var/opt/FJSVrcvmr/operation/
record_status	Status of recording "off" is set when the recording is stopped.
record_count	Number of days to record Days when no events occur, and days when recording is not possible due to the manager being stopped are not counted as dates for recording.

delete

Deletes operation logs of Resource Orchestrator.

list

Displays operation logs of Resource Orchestrator.

Options

-attr record_cycle=*record_cycle*

Specify the number of days to store operation logs. If omitted, "180" is set.

Up to "2147483647" days can be specified.

-format csv

Use this option to output operation logs in CSV format.

Standard output is used for the operation log.

-no_header

Use this option not to output the information headers (Date, User, Group, IP, Progress, Resource, and Event).

-duration *duration*

Specify the data output duration.

Specification formats are shown below.

- *years*Y
- *months*M

- *weeks*W
- *days*D
- *hours*H

Example

```
-duration 3Y
-duration 4M
```

Specify an integer equal to or greater than "1" for *years*, *months*, *weeks*, *days*, and *hours*.

Point

When combined with -from, data for the specified duration is output from the start time using from.

When combined with -to, data for the specified duration is output to the end time using to.

-from *from_date*

Specify the start time of the output duration. Specify the local time.

Specification formats are shown below.

- YYYY-MM-DD
- YYYY-MM-DD HH:MM
- YYYY-MM-DD HH:MM:SS

The specifiable ranges are shown below.

- YYYY: 1970 - 2038
- MM: 1 - 12
- DD: 1 - 31
- HH: 0 - 23
- MM: 0 - 59
- SS: 0 - 60 (When "60" is specified, time will be increased by one minute.)

  In the following cases, the increase will be one day.

Table 5.4 Increment of Days

MMDD Values Specified	Dates Incremented
0431	0501
0631	0701
0931	1001
1131	1201
0229 (Other than leap year) 0230 (Leap year)	0301
0230 (Other than leap year) 0231 (Leap year)	0302
0231 (Other than leap year)	0303

Point

When -to, -duration, and -latest are combined, data from the specified time is output. In this case, the specified time is included.

-to *to_date*

Specify the end time of the output duration. Specify the local time.

-latest cannot be used at the same time.

Specification formats are shown below.

- YYYY-MM-DD
- YYYY-MM-DD HH:MM
- YYYY-MM-DD HH:MM:SS

For details of the specifiable ranges for YYYY, MM, DD, HH, MM, SS, refer to "Table 5.4 Increment of Days".

Point

When -from and -duration are combined, data is output until the specified time. In this case, the specified time is excluded.

-latest

The end time of the data output duration is regarded as the current time. Specify when outputting of the latest data.

-to cannot be used at the same time.

Point

When combined with -from or -duration, the data for the latest specified duration will be output.

-verbose

Specify when displaying detailed information about operations of roles.

5.14 rcxadm mgrctl

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm mgrctl** - Manager control

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm mgrctl - Manager control

Format

```
rcxadm mgrctl start
rcxadm mgrctl stop
rcxadm mgrctl modify {-ip ip |-port name=number}
rcxadm mgrctl snap [-dir directory] [-full|-all]
```

Description

rcxadm mgrctl is the command used to start and stop managers, collect troubleshooting data, and change admin LAN IP addresses and port numbers.

For information on starting and stopping managers, refer to "2.1 Starting and Stopping Managers" in the "Operation Guide CE".
For information on collecting troubleshooting data, refer to "1.2.1 Collecting Initial Troubleshooting Data" and "1.2.2 Collecting Exhaustive Troubleshooting Data" in "Troubleshooting".
For information on methods for changing IP addresses and port numbers, refer to "6.1 Changing Admin IP Addresses" and "6.2 Changing Port Numbers" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

[Windows Manager]
If port numbers are changed, the following lines in the *Windows_system_folder*\system32\drivers\etc\services file are automatically updated.

[Linux Manager]
If the port number has been changed, the following lines in the \etc\services file will be changed automatically.

```
# service name  port number/protocol name
rcxmgr        23460/tcp
rcxtask       23462/tcp
rcxmongrel1   23463/tcp
rcxmongrel2   23464/tcp
rcxmongrel3   23466/tcp
rcxmongrel4   23467/tcp
rcxmongrel5   23468/tcp
rcxdb         23465/tcp
nfdomain      23457/tcp
nfagent       23458/tcp
```

Note

- In a clustered manager configuration, this command should not be used to start or stop the manager.

  [Windows Manager]

  - Start the Manager

    In the Failover Cluster Management tree, right-click [Services and Applications] for managers, and select [Bring this service or application online] from the popup menu.

  - Stop the Manager

    In the Failover Cluster Management tree, right-click [Services and Applications] for managers, and select [Take this service or application offline] from the popup menu.

  [Linux Manager]
  Use the cluster system administration view (Cluster Admin) to start or stop the manager.
  Refer to the PRIMECLUSTER manual for details.

- For Basic mode, the following values are not written.

  - rcxmongrel3
  - rcxmongrel4
  - rcxmongrel5

Subcommands

start

Starts the manager.

stop

Stops the manager.

modify

Modifies the IP address used by the manager in the admin LAN or its port number.

snap

Collects troubleshooting data.

Options

Specify the following options when using the modify subcommand:

-ip *ip*

Specify the new manager IP address.

-port *name=number*

Specify the port name to be modified in *name*, and the new port number in *number*.
The port name can be one of the following values:

- rcxmgr
- rcxtask
- rcxmongrel1
- rcxmongrel2
- rcxmongrel3
- rcxmongrel4
- rcxmongrel5
- rcxdb
- nfdomain
- nfagent

For Basic mode, the following values cannot be specified.

- rcxmongrel3
- rcxmongrel4
- rcxmongrel5

The following options can be specified for the snap subcommand:

-dir *directory*(Optional)

Specify the folder used to store the collected data in *directory*.
When omitted, the data will be stored in the folder specified by the TEMP environment variable:

- When using full paths in the *dir* and the TEMP environment variable

  The length of the full path string must not exceed 100 characters. If more than 100 characters are used the troubleshooting data cannot be collected, and message number 67131 or message number 67265 will be displayed.

- When using relative paths in the *dir* and the TEMP environment variable

  When specifying a relative folder path, its equivalent full path must not exceed 100 characters (calculated using the Windows 8.3 format (*)). If the converted full path string exceeds 100 characters, the troubleshooting data will not be collected, and the "Message number 67131" will be displayed.

  * Note: This rule specifies that the file name can be a maximum of 8 characters, with a file extension of up to 3 characters

- The following symbols cannot be specified in the name of the folder in which the collected data is stored:

  """, "|", "*", "?", "<", ">", ",", "%", "&", "^", "=", "!", ";"

  [Windows Manager]
  "/"

  [Linux Manager]
  "\"

-full (Optional)

Collects exhaustive troubleshooting data from the admin server. This data is required to isolate the cause of a problem which could not be identified from initial troubleshooting data alone.
This requires significantly more disk space for the generated data files. This option can be omitted when collecting troubleshooting data for an initial investigation (first diagnostic).

-all (Optional)

This option collects troubleshooting data not only from the admin server, but from all the managed servers as well. This option cannot be used together with the -full option.
Since only data required for initial troubleshooting is collected, it does not require much disk space. The data can also be collected quickly and sent easily via email.
Data collected from both the admin server and managed servers is stored in the directory specified by dir on the admin server from which the command was executed.
If the user account does not have administrative authority within the operating system, it is necessary to log in as a Resource Orchestrator privileged user (using the rcxlogin command) to use this option.
For information on the rcxlogin command, refer to "2.1 rcxlogin".

- Collected Files

  The collected data is stored in the following compressed files:

  - Admin Server

    [Windows Manager]
    rcxtssnap_*server_name*.jar
    The *server_name* part will be in lower case when the -all option is specified, or upper case when omitted.

    [Linux Manager]
    rcxtssnap_*server_name*.tar.bz2
    The *server_name* part will be in lower case when the -all option is specified, or upper case when omitted.

  - Managed Server

    [Windows] [Hyper-V]
    Managed_server\rcxtssnap_*physical_server_name*.jar

    [Linux] [VMware]
    Managed_server\rcxtssnap_*physical_server_name*.tar.bz2
    The managed server's name is displayed in *Managed_server*.

    

    [Linux] [VMware]
    When collecting troubleshooting data, data is compressed on managed servers using either the bzip2 or the gzip compression command. Depending on the command used, the resulting file extension will be either one of the following.
    Resource Orchestrator uses the command with the best compression ratio (bzip2 -> gzip) available on the managed server.

- When compressing with bzip2

*.tar.bz2

- When compressing with gzip

*.tar.gz

Execution Log

- Data Collection Results

rcxtssnap_result.txt

This file displays collection results in the following format:

```
Server_name:Result
```

Server_name
For a managed server, the physical server name is displayed.
For an admin server, the server name is displayed.

Result
OK: Indicates that the data collection was successful.
NG: Indicates that the data collection failed.

Example

```
blade1:OK
blade2:NG
blade4:NG
blade5:OK
Manager:OK
```

- Error Log

Admin server
rcxtssnap_*server_name*_error.txt

Managed server

[Windows]
Managed_Server\rcxtssnap_*physical_server_name*_error.txt

[Linux]
Managed_Server\rcxtssnap_*physical_server_name*_error.txt

Requirements

Permissions

OS Administrator
Note that when logged in as a Resource Orchestrator privileged user (using the rcxlogin command), only the -all option of the troubleshooting data collection subcommand (snap) can be used.

Location

Admin server

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.15 rcxadm nicdefctl

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm nicdefctl** - server NIC definition operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm nicdefctl - server NIC definition operations

Format

```
rcxadm nicdefctl commit [-nowait]
rcxadm nicdefctl list
rcxadm nicdefctl show -name name [-format {text|xml}]
```

Description

rcxadm nicdefctl is the command used to operate server NIC definitions.

Subcommands

commit

Reflects server NIC definitions on the manager.

To use the server NIC definition from the network resource, specify the physical LAN segment name defined in the server NIC definition as the physical LAN segment name of the network resource.

Refer to "15.6.1 Creation" for details.

list

Displays a list of server NIC definitions managed by the manager.

The following detailed information is displayed:

Table 5.5 Server NIC Definition Information

Item Name	Description
NAME	Server NIC definition name

show

Displays the detailed information for server NIC definitions managed by the manager.

The following detailed information is displayed:

Table 5.6 Detailed Information for Server NIC Definitions

Item Name	Description
NIC_INDEX [*num1*][*num2*]	Index number of NIC
NIC_REDUNDANT [*num1*][*num2*]	Operation type

Item Name	Description
	One of the following is displayed: - For active status "Active" is displayed. - For standby status "Standby" is displayed. If a single configuration is defined in the server NIC definition, this item will not be displayed.
PHYSICAL_LAN_SEGMENT_NAME [*num1*][*num2*]	Physical LAN Segment Name

In *num1*, the management number of a NIC definition group is displayed. The number is an integer starting from "0".
In *num2*, the index number within a NIC definition group is displayed. The number is an integer starting from "0".

Options

-format text|xml

Specify the display format.
When -format is omitted, it is displayed in text format.

text

The information is displayed in text format.

xml

The information is displayed in XML format with XML tags.

-name name

In *name*, specify the name of the target server NIC definition.

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the server NIC definition specified in the subcommand to complete its execution.

Examples

- To display a list of server NIC definition information:

```
>rcxadm nicdefctl list <RETURN>
NAME
--------------------
bx400_d2952
bx900_d2860
```

- To display the detailed information for server NIC definition information:

```
>rcxadm nicdefctl show -name bx900s1_d2860 <RETURN>
nic_index[0][0]: 3
nic_redundant[0][0]: Active
nic_index[0][1]: 4
nic_redundant[0][1]: Standby
physical_lan_segment_name[0][0]: ServiceB
nic_index[1][0]: 5
physical_lan_segment_name[1][0]: ServiceC
physical_lan_segment_name[1][1]: ServiceE
```

```
nic_index[2][0]: 6
nic_redundant[2][0]: Active
nic_index[2][1]: 7
nic_redundant[2][1]: Active
physical_lan_segment_name[2][0]: Management
```

5.16 rcxadm servermgr

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm servermgr** - Server management software operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm servermgr - Server management software operations

Format

```
rcxadm servermgr register -name name [-label label] [-comment comment] -soft_name soft_name
rcxadm servermgr list [-verbose]
rcxadm servermgr show -name name
rcxadm servermgr unregister -name name
rcxadm servermgr modify -name name [-label label] [-comment comment]
rcxadm servermgr refresh -name name
```

Description

rcxadm servermgr is the command used to perform operations of server management software.

Subcommands

register

Registers server management software.

list

Displays a list of server management software information.

The following detailed information is displayed:

Table 5.7 Server Management Software Information

Item Name	Description
NAME	Server management software name
LABEL	Label of the server management software
COMMENT (*)	Comment for the server management software
SOFT NAME	Name of the server management software
STATUS	Status of the server management software

* Note: When specifying -verbose for the option, it is displayed.

show

Displays the detailed information of the server management software.

The following detailed information is displayed:

Table 5.8 Detailed Information of Server Management Software

Item Name	Description
Name	Server management software name
Label	Label of the server management software
Comment	Comment for the server management software
Soft name	Name of the server management software
Version	Version of the server management software
Status	Status of the server management software

unregister

Unregisters the server management software.

modify

Modifies the following items of server management software:

- Label
- Comment

refresh

Updates server management software information.

Options

-name *name*

In *name*, specify the resource name of the target server management software.

-soft_name *soft_name*

In *soft_name*, specify the server management software. The specifiable names are shown below.

- When using BMC BladeLogic Server Automation

  Specify "blade_logic".

-verbose

Specify when displaying detailed information.

-label *label*

In *label*, specify the label of the target server management software.

-comment *comment*

In *comment*, specify the comment for the target server management software.

Examples

- To display the list of server management software information:

```
>rcxadm servermgr list <RETURN>
NAME          LABEL   SOFT NAME                          STATUS
----          -----   ---------                          ------
BladeLogic    -       BMC BladeLogic Server Automation   normal
```

- To display the detailed list of server management software information:

```
>rcxadm servermgr list -verbose <RETURN>
NAME         LABEL   COMMENT   SOFT NAME                          STATUS
----         -----   -------   ---------                          ------
BladeLogic   -       -         BMC BladeLogic Server Automation   normal
```

- To display the detailed information for server management software:

```
>rcxadm servermgr show -name BladeLogic <RETURN>
Name: BladeLogic
Label:
Comment:
Soft name: BMC BladeLogic Server Automation
Version: 8.2.01.273
Status: normal
```

5.17 rcxadm storagemgr

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm storagemgr** - storage management software operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm storagemgr - storage management software operations

Format

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***]**
rcxadm storagemgr list [-verbose]
rcxadm storagemgr show -name *name*
rcxadm storagemgr unregister -name *name*
rcxadm storagemgr modify -name *name* **[-label** *label***] [-comment** *comment***] [-soft_url** *url***] [-ip** *ipaddress***] [-port** *number***] [-user_name** *user_name***] [-passwd** *password***|-passwd_file** *password_file***]**

Description

rcxadm storagemgr is the command used to perform operations of storage management software.

Subcommands

register

Registers storage management software.

list

Displays a list of storage management software information.

The following detailed information is displayed:

Table 5.9 Storage Management Software Information

Item Name	Description
NAME	Storage management software name
LABEL	Storage management software label

Item Name	Description
COMMENT (*)	Storage management software comment
SOFT NAME	Name of storage management software
STATUS	Storage management software status
IP ADDRESS (*)	IP address to use to access the storage management software
PORT (*)	Port number to use to access the storage management software

* Note: When specifying -verbose for the option, it is displayed.

show

Displays the detailed information for storage management software.

The following detailed information is displayed:

Table 5.10 Detailed Information for Storage Management Software

Item Name	Description
NAME	Storage management software name
LABEL	Storage management software label
COMMENT	Storage management software comment
SOFT NAME	Name of storage management software
VERSION	Version of storage management software
URL	URL to use to access the storage management software
IP ADDRESS	IP address to use to access the storage management software
PORT NUMBER	Port number to use to access the storage management software
STATUS	Storage management software status
USER NAME	Storage management software user ID
PASSWORD	Password for storage management software user ID

unregister

Unregisters storage management software.

When releasing registration of storage management software, execute the rcxadm image list command and check that there are no cloning images that meet all of the following conditions.

- Cloning images created in virtual storage resources corresponding to the libvirt storage pool
- Cloning images with the image location type "Virtual Disk"

If there are any cloning images that meet all of the above conditions, ensure that they are deleted in advance.
For details on how to delete cloning images, refer to "17.5.4 Deleting" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

modify

Modifies the following items of storage management software:

- Label
- Comment
- IP address

- Port number
- User name
- Password

When the storage management software is ESC, an error occurs if the following options are specified.

- -ip
- -port
- -user_name
- -passwd
- -passwd_file

When the storage management software is Navisphere, an error occurs if the following options are specified.

- -ip
- -port
- -user_name
- -passwd
- -passwd_file

When the storage management software is Solutions Enabler, an error occurs if the following options are specified.

- -ip
- -port
- -user_name
- -passwd
- -passwd_file

When the storage management software is FalconStor NSS, an error occurs if the following options are specified.

- -port

If the storage management software is the one of the following, an error occurs because this command cannot be used to make changes.

- VMware vCenter Server
- SCVMM
- Oracle VM Manager
- iSCSI controller for Resource Orchestrator

When the storage management software is libvirt, an error occurs if the following options are used.

- -port
- -soft_url

When the storage management software is zfs, an error occurs if the following options are used.

- -soft_url

Options

-name *name*

In *name*, specify the resource name of the target storage management software to perform an operation with.

-soft_name *soft_name*

In *soft_name*, specify the storage management software. The name that can be specified is one of the following:

- When using ETERNUS SF Storage Cruiser

  Specify "esc".

  If the following options are specified, an error will occur.

  - -ip
  - -port
  - -user_name
  - -passwd
  - -passwd_file

- When using Data ONTAP

  Specify "ontap".

  If the following options are not specified, an error will occur.

  - -ip
  - -user_name
  - -passwd
  - -passwd_file

- When using PRIMECLUSTER GDS

  Specify "gds".

  If the following options are not specified, an error will occur.

  - -ip
  - -user_name
  - -passwd
  - -passwd_file

- When using Navisphere

  Specify "emcns".

  If -ip is not specified, an error will occur.

  If the following options are specified, an error will occur.

  - -port
  - -user_name
  - -passwd
  - -passwd_file

- When using Solutions Enabler

  Specify "emcse".

  If the following options are specified, an error will occur.

  - -ip
  - -port
  - -user_name
  - -passwd

- -passwd_file

- When using Citrix XenServer

  Specify "xen".

  If the following options are not specified, an error will occur.

  - -ip
  - -user_name
  - -passwd
  - -passwd_file

- When using FalconStor NSS

  Specify "nss".

  If the following options are not specified, an error will occur.

  - -ip
  - -user_name
  - -passwd
  - -passwd_file

  If the following options are specified, an error will occur.

  - -port

- When using RHEL-KVM in a NAS environment

  Specify "libvirt".

  If the following options are not specified, an error will occur.

  - -ip
  - -user_name
  - -passwd
  - -passwd_file

  If the following options are specified, an error will occur.

  - -port
  - -soft_url

- When using a zfs storage pool in Solaris zones

  Specify "zfs".

  If the following options are not specified, an error will occur.

  - -ip
  - -user_name
  - -passwd
  - -passwd_file

  If the following options are specified, an error will occur.

  - -soft_url

-soft_url *url*

In *url*, specify the URL to use to access the storage management software.

- When using ETERNUS SF Storage Cruiser 14.2 for storage management software

  When specifying -soft_name esc and managing only an ETERNUS, specify the URL of ETERNUSmgr for the ETERNUS.

  When managing multiple ETERNUSs, do not specify -soft_url.

- When using ETERNUS SF Storage Cruiser 15 for storage management software

  Specify the URL for ETERNUS SF operation management servers.

  For details on the URL to specify, refer to the "ETERNUS SF Express 15.0/Storage Cruiser 15.0/AdvancedCopy Manager 15.0 Web Console Guide".

  When managing only one ETERNUS server, the URL can be specified in the same way as when using ETERNUS SF Storage Cruiser 14.2.

-ip *ipaddress*

In *ipaddress*, specify an IP address to use to access the storage management software.

When the storage server that FalconStor NSS is installed on is redundant, and "nss" is specified for "-soft_name", the specified IP address should not be the Heartbeat IP Address but the Virtual IP Address.

-port *number*

In *number*, specify a port number to use to access the storage management software.

-user_name *user_name*

In *user_name*, specify the user ID for the storage management software.

When specifying -soft_name ontap, specify root.

-passwd *password*

In *password*, specify the password for the storage management software.

-passwd_file *password_file*

In *password_file*, specify the password file for the storage management software. When users other than administrators use an admin server, it is dangerous to specify the password using an argument such as -passwd because the arguments of commands issued by other users can be viewed. Use the -passwd_file option.
In the file that defines the passwords, enter a user name and password on each line, separated by a comma (","). The password entered in the line including the user name specified with the -user_name option will be registered.

-verbose

Specify when displaying detailed information.

-label *label*

In *label*, specify the new label.

-comment *comment*

In *comment*, specify the new comments.

Requirements

Permissions

Not required.

Location

Admin server

Examples

- To display the list of the storage management software information:

```
>rcxadm storagemgr list <RETURN>
NAME      LABEL    SOFT NAME                      STATUS
----      -----    ---------                      ------
esc00     -        ETERNUS SF Storage Cruiser     normal
```

- To display the details of the storage management software information:

```
>rcxadm storagemgr list -verbose <RETURN>
NAME    LABEL   COMMENT  SOFT NAME                  STATUS  IP ADDRESS PORT
----    -----   -------  ---------                  ------  ---------- ----
esc00   -       -        ETERNUS SF Storage Cruiser normal  -          -
```

- To display the detailed information for storage management software:

```
>rcxadm storagemgr show -name esc00 <RETURN>
Name: esc00
Label:
Comment:
Soft name: ETERNUS SF Storage Cruiser
Version: 14.2
URL:
IP address:
Port number:
Status: normal
User name:
Password:
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.18 rcxadm vmmgr

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm vmmgr** - VM management software operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm vmmgr - VM management software operations

Format

```
rcxadm vmmgr list
rcxadm vmmgr show -name name
rcxadm vmmgr refresh
```

Description

rcxadm vmmgr is the command used to manage VM management software. The information of VM management software is displayed.

Subcommands

list

Displays a list of VM management software information.

The following detailed information is displayed:

Table 5.11 VM Management Software Information

Item Name	Description
NAME	Name of the target VM management software
TYPE	Types of VM management software
IPADDRESS	IP address to use to access the VM management software
STATUS	VM management software status

show

Displays the detailed information for VM management software.

The following detailed information is displayed:

Table 5.12 Detailed Information for VM Management Software

Item Name	Description
NAME	Name of the target VM management software
TYPE	Types of VM management software
IPADDRESS	IP address to use to access the VM management software
STATUS	VM management software status
MANAGERSOFTWAREURL	URL to use to access the VM management software

refresh

When using the Disaster Recovery feature, the regular update of VM management software is forcibly implemented in order to recover a virtual L-Server.

Options

-name *name*

In *name*, specify the name of the target VM management software to perform operations with.

Examples

- To display a list of VM management software information:

```
>rcxadm vmmgr list <RETURN>
NAME                          TYPE           IPADDRESS       STATUS
----                          ----           ---------       ------
SCVMM1                        SCVMM          192.168.10.20   normal
vCenterServer1                vCenter Server 192.168.100.20  normal
```

- To display the detailed information for VM management software:

```
>rcxadm vmmgr show -name SCVMM1 <RETURN>
Name: SCVMM1
Type: SCVMM
IpAddress: 192.168.10.20
```

```
Status: normal
ManagementSoftwareURL: -
LibraryShare[0]: \\rcxvmmshv-dc.rcxvmmshv.local\MSSCVMMLibrary
LibraryShare[1]: \\rcxclusterfs.rcxvmmshv.local\SCVMM-LIB

>rcxadm vmmgr show -name vCenterServer1 <RETURN>
Name: vCenterServer1
Type: vCenter Server
IpAddress: 192.168.100.20
Status: normal
ManagementSoftwareURL: https://192.168.100.20
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.19 rcxmgrctl

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxmgrctl** - Starting or stopping the manager

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxmgrctl - Starting or stopping the manager

Format

```
rcxmgrctl start
rcxmgrctl stop
```

Description

rcxmgrctl is the command used to start or stop the manager.

Subcommands

start

Starts the manager.

stop

Stops the manager.

Options

There are no options.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.20 rcxmgrexport

For details, refer to "B.1 rcxmgrexport" in the "DR Option Instruction".

5.21 rcxrecovery

For details, refer to "B.2 rcxrecovery" in the "DR Option Instruction".

5.22 rcxrepdef

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxrepdef** - Generate replication definition file

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxrepdef - Generate replication definition file

Format

```
rcxrepdef ccm [-local storage_ip [-remote storage_ip [=box_id]]] -file replication_file
rcxrepdef snapmirror -local storage_ip -remote storage_ip -file replication_file
rcxrepdef navisphere -local storage_ip -remote storage_ip -localsecfile local_secfile -remotesecfile
remote_secfile -file replication_file -rhost storage_mgr_ip
rcxrepdef solutionenabler [-local sid [-remote sid]] -file replication_file [-rhost storage_mgr_ip]
```

Description

The rcxrepdef command creates a replication definition file from the configuration information for the replication software in the high-availability storage machine.

Note

Before executing this command, the path to execute commands of the storage management software must be defined.
When specifying "ccm" for the subcommand, the folder is as follows. When also using other storage management software, define the path for each storage management software.

[Windows]
*ETERNUS_SF_Storage_Cruise_Installation_folder*CM\bin

[Linux]
/opt/FJSVccm/bin

Subcommands

Specify the replication software. Specify the following values.

ccm : ACM-CCM(ETERNUS)

snapmirror : SnapMirror (storage management software for NetApp)

navisphere : NaviSphere(EMC CLARiX, EMC VNX)

solutionenabler :Solution enabler (storage management software for SYMMETRIX)

Options

-local *storage_ip*

Enter the IP address of the source storage machine for replication. If this is omitted, the IP addressed obtained from replication software is used.

-remote *storage_ip* [=*box_id*]

Enter the IP address or box id of the source storage machine for replication. If this is omitted, the IP addressed obtained from replication software is used.

When replication is performed on multiple servers and the IP address cannot be recognized on the replication software, specify the BOX ID to uniquely determine the destination for replication.

-file *replication_file*

Specify the folder name where the replication definition file will be output.

-localsecfile *local_secfile*

Specify the authentication file of the source storage device for replication.

-remotesecfile *remote_secfile*

Specify the authentication file of the destination storage device for replication.

-local *local_sid*

Specify the identifier of the source storage device for replication.

-remote *remote_sid*

Specify the identifier of the destination storage device for replication.

-rhost storage_mgr_ip

Specify the server IP address of storage management software that is deployed on a server other than that of Resource Orchestrator.

This option can be specified only when either navisphere or solutionsenabler is specified in the subcommand.

Example

```
>rcxrepdef ccm -file file1<RETURN>
```

5.23 rcxstorage

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxstorage** - Creation of switchover script for operating or standby storage or disk resource comparison tables for Disaster Recovery

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxstorage - Creation of switchover script for operating or standby storage or disk resource comparison tables for Disaster Recovery

Format

```
rcxstorage [-failover|-failback] -storageunit unit_name -file file -outfile outfile
rcxstorage -recovery -mode [prepare|mapping] -file file -outfile outfile
```

Description

rcxstorage -failover|-failback are the commands to create scripts for switching storage between the operating and standby states, and to create scripts for power operations for physical L-Servers.

rcxstorage -recovery is the command to create a disk resource comparison table for Disaster Recovery.

Options

-failover|-failback

- Use the -failover option to create the following scripts:
  - A script for switching from operating to standby (failover script)
  - A script for stopping a target physical L-Server
  - A script for starting a target physical L-Server
- Use the -failback option to create the following scripts:
  - A script for switching from standby to operating (failback script)
  - A script for stopping a target physical L-Server
  - A script for starting a target physical L-Server

-recovery

When specified with -mode, the Disaster recovery function is executed.

-storageunit *unit_name*

Specify the operating storage units.

- When the storage unit is ETERNUS, EMC CLARiiON, or EMC VNX

  Specify the IP address of the storage unit for *unit_name*.

- When the storage unit is EMC Symmetrix DMX or EMC Symmetrix VMAX

  Specify the SymmID of the storage unit for *unit_name*.

-mode [prepare|mapping]

Use the prepare option to extract the disk resource information from the configuration information of the manager of the operating storage.

Use the mapping option to create a comparison table for the disk resource, comparing the configuration information of the operating and standby storage.

-file *file*

- For -failover or -failback

  Specify the replication definition file using a full pathname.

- For -mode prepare

  Specify the replication definition file using a full pathname.

- For -mode mapping

  Specify the file for the configuration information of the operating storage using its full path.

Use rcxrepdef command to create the replication definition file. For details on rcxrepdef command, refer to "5.22 rcxrepdef".

-outfile *outfile*

- For -failover

  Specify the full pathname of the failover script file.

- For -failback

  Specify the full pathname of the failback script file.

- For -mode prepare

  Specify the full path name of the file for the configuration information of the operating storage.

- For -mode mapping

  Specify the full path name for the disk resource comparison table.

For the file name of a failover or a failback script, the file name specified for *outfile* is used. The script for stopping physical L-Servers is created with a file name composed of the file name specified in *outfile* (the extension is omitted), followed by the string "_power_off". The script for stopping physical L-Servers is created with a file name composed of the file name specified in *outfile* (the extension is omitted), followed by the string "_power_on".

Example

- When C:\temp\command.bat is specified for *outfile*

Type of Script File	File Name of the Script Created
A failover or a failback script	C:\temp\command.bat
A script for stopping physical L-Servers	C:\temp\command_power_off.bat
A script for starting physical L-Servers	C:\temp\command_power_on.bat

If there is already a file with the same name, the script cannot be created. Specify the name of the new file to create.

When operating this command in Windows environments, the script file to be output is a batch file, in Linux environments it is a shell script. When specifying the name of a script file, reflect the extensions of batch files and shell scripts.

5.24 rcxvmdisk

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxvmdisk** - Output of disk resource configuration information (partial) for virtual L-Servers

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxvmdisk - Output of disk resource configuration information (partial) for virtual L-Servers

Format

rcxvmdisk -dir *The_name_of_the_folder_that_stores_the_information_output_by_the_rcxvmdiskagt_command*

Description

rcxvmdisk is the command that outputs a part of disk resource configuration information for virtual L-Servers to the standard output in XML format.

The following detailed information is displayed:

Table 5.13 Disk Resource Configuration Information for Virtual L-Servers (Partial)

Element Name/Attribute Name	Description
VmHost/ip	The admin LAN IP address for the VM host
Disk/path	Absolute path to the raw device or partition recognized by the VM host
Disk/size	The capacity of the raw device or partition recognized by the VM host (unit: GB)

By saving the output information in a file and making the following changes to the file, the file can be specified for the -file option of the rcxadm disk register command, etc.

- For the *name* attribute of the Pool element, describe the name of the storage pool to register disk resources for virtual L-Servers to.
- For the *name* attribute of the Disk element, describe the disk resource name.

  For the disk resource name, enter a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").

  For the raw device or partition connected so that it can be shared between VM hosts, specify the same disk resource name on the VM hosts.

Options

-dir *directory*

For *dir*, specify the name of the folder for storing output information of the rcxvmdiskagt command executed on each VM host.

- Create the folder to specify for the -dir option in advance. It is necessary to use this folder to store the information output when the rcxvmdiskagt command is executed on each VM host. In addition, those files must have the extension "xml".

  Files with extensions other than "xml" in that folder are ignored.

  Only files with the extension "xml" are treated as operation targets. When the extension is "xml", do not execute the following:

  - Store files other than those containing the information output by the rcxvmdiskagt command in that folder.
  - Redirect the standard output of this command to the directory specified in the -dir option.
- The folder specified for the -dir option can be specified using an absolute path or a relative path.
- When there is no file containing the information output by the rcxvmdiskagt command in the folder specified for the -dir option, the elements other than the VmHost element and its child elements are output.

Example

- When There are Two VM hosts

```
>rcxvmdisk -dir DirectoryName <RETURN>
<?xml version="1.0" encoding="utf-8"?>
<Storage>
  <Pool name="*"/>
  <VmHosts>
    <VmHost ip="192.168.23.153">
      <Disks>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300010000"
size="10.0"/>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300020000"
size="10.0"/>
```

```
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300030000"
size="10.0"/>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300040000"
size="10.0"/>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300050000"
size="10.0"/>
      </Disks>
    </VmHost>
    <VmHost ip="192.168.23.154">
      <Disks>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300010000"
size="10.0"/>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300020000"
size="10.0"/>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300030000"
size="10.0"/>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300040000"
size="10.0"/>
        <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300050000"
size="10.0"/>
      </Disks>
    </VmHost>
  </VmHosts>
</Storage>
```

Note

- This command should be performed using a user account with administrative privileges within the operating system.
- The information output by this command will be the input information for the rcxadm disk register command and the rcxadm disk modify command. Therefore, the output information must be saved as a file.
- There are no limitations on the names of the files that store the output information of this command, except that the file extension must be "xml".

5.25 rcxvmdiskagt

Name

[KVM]
/opt/FJSVrcxat/bin/rcxvmdiskagt - Output of the device information recognized by a VM host

[Solaris Zones (Solaris 10)] [OVM for SPARC]
/opt/FJSVrcvat/bin/rcxvmdiskagt - Output of the device information recognized by a VM host

Format

[KVM]
rcxvmdiskagt -ip *ipaddress*

[Solaris Zones (Solaris 10)] [OVM for SPARC]
rcxvmdiskagt -ip *ipaddress* **[-vmtype {solaris-zone|ovm-sparc}]**

Description

rcxvmdiskagt is the command that outputs the device information recognized by a VM host to the standard output in XML format.

The following detailed information is displayed:

Table 5.14 Device Information Recognized by a VM Host [KVM]

Element Name/Attribute Name	Description
VmHost/ip	The admin LAN IP address for the VM host
Disk/path	Absolute path to the raw device or partition recognized by the VM host
Disk/size	The capacity of the raw device or partition recognized by the VM host (unit: GB)

Table 5.15 Device Information Recognized by a VM Host [Solaris Zones (Solaris 10)]

Element Name/Attribute Name	Description
VmHost/ip	The admin LAN IP address of the global zone
Disk/path	Mount point of a raw device or partition connected to a non-global zone, which is described in the /etc/vfstab file in the global zone
Disk/size	The capacity of the raw device or partition recognized by the global zone (unit: GB)

Table 5.16 Device Information Recognized by a VM Host [OVM for SPARC]

Element Name/Attribute Name	Description
VmHost/ip	The admin LAN IP address for the VM host
Disk/path	The value in which the virtual disk service name of service domain in host is combined with the volume name corresponding to a raw device or partition connected with VM guest  Example When the volume name and the virtual disk service name are shown as below, the value specified for here is vol0@primary-vds0. volume name: vol0 virtual disk service name: primary-vds0
Disk/size	The capacity of the raw device or partition recognized by the VM host (unit: GB)

Options

-ip *ipaddress*

Specify the IP address of the admin LAN for the VM host.

-vmtype solaris-zone|ovm-sparc [Solaris Zones (Solaris 10)] [OVM for SPARC]

Specify the type of VM management software.
If omitted, the disk resource configuration information when the VM management software is Solaris zones is displayed.

[Solaris Zones (Solaris 10)]
Specify "solaris-zone".

[OVM for SPARC]
Specify "ovm-sparc"

Example [KVM]

```
>rcxvmdiskagt -ip 192.168.23.153 <RETURN>
<?xml version="1.0" encoding="utf-8"?>
<VmHost ip="192.168.23.153">
```

```
 <Disks>
  <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300010000" size="10.0"/>
  <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300020000" size="10.0"/>
  <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300030000" size="10.0"/>
  <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300040000" size="10.0"/>
  <Disk name="*" path="/dev/disk/by-id/scsi-3600000e00d0000000001321300050000" size="10.0"/>
 </Disks>
</VmHost>
```

Example [Solaris Zones (Solaris 10)]

```
>rcxvmdiskagt -ip 192.168.23.153 <RETURN>
<?xml version="1.0" encoding="utf-8"?>
<VmHost ip="192.168.23.153">
 <Disks>
  <Disk name="*" path="/ror/zones/zone1" size="10.0"/>
  <Disk name="*" path="/ror/zones/zone2" size="10.0"/>
  <Disk name="*" path="/ror/zones/zone3" size="10.0"/>
 </Disks>
</VmHost>
```

Example [OVM for SPARC]

```
>rcxvmdiskagt -ip 192.168.23.153 <RETURN>
<?xml version="1.0" encoding="utf-8"?>
<VmHost ip="192.168.23.153">
 <Disks>
  <Disk name="*" path="vol0@primary-vds0" size="10.0"/>
  <Disk name="*" path="vol1@primary-vds0" size="10.0"/>
  <Disk name="*" path="vol2@primary-vds0" size="10.0"/>
 </Disks>
</VmHost>
```

- This command should be performed using a user account with administrative privileges within the operating system.
- The information output by this command will be the input information for the rcxvmdisk command. Therefore, the output information must be saved as a file.
- The rcxvmdisk command is included in the manager. Therefore, move the files that store the output information of this command to the server where the manager is running.
- Although there are no limitations on the name of the files that store the output information of this command, when there are multiple VM hosts (or global zones in Solaris zones), users are recommended to use file names that do not overlap with the file names used on the other VM hosts. In addition, those files must have the extension "xml".
- Delete the following from the output information:
  - Devices not used by VM guests (non-global zones in Solaris zones)
  - Devices not to be used nor mounted on VM hosts (global zones in Solaris Zones)
  - LVM disks
- Delete the information on the devices already registered with the manager as disk resources for virtual L-Servers. However, this does not apply when changing registered information using the rcxadm disk modify command.

- For details on the conditions of the device information output in the Disk element used for this command, refer to "Information".

  When the device information registered in Resource Orchestrator is not output when this command is used, add the Disk element. For details on the Disk element, refer to "15.4.1 Disk Resources [KVM]", "15.4.3 Disk Resources [Solaris Zones]", or "15.4.4 Disk Resources [OVM for SPARC]".

[KVM]

- This command is included in the agents that operate on Red Hat(R) Enterprise Linux(R) 6 (for Intel64).

[Solaris Zones (Solaris 10)]

- This command is included in the agents that operate on Solaris 10.
- The devices for this command are shown as below. When defining other devices as disk resources, edit the XML definitions of the disk resource configuration information for virtual L-Servers.
  - Solaris standard special files (/dev/dsk/c*t*d*s*)
  - mplb special files (/dev/FJSVmplb/dsk/mplb*s*)

Information

The conditions for the device information to be output to the Disk element are as follows:

[KVM]

- The device is a SCSI disk (a disk beginning with "scsi-" in /dev/disk/by-id/)
- The device has not been mounted on the VM host at the time when this command is executed (except disks or partitions that have been mounted as /dev/sd* referring to the /etc/mtab information)

[Solaris Zones (Solaris 10)]

- SCSI disks (the disk starting with "c" under /dev/dsk/ or the disk starting with "mplb" under /dev/FJSVmplb/dsk/)
- The mount point of a device has been specified in a global zone (a disk which refers to the information in /etc/vfstab and whose mount point for /dev/dsk/c* disk or /dev/FJSVmplb/dsk/mplb* is set to something other than "-" in that file)
- The device has not been mounted in the global zone at the time when this command is executed (except disks that have been mounted at /dev/dsk/c* or dev/FJSVmplb/dsk/mplb* referring to the /etc/mnttab information)

[OVM for SPARC]
When the service of ldmd is started on the VM host and the /sbin/ldm command can be executed, the device information is output to the Disk element.

- The volume is managed by the virtual disk service on the VM host
- SCSI disks (the disk starting with "c" under /dev/dsk/ or the disk starting with "mplb" under /dev/FJSVmplb/dsk/) recognized by VM hostsSCSI disks (the disk starting with "c" under /dev/dsk/ or the disk starting with "mplb" under /dev/FJSVmplb/dsk/)

For partitioned disks, the information for each partition is output.
When there is no raw device or partition that meets the above conditions, the elements other than the Disk element are output.

5.26 rcxadm vmhostctl

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm vmhostctl** - operation of VM host's configuration information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm vmhostctl - operation of VM host's configuration information

Format

```
rcxadm vmhostctl commit [-nowait]
rcxadm vmhostctl list {-server server | -pool pool | -tenant tenant}
```

Description

rcxadm vmhostctl is the command that reflects value of configuration files on VM hosts or displays the resources reserved for VM hosts.

When the VM type is "RHEL-KVM", the command is available.

Subcommands

commit

Reflects values of configuration files on VM hosts.

list

Displays a list of the resources reserved for VM hosts.

Also displays VM hosts that are not in configuration files.

In that case, the default values are displayed.

Table 5.17 VM Host's Configuration Information

Item Name	Description
PHYSICAL_SERVER	Physical server
SERVER	Server name (VM host)
CPU	CPU capacity reserved for VM host
MEMORY	Memory capacity reserved for VM host

Options

-nowait

Use this option to return directly to the command prompt without waiting for the reflection of configuration file values on VM hosts in the subcommand to complete its execution.

-server *server*

Only displays information for the physical server that is specified for -server *server*.

-pool *pool*

Displays information for the physical servers that are in the VM pool specified for *pool*.
Enter a slash ("/") in front of *pool*.
For resource folders or pools hierarchized using tenants, specify the resource folder or tenant name using slashes ("/").

Example

- To specify "VMPool"

```
/VMPool
```

- To specify "VMPool" below "RCX_TENANT" below "RCX_FOLDER"

```
/RCX_FOLDER/RCX_TENANT/VMPool
```

-tenant *tenant*

Displays information for physical servers that are in the tenant specified by -tenant *tenant*
Enter a slash ("/") in front of *tenant*.
For the hierarchized resource folder, specify the resource folder name using slashes ("/").

Example

- To specify "RCX_TENANT"

```
/RCX_TENANT
```

- To specify "RCX_TENANT" below "/RCX_FOLDER/RCX_TENANT/VMPool"

```
/RCX_FOLDER/RCX_TENANT
```

Examples

- When reflecting values of configuration file on VM hosts

```
>rcxadm vmhostctl commit <RETURN>
```

- Displays a list of the resources reserved for VM hosts.

```
>rcxadm vmhostctl list <RETURN>
PHYSICAL_SERVER        SERVER          CPU                          MEMORY
----                   ----            -----                        ----
bx600_1                KVM_1           1.6 (2.0GHz x 8 x 10%)       1.1
bx600_2                KVM_2           3.2 (2.0GHz x 8 x 20%)       2
bx600_3                KVM_3           1.6 (2.0GHz x 8 x 12%)       3.3
```

5.27 macbindconfig

Name

- Agent

  [Linux]
  /usr/local/sbin/macbindconfig - Bind settings for MAC addresses (Red Hat Enterprise Linux 5, Red Hat Enterprise Linux 6, or Red Hat Enterprise Linux 7)

Format

```
macbindconfig create
```

Description

macbindconfig is the function that configures MAC addresses of Network Interface Cards (NICs) in interface configuration files corresponding to Ethernet interface names (eth0, eno1, enp5s0f0, etc.) and allocates the correct NIC to each interface, regardless of the NIC load order, in the environment where multiple NICs are used.

This command is automatically executed when installing an ROR agent.

After an ROR agent has been installed, execute this command when adding or removing network interfaces.

Subcommands

create

Retains the relation information on the PCI bus number that corresponds to the Ethernet interface name (eth0, eno1, enp5s0f0, etc.) in a file (/etc/macbind-tool/pci-eth_table) as configuration information.

Requirements

Permissions

OS Administrator

Location

Managed server

Examples

- When creating a configuration information file with the PCI bus number that corresponds to the Ethernet interface name

```
> /usr/local/sbin/macbindconfig create <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

5.28 rcxadm vdimgr

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm vdimgr** - VDI management software operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm vdimgr - VDI management software operations

Format

```
rcxadm vdimgr list
rcxadm vdimgr show -name name
```

Description

rcxadm vdimgr is the command used to manage VDI management software. The information of VDI management software is displayed.

Subcommands

list

Displays a list of VDI management software information.

The following detailed information is displayed:

Table 5.18 VDI Management Software Information

Item Name	Description
NAME	The name of the target VDI management software
TYPE	The type of VDI management software
IPADDRESS	The IP address to use to access the VDI management software
STATUS	The VDI management software status [Horizon View] "normal" is always displayed.

show

Displays the detailed information for VDI management software.

The following detailed information is displayed:

The displayed items may differ based on the type of the VDI management software due to the enhancement of Resource Orchestrator.

Table 5.19 Detailed Information for VDI Management Software

Item Name	Description
Name	The name of the target VDI management software
Type	The type of VDI management software
IpAddress	The IP address to use to access the VDI management software
Status	The VDI management software status [Horizon View] "normal" is always displayed.
VmMgr	The name of the VM management software linked to the VDI management software When there are multiple VM management software linked to the VDI management software, they are displayed separated by commas. This item is not displayed when there is no VM management software linked to the VDI management server.
ConnectInfo[*num*]	Connection information of VDI management software The index number is configured in *num*. The number is "1 to 3". The connection information of the VDI management server specified when a VDI user uses a virtual desktop is displayed. When deploying an L-Platform, the user is notified of the first connection information by e-mail.

Options

-name *name*

In *name*, specify the name of the VDI management software to perform operations with.

Examples

- To display a list of VDI management software information:

```
>rcxadm vdimgr list <RETURN>
NAME                            TYPE           IPADDRESS       STATUS
----                            ----           ---------       ------
View1                           Horizon View   192.168.10.20   normal
```

- To display the detailed information for VDI management software:

```
>rcxadm vdimgr show -name View1 <RETURN>
Name: View1
Type: Horizon View
IpAddress: 192.168.10.20
Status: normal
VmMgr: vCenter1, vCenter2
ConnectInfo[1]: 192.168.123.20
ConnectInfo[2]: http://192.168.123.20/vmwareview/
ConnectInfo[3]: 192.168.124.21
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Chapter 6 Backup and Restoration Operations for Configuration Definition Information

This chapter explains how to use the commands to backup and restore the configuration definition information of Resource Orchestrator.

6.1 rcxbackup [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxbackup** - Backup of configuration definition information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxbackup - Backup of configuration definition information

Format

rcxbackup [-dir *directory***] [[-immediate]|[-timeout** *value***]]**

Description

rcxbackup is the command used for backup of the configuration definition information of Resource Orchestrator.

Back up configuration definition information of Resource Orchestrator using this command for restoration in case the configuration definition information is damaged.

Configuration definition information cannot be backed up while resource operations, such as those involving L-Servers, resource pools, or resource folders, are being performed.
Backup of configuration definition information can only be performed when no operation is being executed for the resources.

- When executing the command while the manager is running

  Backup will be performed after completing the operations.

- When executing the command while the manager is stopped

  This command will be returned without waiting for the completion of operations being executed, regardless of the presence or absence of the specified options.

Options

-dir *directory*

In *directory*, specify a directory to use for backup of the configuration definition information of Resource Orchestrator. However, for online backups, the name of a directory on a network drive cannot be specified.

When omitting the directory specification, or the destination is defined in the following definition file, the backup is saved in the specified directory.

Storage Location of Definition Files

[Windows Manager]
*Installation_folder***SVROR\Manager\etc\customize_data\Manager_backup.rcxprop**

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data/manager_backup.rcxprop

If the directory specification is omitted in the definition file, the backup is saved in the following directory:

Storage Location of Backup Files

[Windows Manager]
*Installation_folder***SVROR\Manager\var\backup**

[Linux Manager]
/var/opt/FJSVrcvmr/backup

-immediate

Use this option to return directly to the command prompt without waiting for the operation being executed on the admin server to complete its execution.

Backup of configuration definition information can only be performed when no operation is being executed for the resources. If an operation is being executed, this command will return an error.

-timeout *value*

Use this option to wait the number of seconds specified in *value* for completion of the operation being performed on the admin server. If the operation is not completed within the specified time, this command will return an error.

If this option is omitted, the default value (3600 seconds) is set.

Use this option to return with an error when the operation being executed on the admin server does not complete its execution after the expiration of the number of seconds specified in *value*.

Periodical backup may not be able to start its process while the manager is performing operations using the configuration definition information such as L-Server creation. Specify this option to cancel the backup after the specified number of seconds has elapsed.

If this command is executed when the manager has been stopped, the specification of this option will be ignored.

Example

```
>rcxbackup -dir /dir0 -immediate <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Note

- Specify the command using an absolute path.
- When specifying folders or directories, take note of the following points.
  - Do not specify the system installation folder or the installation directory for the -dir option.
  - Do not use double-byte characters or the following symbols to specify folders or directories for the -dir option.

    """, "|", "*", "?", "<", ">", ",", "%", "&", "^", "=", "!", ";"

    [Windows Manager]
    "/"

    [Linux Manager]
    "\"
  - The folder path or directory path can be specified using up to 100 characters.
- For the -timeout option, "172800" or less seconds can be specified.

- Do not stop or start the manager during execution of this command.
- If this command fails, a folder or a directory that has a name starting with tmp will be created in the folder or directory specified for the -dir option. If the problem is still not resolved after performing the actions based on the output error message, collect the folder or the directory as troubleshooting data, and contact Fujitsu technical staff. Delete these folders or directories when they are no longer necessary.
- Do not execute this command while resource operations, such as those involving L-Servers, resource pools, or resource folders, are being performed.
- If the configuration definition information is being updated when the periodical backup operation starts, the backup operation will be postponed until the update is complete.
- When an operation is being executed on the admin server, "INFO: Manager operation is still running." is displayed periodically.

6.2 rcxchkmismatch [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\sys\lserver_repair\rcxchkmismatch** - Deletion of resource folders and L-Servers

[Linux Manager]
/opt/FJSVrcvmr/sys/lserver_repair/rcxchkmismatch - Deletion of resource folders and L-Servers

Format

rcxchkmismatch {-logdir *L-Server_restoration_log_storage_directory* **| -diff} [-allow del]**

Description

rcxchkmismatch is the command to perform the following operations after the manager is backed up:

- Checking resources which have been deleted or for which configuration changes have been made
- Deleting the information of resources which have been deleted from the configuration definition information
- Reflecting the information of resources for which configuration changes have been made, on the configuration definition information

Options

-logdir *L-Server_restoration_log_storage_directory*

Specify the directory where L-Server restoration logs are stored.

-diff

Use this option if L-Server restoration logs are damaged or not recorded. This option compares information between regular update information of VM management software and configuration definition information, and then displays the differences between them.

-allow del

Deletes the difference information between L-Server restoration logs and configuration definition information, or between VM management software and configuration definition information.

Examples

```
>rcxchkmismatch -logdir L-
Server_restoration_log_destination_directory <RETURN>
mismatch:
```

```
/Resource_folder_name/L-Server_name_1
/L-Server_name_2
...
spec mismatch:
/Resource_folder_name_2/L-Server_name_3
/L-Server_name_4
...
```

```
>rcxchkmismatch -logdir L-Server_restoration_log -allow del <RETURN>
mismatch and deleted:
/Resource_folder_name/L-Server_name_1
/L-Server_name_2
...
```

6.3 rcxkeydefbackup [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxkeydefbackup** - Backup of other definition and management information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxkeydefbackup - Backup of other definition and management information

Format

rcxkeydefbackup [-dir *directory*] **[[-immediate]|[-timeout** *value*]]

Description

rcxkeydefbackup is the command used for backup of the other definition and management information of Resource Orchestrator.

Back up the following other definition and management information of Resource Orchestrator using this command for restoration in case the information is damaged.

Table 6.1 List of Items for Backup/Restore [Windows Manager]

No	Overview	Item
1	Certificates	*Installation_folder*\SVROR\Manager\etc\opt\FJSVssmgr\current\certificate (*1) *Installation_folder*\SVROR\Manager\etc\opt\FJSVrcxdm\certificate (*1) *Installation_folder*\SVROR\Manager\sys\apache\conf\ssl.crt *Installation_folder*\SVROR\Manager\sys\apache\conf\ssl.key
2	Session encryption keys	*Installation_folder*\SVROR\Manager\rails\config\rcx_secret.key
3	Definition files	*Installation_folder*\SVROR\Manager\etc\customize_data (*1) *Installation_folder*\SVROR\Manager\etc\vm (*1) Installation folder\SVROR\Manager\etc\l_server (*1) Installation folder\SVROR\Manager\etc\trapop.bat Installation folder\SVROR\Manager\sys\usm\etc\symmetrix.conf
4	Image management information (*2)	The number of system image versions The number of cloning images versions Image file storage folder

No	Overview	Item
5	Home tab information	*Installation_folder*\SVROR\Manager\rails\public\man\en\CloudEdition\home.html (*3) *Installation_folder*\SVROR\Manager\rails\public\man\ja\CloudEdition\home.html (*3) *Installation_folder*\SVROR\Manager\rails\public\man\en\CloudlEdition\img (*3) *Installation_folder*\SVROR\Manager\rails\public\man\ja\CloudEdition\img (*3) *Installation_folder*\SVROR\Manager\rails\public\man\en\CloudEdition\css (*3) *Installation_folder*\SVROR\Manager\rails\public\man\ja\CloudEdition\css (*3)

*1: All objects in the specified directory are targeted. Objects linked with shortcut are not backed up.
*2: The values displayed using the rcxadm imagemgr info command are targeted.
*3: It is an information file used by basic mode.

Table 6.2 List of Items for Backup/Restore [Linux Manager]

No	Overview	Item
1	Certificates	/etc/opt/FJSVrcvmr/opt/FJSVssmgr/current/certificate (*1) /etc/opt/FJSVrcvmr/sys/apache/conf/ssl.crt /etc/opt/FJSVrcvmr/sys/apache/conf/ssl.key
2	Session encryption keys	/opt/FJSVrcvmr/rails/config/rcx_secret.key
3	Definition files	/etc/opt/FJSVrcvmr/customize_data (*1) /etc/opt/FJSVrcvmr/vm (*1) /etc/opt/FJSVrcvmr/l_server (*1) /etc/opt/FJSVrcvmr/trapop.sh /opt/FJSVrcvmr/sys/usm/etc/symmetrix.conf
4	Image management information (*2)	The number of system image versions The number of cloning images versions Image file storage directory
5	Home tab information	/opt/FJSVrcvmr/rails/public/man/en/CloudEdition/home.html (*3) /opt/FJSVrcvmr/rails/public/man/ja/CloudEdition/home.html (*3) /opt/FJSVrcvmr/rails/public/man/en/CloudEdition/img (*3) /opt/FJSVrcvmr/rails/public/man/ja/CloudEdition/img (*3) /opt/FJSVrcvmr/rails/public/man/en/CloudEdition/css (*3) /opt/FJSVrcvmr/rails/public/man/ja/CloudEdition/css (*3)

*1: All objects in the specified directories are targeted. Objects linked using symbolic links are not backed up.
*2: The values displayed using the rcxadm imagemgr info command are targeted.
*3: It is an information file used by basic mode.

Other definition and management information cannot be backed up while resource operations, such as those involving L-Servers, resource pools, or resource folders, are being performed. Backup of other definitions and management information can only be performed when no operation is being executed for the resources.

When executing the command while the manager is running, backup will be performed after the operations are completed.

When this command is executed while the manager is stopped, this command will be returned regardless of the presence or absence of the specified options. Completion of operations being executed will not be waited for.

Options

-dir *directory*

In *directory*, specify a directory to back up other definition and management information of Resource Orchestrator. However, for online backups, the name of a directory on a network drive cannot be specified.

When this option is omitted, if the destination is defined in the following definition file, the information is saved in the specified folder or directory:

[Windows Manager]
Installation_folder\SVROR\Manager\etc\customize_data\Manager_backup.rcxprop

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data/manager_backup.rcxprop

If the destination is not defined, the information is saved in the following folder or directory:

[Windows Manager]
Installation_folder\SVROR\Manager\var\backup

[Linux Manager]
/var/opt/FJSVrcvmr/backup

-immediate

Use this option to return directly to the command prompt without waiting for the operation being executed on the admin server to complete its execution.

Backup can only be performed when no operation is being executed for the resources. If an operation is being executed, this command will return an error.

-timeout *value*

Use this option to wait the number of seconds specified in *value* for completion of the image operation being performed on the admin server. If the operation is not completed within the specified time, this command will return an error.

If this option is omitted, the default value (3600 seconds) is set.

When this command is periodically executed while the manager is operating, if heavy operations such as L-Server creation are ongoing, execution of the command will be delayed until the relevant operation is completed. Specify this option to terminate execution of the command within a fixed time.

When an operation is being executed on the admin server, "INFO: Manager operation is still running." is displayed periodically.

If this command is executed when the manager has been stopped, the specification of this option will be ignored.

Example

```
>rcxkeydefbackup -dir /dir1 -immediate <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Note

- When specifying folders or directories, take note of the following points:
  - Do not specify the system installation folder or the installation directory for the -dir option.

  - Do not use double-byte characters or the following symbols to specify folders or directories for the -dir option.

    """, "|", "*", "?", "<", ">", ",", "%", "&", "^", "=", "!", ";"

    [Windows Manager]
    "/"

    [Linux Manager]
    "\"

  - The folder path or directory path can be specified using up to 100 characters.

  - For restoration, the certificates, configuration definition information, OS property definition files, system images, and cloning images must have been backed up at the same point in time. It is recommended to store the backed up information in folders with names including the date and time of backup.

  - For the -timeout option, "172800" or less seconds can be specified.

- Do not stop or start the manager during execution of this command.

- If this command fails, a folder or a directory that has a name starting with tmp will be created in the folder or directory specified for the -dir option.
  If the problem is still not resolved after performing the actions based on the output error message, collect the folder or the directory as troubleshooting data, and contact Fujitsu technical staff. Delete these folders or directories after collecting the troubleshooting data.

6.4 rcxkeydefrestore [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxkeydefrestore** - Restoration of other definition and management information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxkeydefrestore - Restoration of other definition and management information

Format

rcxkeydefrestore -file *filename*

Description

rcxkeydefrestore is the command used for the restoration of other definition and management information of Resource Orchestrator.

Options

-file *filename*

In *filename*, specify the compressed format file name of the backup collected using the rcxbackup command.

Example

>**rcxkeydefrestore -file mgr_20110123_1159.bz2** <RETURN>

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Note

- This command deletes everything in the folder or directory that is the target of Backup/Restore when it is executed, and then restores the backup specified with the -file option.
- When specifying files, take note of the following points:
  - Do not use double-byte characters or the following symbols to specify files for the -file option.

    """, "|", "*", "?", "<", ">", ",", "%", "&", "^", "=", "!", ";"

    [Windows Manager]
    "/"

    [Linux Manager]
    "\"
  - The file path can be specified using up to 100 characters.
- Do not stop or start the manager during execution of this command.
- If this command fails, a folder or a directory that has a name starting with tmp will be created in the folder or directory specified for the -file option.
  If the problem is still not resolved after performing the actions based on the output error message, collect the folder or the directory as troubleshooting data, and contact Fujitsu technical staff.
  Delete these folders or directories after collecting the troubleshooting data.

6.5 rcxlogtruncate [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\sys\lserver_repair\rcxlogtruncate** - Deletion of L-Server restoration logs

[Linux Manager]
/opt/FJSVrcvmr/sys/lserver_repair/rcxlogtruncate - Deletion of L-Server restoration logs

Format

rcxlogtruncate -dir *L-Server_restoration_log_storage_directory* **-date** *yyyymmdd_hhmm*

Description

rcxlogtruncate is the command used to delete L-Server restoration logs.

Options

-dir *L-Server_restoration_log_storage_directory*

Specify the directory to be used to store L-Server restoration logs.

-date *yyyymmdd_hhmm*

Deletes L-Server restoration logs before the specified date and time (*yyyymmdd_hhmm*).

Example

```
>rcxlogtruncate -dir dir1 -date 20110501_0000 <RETURN>
```

6.6 rcxmgrbackup

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxmgrbackup** - backup the Manager

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxmgrbackup - backup the Manager

Format

```
rcxmgrbackup -dir directory [-base] [-cleanup]
```

Description

rcxmgrbackup is the command that backs up the Manager of Resource Orchestrator.

The service status is evaluated to determine whether the command is to implement an offline backup or an online backup.

If this command is executed in a state where only some services have been started, an error will occur.

When -base is specified, this command implements a base backup.

If -base is not specified, this command implements a differential backup. A differential backup will end abnormally when executed offline.

Options

-dir *directory*

In *dir*, specify the name of the directory that is used to back up the Manager of Resource Orchestrator. However, the name of a directory on a network drive cannot be specified.

-base

Specify this option to implement a base backup. Refer to "10.1.3 Online Backup of the Admin Server" in the "Operation Guide CE" for information on base backup.

-cleanup

Specify this when deleting past backup data which was collected using the rcxmgrbackup command.
When this option is specified, only the newest generation of off-line and online backup information (base and difference) is retained, and all other past information is deleted after the backup.

Example

When there are one generation of off-line backup, three generations of online backup (base), and five generations of online backup (difference)t, executing rcxmgrbackup -cleanup online retains only the newest generation of backup information for each of off-line, online (base), and online (difference) backup.

Example

```
>rcxmgrbackup -dir /dir0 <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

- When specifying folders or directories, take note of the following points.
  - Do not specify the system installation folder or the installation directory for the -dir option.
  - Do not specify the installation folder or installation directory of the system in the -dir option.
  - Use 28 characters or less for the path of the folder or directory being specified.
  - The folder path or directory path can be specified using up to 28 characters.
  - Do not specify the following characters for the -dir option.

    [Windows Manager]
    Slashes ("/")

    [Linux Manager]
    Backslashes ("\")
- Do not stop or start the manager during execution of this command.
- If this command fails, a folder or a directory that has a name starting with tmp will be created in the folder or directory specified for the -dir option. If the problem is still not resolved after performing the actions based on the output error message, collect the folder or the directory as troubleshooting data, and contact Fujitsu technical staff. Delete these folders or directories when they are no longer necessary.
- Do not execute this command while resource operations, such as those involving L-Servers, resource pools, or resource folders, are being performed.
- If the configuration definition information is being updated when the periodical backup operation starts, the backup operation will be postponed until the update is complete.
- When an operation is being executed on the admin server, "INFO: Manager operation is still running." is displayed periodically.

The backup command may not end normally at times, so do not perform the following operations:

- Forced end using Ctrl+C during execution of the backup command
- Stopping the database during execution of the backup command

If the operations listed above have been performed, the following action will be required, depending on the status:

- Execute the command shown below whenever the base backup command does not end normally.

  For details on the command, refer to "13.3 ctmg_resetbackuperror (Recover Base Backup Error)".

  ```
  >Installation_folder\RCXCTMG\bin\ctmg_resetbackuperror.bat <RETURN>
  ```

  The processing result is output as standard output.
  The contents and meaning of the processing result are shown in the table below.

Processing Result	Return Value	Messages
The command executed successfully.	0	Successfully reset the base-backup error.
Error	non-zero	Failed to reset the base-backup error.

- After the database service is stopped, when starting of the database service fails, an error message will be output as follows to the log files of the target database:

  - Database Log Files

    >*Installation_folder***RCXCTMG\Charging\log\psql -*nn*.log**(*) <RETURN>

    * Note: The "*nn*" part is a 2-digit number indicating the date on which the log was output.

  - Error Message

    Example: If the access control database failed to start

    ```
    LOG: could not open file "pg_xlog/xxxxxxxx" (log file 0, segment xx): No such file or
    directory (*2)
    LOG: invalid checkpoint record
    PANIC: could not locate required checkpoint record
    HINT: If you are not restoring from a backup, try removing the file
    "C:/Fujitsu/ROR/RCXCTMG/Charging/pgsql/data/backup_label".
    ```

    *2: The "xxxxxxxx" and "xx" parts of the log are undefined.

  In a case like this, check whether the following file exists and, if so, delete the file.

  >*Installation_folder***RCXCTMG\Charging\pgsql\data\backup_label** <RETURN>

6.7 rcxmgrrestore

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxmgrrestore** - restore the Manager

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxmgrrestore - restore the Manager

Format

rcxmgrrestore -dir *directory*

Description

rcxmgrrestore is the command for restoring the manager of Resource Orchestrator.

If this command is executed in a state where services have been started, an error will occur.

Options

-dir *directory*

In *directory*, specify the directory in which the backup data has been stored. However, the name of a directory on a network drive cannot be specified.

Do not specify the following characters for the -dir option.

[Windows Manager]
Slashes ("/")

[Linux Manager]
Backslashes ("\")

Example

```
>rcxmgrrestore -dir /dir0 <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Note

- This command deletes everything in the folder or directory that is the target of Backup/Restore when it is executed, and then restores the backup specified with the -dir option.
  Refer to the article on Description of "6.3 rcxkeydefbackup [for Basic Mode]" and "6.11 scwbackup [for Basic Mode]" for the list of items for Backup/Restore.
- When specifying folders or directories, take note of the following points.
  - Do not specify the system installation folder or the installation directory for the -dir option.
  - Do not specify the installation folder or installation directory of the system in the -dir option.
  - Use 28 characters or less for the path of the folder or directory being specified.
  - The folder path or directory path can be specified using up to 28 characters.
  - Do not specify the following characters for the -dir option.

    [Windows Manager]
    Slashes ("/")

    [Linux Manager]
    Backslashes ("\")
- Do not start the manager during execution of this command.
- Do not force-quite using Ctrl+C during execution of this command.

6.8 rcxrepair [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\sys\lserver_repair\rcxrepair** - Checking configuration definition information to restore

[Linux Manager]
/opt/FJSVrcvmr/sys/lserver_repair/rcxrepair - Checking configuration definition information to restore

Format

```
rcxrepair -logdir L-Server_restoration_log_storage_directory [-dir
Output_destination_of_resource_definition_information | -dryrun]
```

Description

rcxrepair compares information between L-Server restoration logs and configuration definition information to identify the information requiring restoration.
rcxrepair is the command used to create an import file for restoring configuration definition information.

Options

-logdir *L-Server_restoration_log_storage_directory*

Specify the directory to be used to store L-Server restoration logs.

-dir *Output_destination_of_resource_definition_information*

Specify the destination for resource information of configuration definition information to restore.

When there is configuration definition information to be restored using the -dryrun option, use this option to create resource information.

-dryrun

Checks the contents of configuration definition information to restore. When restoration is unnecessary, it is output as such.

When using the -dryrun option, a temporary folder named rcxrepair_tmp is created in the folder specified when executing the command. Therefore, specify a writable folder when executing the command.

Even if the command is forcibly terminated, the rcxrepair_tmp folder may be created. In that case, delete the rcxrepair_tmp folder.

Example

```
>rcxrepair -logdir L-Server_restoration_log -dryrun <RETURN>
folder create: /folder1
lserver create: /folder1/l-server1
lserver create: /folder1/l-server2
>rcxrepair -logdir L-Server_restoration_log_storage_directory [-dir
Output_destination_of_resource_definition_information <RETURN>
```

6.9 rcxreserveid

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\sys\lserver_repair\rcxreserveid** - Reservation of resource IDs

[Linux Manager]
/opt/FJSVrcvmr/sys/lserver_repair/rcxreserveid - Reservation of resource IDs

Format

```
rcxreserveid -logdir L-Server_restoration_log_destination_directory
```

Description

rcxreserveid is the command used to reserve resource IDs during restoration of the manager.

Executing this command prevents the overlapping of resource IDs before and after a manager failure.

Options

-logdir *L-Server_restoration_log_storage_directory*

Specify the directory to be used to store L-Server restoration logs.

Example

```
>rcxreserveid -logdir dir1 <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

 Note

After restoring the manager, if starting the manager before executing this command, perform these operations again from restoration of the manager.

6.10 rcxrestore [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxrestore** - Restoration of configuration definition information

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxrestore - Restoration of configuration definition information

Format

rcxrestore -file *filename*

Description

rcxrestore is the command used for restoration of the configuration definition information of Resource Orchestrator.

Options

-file *filename*

In *filename*, specify the compressed format file name of the backup collected using the rcxbackup command.

Example

```
>rcxrestore -file mgr_20110123_1159.bz2 <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

- Specify the command using an absolute path.
- When specifying files, take note of the following points.
  - Do not use double-byte characters or the following symbols to specify files for the -file option.

    """, "|", "*", "?", "<", ">", ",", "%", "&", "^", "=", "!", ";"

    [Windows Manager]
    "/"

    [Linux Manager]
    "\"
  - The file path can be specified using up to 100 characters.
  - For restoration, the certificates, configuration definition information, OS property definition files, system images, and cloning images must have been backed up at the same point in time. It is recommended to store the backed up information in folders with names including the date and time of backup.
- Do not stop or start the manager during execution of this command. If this command fails, a folder or a directory that has a name starting with tmp will be created in the folder or directory specified for the -file option. If the problem is still not resolved after performing the actions based on the output error message, collect the folder or the directory as troubleshooting data, and contact Fujitsu technical staff. Delete these folders or directories when they are no longer necessary.

6.11 scwbackup [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\scwbackup** - Backup of image file information

[Linux Manager]
/opt/FJSVrcvmr/bin/scwbackup - Backup of image file information

Format

```
scwbackup [-dir directory] [[-immediate]|[-timeout value]]
```

Description

scwbackup is the command used for backing up the image file information of Resource Orchestrator.

This command backs up the following image file information of Resource Orchestrator using this command for restoration in case ServerView Deployment Manager information is damaged:

- System Images and Cloning Images

  All objects in the specified folder or directory are targeted. Objects linked with shortcuts or symbolic links are not backed up.

Table 6.3 List of Items for Backup/Restore [Windows Manager]

No	Overview	Item
1	System images	*Image file storage folder*\Managed server name@0@0@Management information@Management information@Version
2	Cloning images	*Image file storage folder*\Cloning image name@Version

Image_file_storage_folder is *The_value_of_imagedir_displayed_by_executing_the_rcxadm imagemgr_info_command*\Cloneimg.

Table 6.4 List of Items for Backup/Restore [Linux Manager]

No	Overview	Item
1	System images	*Image_file_storage_directory*/Managed server name@0@0@Management information@Management information@Version
2	Cloning images	*Image_file_storage_directory*/Cloning image name@Version

Image_file_storage_directory is *The_value_of_imagedir_displayed_by_executing_the_rcxadm imagemgr_info_command*/CLONEIMG.

- Image file related information

Table 6.5 List of Items for Backup/Restore [Windows Manager]

No	Overview	Item
1	Registry	- For 32-bit operating systems HKEY_LOCAL_MACHINE\SOFTWARE\Fujitsu\SystemcastWizard - For 64-bit operating systems (*1) HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Fujitsu\SystemcastWizard
2	Database	*Installation_folder*\ScwPro\scwdb\scwdb1.mdb *Installation_folder*\ScwPro\scwdb\scwdb1.mdw
3	DHCP configuration information file	*Installation_folder*\ScwPro\bin\ipTable.dat
4	IP address configuration file	*Installation_folder*\ScwPro\bin\localipaddress.txt
5	AWWN definition file (*2)	*Installation_folder*\ScwPro\tftp\rcbootimg\awwn_*IP_address*.cfg *Installation_folder*\ScwPro\tftp\rcbootimg_awwn_*IP_address*.cfg
6	BROADCAST configuration file for client connection requests	*Installation_folder*\ScwPro\bin\bcastaddress.txt

*1: For 64-bit operating systems, it is redirected to Wow6432Node.
*2: In VIOM environments, this file does not exist.

Table 6.6 List of Items for Backup/Restore [Linux Manager]

No	Overview	Item
1	Configuration file	/etc/opt/FJSVscw-common/scwconf.reg
2	Database	/var/opt/FJSVscw-deploysv/scwdb/scwdb1.db /var/opt/FJSVscw-deploysv/scwdb/scwdb2.db
3	DHCP configuration information file	/var/opt/FJSVscw-pxesv/ipTable.dat
4	bootcfg configuration file (*1)	/etc/opt/FJSVscw-pxesv/ClientBoot/*
5	AWWN definition file (*2)	/var/opt/FJSVscw-tftpsv/tftproot/rcbootimg/awwn_*IP_address*.cfg /var/opt/FJSVscw-tftpsv/tftproot/rcbootimg/_awwn_*IP_address*.cfg
6	BROADCAST configuration file for client connection requests	/opt/FJSVscw-deploysv/sys/bcastaddress.txt

*1: All objects in the specified directories are targeted. Objects linked using symbolic links are not backed up.
*2: In VIOM environments, this file does not exist.

Image file information cannot be backed up while an image operation is being performed for a physical L-Server or a VM host.

Backup of image file information is only performed when no operation is being executed.

When executing the command while the manager is running, backup will be performed after the operations are completed.

When this command is executed while the manager is stopped, this command will be returned regardless of the presence or absence of the specified options. Completion of operations being executed will not be waited for.

Options

-dir *directory*

In *directory*, specify a folder or a directory to back up the image file information of Resource Orchestrator. However, for online backups, the name of a directory on a network drive cannot be specified.

If previous backup information remains in the specified folder or directory, the previous backup information will be reused in the backup operation for system images and cloning images.

When this option is omitted, if the destination is defined in the following definition file, the information is saved in the specified folder or directory:

[Windows Manager]
Installation_folder\SVROR\Manager\etc\customize_data\Manager_backup.rcxprop

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data/manager_backup.rcxprop

If the destination is not defined, the information is saved in the following folder or directory:

[Windows Manager]
Installation_folder\SVROR\Manager\var\backup

[Linux Manager]
/var/opt/FJSVrcvmr/backup

-immediate

Use this option to return directly to the command prompt without waiting for the operation being executed on the admin server to complete its execution.

Backup can only be performed when no operation is being executed for the resources. If an operation is being executed, this command will return an error.

-timeout *value*

Use this option to wait the number of seconds specified in *value* for completion of the image operation being performed on the admin server. If the operation is not completed within the specified time, this command will return an error.

For the -timeout option, "172800" or less seconds can be specified.

If this option is omitted, the default value (3600 seconds) is set.

When this command is periodically executed while the manager is operating, if heavy operations such as cloning image collection are ongoing, execution of the command will be delayed until the relevant operation is completed. Specify this option to terminate execution of the command within a fixed time.

When an operation is being executed on the admin server, "INFO: Manager operation is still running." is displayed periodically.

If this command is executed when the manager has been stopped, the specification of this option will be ignored.

Example

```
>scwbackup -dir /scwdir0 -immediate <RETURN>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Note

- When specifying folders or directories, take note of the following points:
  - Do not specify the system installation folder or the installation directory for the -dir option.
  - Do not use double-byte characters or the following symbols to specify folders or directories for the -dir option.

    """, "|", "*", "?", "<", ">", ",", "%", "&", "^", "=", "!", ";"

    [Windows Manager]
    "/"

    [Linux Manager]
    "\"
  - The folder path or directory path can be specified up to 100 characters.
  - For restoration, the certificates, configuration definition information, OS property definition files, system images, and cloning images must have been backed up at the same point in time. It is recommended to store the backed up information in folders with names including the date and time of backup.
- Do not stop or start the manager during execution of this command.
- If this command fails, a folder or a directory that has a name starting with tmp will be created in the folder or directory specified for the -dir option.

If the problem is still not resolved after performing the actions based on the output error message, collect the folder or the directory as troubleshooting data, and contact Fujitsu technical staff.
Delete these folders or directories after collecting the troubleshooting data.

6.12 scwrestore [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\scwrestore** - Restoration of image file information

[Linux Manager]
/opt/FJSVrcvmr/bin/scwrestore - Restoration of image file information

Format

scwrestore -dir *directory*

Description

scwrestore is the command used for restoration of image file information of Resource Orchestrator.

Options

-dir *directory*

In *directory*, specify a directory name created as a result of collection using the backup command.

Example

>**scwrestore -dir** */scwdir0/mgr_20110123_1159* <RETURN>

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Note

- This command deletes everything in the folder or directory that is the target of Backup/Restore when it is executed, and then restores the backup specified with the -dir option.
- When specifying files, take note of the following points:
  - Do not use double-byte characters or the following symbols to specify folders or directories for the -dir option.

    """, "|", "*", "?", "<", ">", ",", "%", "&", "^", "=", "!", ";"

    [Windows Manager]
    "/"

[Linux Manager]
"\"

  - The folder path or directory path can be specified up to 100 characters.

- Do not stop or start the manager during execution of this command.

- If this command fails, a folder or a directory that has a name starting with tmp will be created in the folder or directory specified for the -dir option.
  If the problem is still not resolved after performing the actions based on the output error message, collect the folder or the directory as troubleshooting data, and contact Fujitsu technical staff.
  Delete these folders or directories after collecting the troubleshooting data.

Chapter 7 User Operations

This chapter explains the commands used to operate users and access privileges.

7.1 rcxadm user

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm user** - user operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm user - user operations

Format

```
rcxadm user create -file file.xml
rcxadm user list [-format text|xml|ldif] [-outfile outfile]
rcxadm user show -name name [-format text|xml] [-outfile outfile]
rcxadm user modify -file file.xml
rcxadm user delete -name name
```

Description

rcxadm user is the command to perform the following operations:

- Register a User
- Modify a Password
- Delete a User
- Change User Roles and Restrict Access Scopes

Subcommands

create

Creates a user.
Use the -file option to specify the XML file that defines the attributes of one or more users to register. For details on the XML file definition, refer to "15.10 User".

When using Single Sign-On authentication, the user is registered in the directory service when changing to the setting that registers the user in the directory service with the directory service operation definition file.
The user of the directory service is registered at the following positions.

- For the Directory Services Provided with ServerView Operations Manager

  cn=*user ID*,ou=users,*Base DN*

- For Active Directory

  cn=*user ID*,cn=users,*BaseDN*

For details on the directory service operation definition file, refer to "8.6.1 Settings for Tenant Management and Account Management" in the "Operation Guide CE".

list

Displays a list of user information in the text format, XML format, or LDIF.
For the text format, the following information is displayed.

Table 7.1 User Information (text format)

Item Name	Description
NAME	User ID
USERGROUP	Name of the user group the user belongs to
LABEL	Label for the user
ROLE	Scope and role of access of the user Displayed as "*access_scope=role*", and when there are multiple roles, they are displayed separated by commas.

For the XML format at the tenant management roles and the tenant user role, the following information is displayed.

Table 7.2 User Information (XML format at the tenant management roles and the tenant user role)

Item Name	Description
User name	User ID
Comment	Comment for the user
Role name	Role of the user
Scope	Tenant to whom user belongs
MailAddress	User's email address
ContractName	Company name or department name
EmergencyMailAddress	User's emergency contact email address
TelephoneNumber	User's telephone number
FirstName	User's first name
LastName	User's last name
MiddleName	User's middle name

In the XML format for infrastructure administrative roles and multiple roles, the following information is displayed.

Table 7.3 User Information (XML format for the infrastructure administrative roles and multiple roles)

Item Name	Description
User name	User ID
User label	Label for the user
Comment	Comment for the user
UserGroup	Name of the user group the user belongs to
Role name	Role of the user
Scope	Access scope for the specified role
MailAddress	User's email address

When LDIF is specified, user IDs are output.

show

Displays the detailed information for the specified user in the text format.

In text format, the following information is displayed.

Table 7.4 Detailed Information for Users

Item Name	Description
NAME	User ID

Item Name	Description
USERGROUP	Name of the user group the user belongs to
LABEL	Label for the user
COMMENT	Comment for the user
ROLE[*num*]	Scope and role of access of the user A number starting from "0" is displayed for *num*.

For the XML format, same information as display information on the list subcommand is displayed.

modify

Modifies the information of the specified user.
Use the -file option to specify the XML file that defines the attributes of one or more users to change. For details on the XML file definition, refer to "15.10 User".

delete

Deletes the specified user.
When using Single Sign-On authentication, the user is deleted from the directory service when changing to the setting that registers the user in the directory service with the directory service operation definition file.

Options

-file *file.xml*

In *file.xml*, specify the XML file that defines one or more user attributes to register or change.
For details on the XML file definition, refer to "15.10 User".

It is possible to perform batch registration or changes of multiple users using the output results of list -format xml.
When the error occurs by users' registration or changes, processing is interrupted. Remove the error factor and delete user information that has succeeded from the file in registration or the change.

-name *name*

In *name*, specify the user ID.

-format text|xml|ldif

Specify the display format. You can specify text, xml, or ldif format. ldif can be specified only for the list subcommand.
When -format is omitted, it is displayed in text format.

-outfile *outfile*

In *outfile*, specify the file that stores output information. Information is output by the UTF-8 form. Please set it when you change user information by using the output result of the XML form with multibyte character.
When the specified file exists, it becomes an error.

Examples

- To create a user:

```
>rcxadm user create -file myusers.xml <RETURN>
```

- To display a list of user information in the text format:

```
>rcxadm user list <RETURN>
NAME                USERGROUP           LABEL               ROLE
----                ---------           -----               ----
aaa                 -                   -                   all=administrator
admin_user          administrator       -                   -
bbb                 -                   -                   /folder001=administrator
```

```
folder_user         folder_group        -                   -
manage              -                   -                   -
```

- To display the detailed information for the specified user in the text format:

```
>rcxadm user show -name aaa <RETURN>
Name      : aaa
UserGroup :
Label     :
Comment   :
Role[0]   : all=administrator
```

7.2 rcxadm usergroup

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm usergroup** - user group operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm usergroup - user group operations

Format

```
rcxadm usergroup create -file file.xml
rcxadm usergroup create -name usergroup [-label label] [-comment comment] [-role scope=role[,...]]
rcxadm usergroup list [-format {text|xml}]
rcxadm usergroup show -name usergroup
rcxadm usergroup modify -name usergroup -file file.xml
rcxadm usergroup modify -name usergroup {[-new_name usergroup] [-label label] [-comment comment] [-
role scope=role[,...]]}
rcxadm usergroup delete -name usergroup
```

Description

rcxadm usergroup is the command used to perform operations on multiple users and batch restriction of access scopes. By performing operations on and restricting the access scope for a user group, the settings are applied on all users registered in that user group. When different settings are specified for a user and its user group, the settings for the user are given priority.

Subcommands

create

Creates a user group.
For details on the definition of the XML file to be specified for the -file option, refer to "15.11 User Groups".

list

Displays a list of user group information in text format or XML format.

For the text format or XML format, the following information is displayed.

Table 7.5 User Group Information

Item Name	Description
NAME	User group name
LABEL	Label for the user group
ROLE	Scope and role of access of the user group

Item Name	Description
	Displayed as "*access_scope*=*role*", and when there are multiple roles, they are displayed separated by commas.

show

Displays the detailed information for the specified user in the text format.

The following detailed information is displayed:

Table 7.6 Detailed Information for User Groups

Item Name	Description
NAME	User group name
LABEL	Label for the user group
COMMENT	Comment for the user group
USER[*num*]	User IDs of belonging users A number starting from "0" is displayed for *num*.
ROLE[*num*]	Scope and role of access of the user group A number starting from "0" is displayed for *num*.

modify

Modifies the following items of the specified user group.

- User Group Name
- Label
- Comment
- Operations
- Access Scope

User groups of the same name as the tenant cannot be modified.

For details on the definition of the XML file to be specified for the -file option, refer to "15.11 User Groups".

delete

Deletes the specified user group. You cannot delete a user group if it includes users.
User groups of the same name as the tenant cannot be deleted by this command. When the tenant is deleted, user groups of the same name as the tenant are deleted.

Options

-file *file.xml*

In *file.xml*, specify the XML file that defines the attributes of the user group to register or change.
For details on the XML file definition, refer to "15.11 User Groups".

It is not possible to perform batch registration or changes of multiple user groups using the output results of list -format xml.

-name *usergroup*

In *usergroup*, specify the user group name.

-label *label*

In *label*, specify the label for the user group.

-comment *comment*

In *comment*, specify the comments for the user group.

-role *scope=role*,...

In *scope*, specify the names of the resource folders, resource pools, or resources in the orchestration tree to include in the access scope. Specify resources inside resource folders by entering a slash ("/") and the resource name after the resource folder name.
Specify resource folder names or resource names for the access scope. If you do not want to restrict the access scope, omit the access scope, or specify "all".

In *role*, specify the most appropriate role of the standard roles.

For *role*, specify one of the following roles:

- Infrastructure administrative roles
- Multiple roles
- A role created from an infrastructure administrative role or a multiple role

Multiple access scopes and roles can be specified, separated by a comma (",").

-format text|xml

Specify the display format. You can specify text or xml format.

When -format is omitted, it is displayed in text format.

-new_name *usergroup*

In *usergroup*, specify the new user group name.

Examples

- To create a user group:

```
>rcxadm usergroup create -name mygroup -role all=infra_admin <RETURN>
```

- To modify an access scope and a role of a user group:

```
>rcxadm usergroup modify -name mygroup2 -role all=operator <RETURN>
```

- To display a list of user group information in text format:

```
>rcxadm usergroup list <RETURN>
NAME                LABEL               ROLE
----                -----               ----
admin               -                   all=administrator
folder_group        -                   /folder001=administrator
```

- To display the detailed information for the specified user group in text format:

```
>rcxadm usergroup show -name admin <RETURN>
Name      : admin
Label     :
Comment   :
User[0]   : admin_user
Role[0]   : all=administrator
```

7.3 rcxadm user [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm user** - user operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm user - user operations

Format

```
rcxadm user create -file file.xml
rcxadm user create -name name [{-passwd password|-passwd_file password_file}] [-label label] [-
comment comment] [-usergroup usergroup] [-role scope=role[,scope=role,...]]
rcxadm user list [-format text|xml|ldif]
rcxadm user show -name name
rcxadm user modify -name name -file file.xml
rcxadm user modify -name name {[-new_name newname] [-label label] [-comment comment] [-usergroup
usergroup] {-passwd password |-passwd_file password_file} [-role scope=role[,scope=role,...]]}
rcxadm user delete -name name
```

Description

rcxadm user is the command to perform the following operations:

- Register a User
- Modify a Password
- Delete a User
- Change User Roles and Restrict Access Scopes

Subcommands

create

Creates a user.
For directory service authentication, user information must be registered in the directory service beforehand.

list

Displays a list of user information in the text format, XML format, or LDIF.
For the text format or XML format, the following information is displayed. The information is also displayed for directory service authentication.

Table 7.7 User Information

Item Name	Description
NAME	User ID
USERGROUP	Name of the user group the user belongs to
LABEL	Label for the user
ROLE	Scope and role of access of the user Displayed as "*access_scope=role*".

LDIF is necessary when migrating user information from the internal authentication function to the directory service. When LDIF is specified, user IDs are output.

show

Displays the detailed information for the specified user in the text format.

The following detailed information is displayed:

Table 7.8 Detailed Information for Users

Item Name	Description
NAME	User ID
USERGROUP	Name of the user group the user belongs to
LABEL	Label for the user
COMMENT	Comment for the user
ROLE[*num*]	Scope and role of access of the user A number starting from "0" is displayed for *num*.

When user information is managed using a directory service, only the user information that is registered in the management information of Resource Orchestrator is displayed.

modify

Modifies the following items of the specified user.

- User ID
- Label
- Comment
- User Groups
- Password
- Operations
- Access Scope

delete

Deletes the specified user.
For directory service authentication, the user information cannot be deleted from the directory service.

Options

-file *file*.xml

In *file*.xml, specify the XML file that defines the attributes of the user to register or change.
It is not possible to perform batch registration or changes of multiple users using the output results of list -format xml.
For details on the XML file definition, refer to "15.18 User (for Basic mode)".

-name *name*

In *name*, specify the user ID.

-label *label*

In *label*, specify the label for the user.

-comment *comment*

In *comment*, specify the comments for the user.

-usergroup *usergroup*

In *usergroup*, specify the user group to use for setting users in batches.

-passwd *password*

In *password*, specify the password for the user.
When using Single Sign-On or directory services as external authentication functions, this option cannot be specified for the create subcommand.

-passwd_file *password_file*

In *password_file*, specify the password file for the user. When users other than administrators use an admin server, it is dangerous to specify the password using an argument such as -passwd because the arguments of commands issued by other users can be viewed. Use the -passwd_file option.
In the file that defines the passwords, enter a user ID and password on each line, separated by a comma (","). The password entered in the line including the user ID specified with the -name option will be registered.
When using Single Sign-On or directory services as external authentication functions, this option cannot be specified for the create subcommand.

-role *scope=role*,...

In *scope*, specify the names of the resource folders, resource pools, and resources in the orchestration tree to include in the access scope. Specify resources inside resource folders by entering a slash ("/") and the resource name after the resource folder name.
Specify resource folder names or resource names for the access scope. If you do not want to restrict the access scope, omit the access scope, or specify "all".

In *role*, specify the most appropriate role of the standard roles. Multiple access scopes and roles can be specified, separated by a comma (",").

- administrator (Administrator)
- operator (Operator)
- monitor (Infrastructure Monitor, Monitor)
- tenant_admin (Tenant Administrator)
- tenant_operator (Tenant Operator)
- tenant_monitor (Tenant Monitor)
- tenant_user (Tenant User)
- infra_admin (Infrastructure Administrator)
- infra_operator (Infrastructure Operator)

-format text|xml|ldif

Specify the display format. You can specify text, xml, or ldif format.

When -format is omitted, it is displayed in text format.

-new_name *newname*

In *newname*, specify the new user ID.

Example

- To create a user:

```
>rcxadm user create -name myuser -passwd mypassword -role all=infra_admin <RETURN>
```

- To set an access scope and a role to a user for directory service authentication:

```
>rcxadm user modify -name myuser2 -role all=tenant_admin <RETURN>
```

- To display a list of user information in the text format:

```
>rcxadm user list <RETURN>
NAME                USERGROUP           LABEL               ROLE
----                ---------           -----               ----
aaa                 -                   -                   all=administrator
admin_user          administrator       -                   -
bbb                 -                   -                   /folder001=administrator
```

```
folder_user         folder_group        -                   -
manage              -                   -                   -
```

- To display the detailed information for the specified user in the text format:

```
>rcxadm user show -name aaa <RETURN>
Name      : aaa
UserGroup :
Label     :
Comment   :
Role[0]   : all=administrator
```

7.4 rcxadm usergroup [for Basic Mode]

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm usergroup** - user group operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm usergroup - user group operations

Format

```
rcxadm usergroup create -file file.xml
rcxadm usergroup create -name usergroup [-label label] [-comment comment] [-role scope=role[,...]]
rcxadm usergroup list [-format {text|xml}]
rcxadm usergroup show -name usergroup
rcxadm usergroup modify -name usergroup -file file.xml
rcxadm usergroup modify -name usergroup {[-new_name usergroup] [-label label] [-comment comment] [-
role scope=role[,...]]}
rcxadm usergroup delete -name usergroup
```

Description

rcxadm usergroup is the command used to perform operations on multiple users and batch restriction of access scopes. By performing operations on and restricting the access scope for a user group, the settings are applied on all users registered in that user group. When different settings are specified for a user and its user group, the settings for the user are given priority.
For directory service authentication, all operations using this command are allowed.

Subcommands

create

Creates a user group.

list

Displays a list of user group information in text format or XML format.

For the text format or XML format, the following information is displayed.

Table 7.9 User Group Information

Item Name	Description
NAME	User group name
LABEL	Label for the user group
ROLE	Scope and role of access of the user group

Item Name	Description
	Displayed as "*access_scope*=*role*".

show

Displays the detailed information for the specified user in the text format.

The following detailed information is displayed:

Table 7.10 Detailed Information for User Groups

Item Name	Description
NAME	User group name
LABEL	Label for the user group
COMMENT	Comment for the user group
USER[*num*]	User IDs of belonging users A number starting from "0" is displayed for *num*.
ROLE[*num*]	Scope and role of access of the user group A number starting from "0" is displayed for *num*.

modify

Modifies the following items of the specified user group.

- User Group Name
- Label
- Comment
- Operations
- Access Scope

delete

Deletes the specified user group. You cannot delete a user group if it includes users.

Options

-file *file*.xml

In *file*.xml, specify the XML file that defines the attributes of the user group to register or change.
It is not possible to perform batch registration or changes of multiple user groups using the output results of list -format xml.
For details on the XML file definition, refer to "15.11 User Groups".

-name *usergroup*

In *usergroup*, specify the user group name.

-label *label*

In *label*, specify the label for the user group.

-comment *comment*

In *comment*, specify the comments for the user group.

-role *scope*=*role*,...

In *scope*, specify the names of the resource folders, resource pools, or resources in the orchestration tree to include in the access scope.
Specify resources inside resource folders by entering a slash ("/") and the resource name after the resource folder name.
Specify resource folder names or resource names for the access scope. If you do not want to restrict the access scope, omit the access scope, or specify "all".

In *role*, specify the most appropriate role of the standard roles. Multiple access scopes and roles can be specified, separated by a comma (",").

- administrator (Administrator)
- operator (Operator)
- monitor (Infrastructure Monitor, Monitor)
- tenant_admin (Tenant Administrator)
- tenant_operator (Tenant Operator)
- tenant_monitor (Tenant Monitor)
- tenant_user (Tenant User)
- lplatform_user (L-Platform User)
- infra_admin (Infrastructure Administrator)
- infra_operator (Infrastructure Operator)

-format text|xml

Specify the display format. You can specify text or xml format.

When -format is omitted, it is displayed in text format.

-new_name *usergroup*

In *usergroup*, specify the new user group name.

Example

- To create a user group:

```
>rcxadm usergroup create -name mygroup -role all=infra_admin <RETURN>
```

- To modify an access scope and a role of a user group:

```
>rcxadm usergroup modify -name mygroup2 -role all=tenant_admin <RETURN>
```

- To display a list of user group information in text format:

```
>rcxadm usergroup list <RETURN>
NAME                LABEL               ROLE
----                -----               ----
admin               -                   all=administrator
folder_group        -                   /folder001=administrator
```

- To display the detailed information for the specified user group in text format:

```
>rcxadm usergroup show -name admin <RETURN>
Name      : admin
Label     :
Comment   :
User[0]   : admin_user
Role[0]   : all=administrator
```

Chapter 8 L-Server Template Operations

This chapter explains the commands used for L-Platform template and L-Server template operations.

8.1 rcxadm template

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm template** - L-Server template operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm template - L-Server template operations

Format

```
rcxadm template import -file file [-force] [-nowait]
rcxadm template list [-verbose]
rcxadm template show -name name
rcxadm template export -file file [-name name]
rcxadm template modify -name name {[-new_name name] [-label label] [-comment comment]} [-nowait]
rcxadm template delete -name name [-force] [-nowait]
```

Description

rcxadm template is the command used to perform operations on L-Server templates. L-Server templates define the values such as the number of CPUs, memory capacity, and disk capacity that comprise an L-Server. Using an L-Server template enables easy creation of L-Servers.

Subcommands

import

Imports the L-Server template defined in an XML file.

list

Displays a list of the L-Server templates that can be accessed. Using the -verbose option also displays information regarding the redundancy configuration and operation location.

The following detailed information is displayed:

- For Physical L-Servers

Table 8.1 Information for L-Server Templates of Physical L-Servers

Item Name	Description
NAME	L-Server template name
TYPE	Server type
SPEC/MODEL	Model
DISKS	Disk size When there are multiple disks, they are displayed separated by commas.
NICS	Number of NICs (a hyphen "-" is displayed, as this parameter is not supported)
REDUNDANCY (*)	Server redundancy
POSITIONING (*)	Positioning (a hyphen "-" is displayed, as this parameter is not supported)

* Note: When specifying -verbose for the option, it is displayed.

- For Virtual L-Servers

Table 8.2 Information for L-Server Templates of Virtual L-Servers

Item Name	Description
NAME	L-Server template name
TYPE	Server type
SPEC/MODEL	CPU clock frequency, CPU number, and memory size used to comprise the L-Server
DISKS	Disk size When there are multiple disks, they are displayed separated by commas.
NICS	Number of NICs
REDUNDANCY (*)	Server redundancy
POSITIONING (*)	Positioning

* Note: When specifying -verbose for the option, it is displayed.

show

Displays the detailed information for the specified L-Server template.

The following detailed information is displayed:

Note

The number and display order of the items may be changed by enhancement of Resource Orchestrator.

- For Physical L-Servers

Table 8.3 Detailed Information for L-Server Templates of Physical L-Servers

Item Name	Description
Name	L-Server template name
Label	Label
Comment	Comment
ServerType	Server type
Model	Server model name
CPUPerf	CPU performance
NumOfCPU	Number of CPUs
MemorySize	Memory size
DiskType[*num*]	Disk type name The index number of the disk element is configured in *num*. The number is "0" or larger.
DiskSize[*num*]	The disk size to allocate to L-Servers The index number of the disk element is configured in *num*. The number is "0" or larger.
NumOfNIC	Number of NICs used for an L-Server
NIC[*num*] [NumOfNetworkLinks]	Number of networks that use VLAN In *num*, the NIC number is set. The number is "0" or larger.
NICGroup[*num*] [NumOfNetworkLinks]	Number of networks to be redundant In *num*, specify the NIC redundancy group number. The number is "0" or larger.

Item Name	Description
NICGroup[*num*] [NICLinks]	NIC number for redundancy In *num*, specify the NIC redundancy group number. The number is "0" or larger.
Redundancy	Server redundancy to assign to L-Servers
FCConnectionPattern	FC connection pattern file
AliveMonitoring	Alive monitoring setting status
ReserveResources	Retention of resources
SpareSelection	Selection method for spare servers
SpareServerForceOFF	When the resources in the spare server pool are exhausted, this option forcibly powers off servers for which forced power off is allowed When this setting is used, "yes" is displayed.
AllowForceOFF	When the resources in the spare server pool are exhausted, this option allows forced power off from another server When this setting is used, "yes" is displayed.
LServer	L-Servers created using this L-Server template When there is more than one, they are displayed separated by commas.
CNA[NumOfFunctions]	When using number expansion of functions of the onboard CNA, one of the following is displayed: When CNA is not configured or when a virtual L-Server is used, the number is not displayed. - 2 or 4 The number specified in [Number of functions per port] is displayed.

- For Virtual L-Servers

Table 8.4 Detailed Information for L-Server Templates of Virtual L-Servers

Item Name	Description
Name	L-Server template name
Label	Label
Comment	Comment
DeployDisk	Disk deployment settings during image specification - When configuring the settings in the same configurations as for images "all" is displayed.
FitDiskSizeToImage	Configure the same disk capacity as that of the image. One of the following is displayed: - true Displayed when the same disk capacity as that of the image has been configured during L-Server creation. - false Displayed when disks with larger disk capacities than the disk of the image and the L-Server template or the disk capacity specified in the DiskSize element of the L-Server XML are allocated, during L-Server creation.
ServerType	Server type
VMType	VM type

Item Name	Description
CPUArch	CPU architecture
CPUPerf	CPU performance
NumOfCPU	Number of CPUs
CPUReserve	The minimum number of CPU resources to be allocated
CPUShare	The relative proportion for allocation of CPU resources
CPUWeight	The priority for allocation of CPU resources
MemorySize	Memory size
MemoryReserve	The minimum amount of memory resources to be allocated
MemoryShare	The relative proportion for allocation of memory resources
StartupRAM	Initial memory capacity to be allocated at startup
MemoryBuffer	Available memory to be reserved as a buffer
MemoryWeight	The priority for allocation of memory resources
DynamicMemory	Dynamic memory settings One of the following is displayed: - When dynamic memory settings are enabled "on" is displayed. - When dynamic memory settings are disabled "off" is displayed. If left blank, no value is displayed.
DiskSize[*num*]	The disk size to allocate to L-Servers The index number of the disk element is configured in *num*. The number is "0" or larger.
Shared[*num*]	Shared status of disks The index number of the disk element is configured in *num*. The number is "0" or larger.
NumOfNIC	Number of NICs used for an L-Server
Redundancy	Server redundancy to assign to L-Servers
Positioning	Physical location of the server to allocate to L-Servers
AliveMonitoring	Alive monitoring setting status
OverCommit	Setting for overcommit One of the following is displayed: - When overcommit settings are enabled "true" is displayed. - When overcommit settings are disabled "false" is displayed.
ReserveResources	Retention of resources
GUIRunOnce	The GUIRunOnce command file name is displayed. If the GUIRunOnce command file name is not set, this item is not displayed.
ActiveDirectoryDomain	The setting for participation in the Active Directory domain is displayed. - If the participation setting is enabled "true" is displayed.

Item Name	Description
	- If the participation setting is disabled "false" is displayed.
LServer	L-Servers created using this L-Server template. When there is more than one, they are displayed separated by commas.

export

Exports the specified L-Server template information in the XML format. If you do not specify an L-Server template with the -name option, all L-Server templates are exported.

modify

Modifies the label, comment, and name of the specified L-Server template.

delete

Deletes the specified L-Server template. Use the -force option to forcibly delete the specified L-Server template even if there are L-Servers created from the template.

Options

-file *file*

In *file*, specify the L-Server template XML file to import or export.

-nowait

Use this option to return directly to the command prompt without waiting for the operation of the L-Server template specified in the subcommand to complete its execution.

-name *name*

In *name*, specify the L-Server template name.

-verbose

Use this option to display the redundancy configuration and the operation location.

-new_name *name*

In *name*, specify the new L-Server template name.

-label *label*

In *label*, specify the new label.

-comment *comment*

In *comment*, specify the new comments.

-force

Use the -force option to import to overwrite the L-Server template even if there are existing L-Server templates.

Use the -force option to forcibly delete the specified L-Server template even if there are L-Servers created from the template.

Examples

- To display a list of the L-Server templates that can be accessed:

  - For Virtual L-Servers

```
>rcxadm template list <RETURN>
NAME                TYPE        SPEC/MODEL          DISKS               NICS
----                ----        ----                -----               ----
```

```
no-nic              Virtual     1.0GHz,1,2.0GB      10.0GB,12.0GB       -
small               Virtual     1.0GHz,1,1.0GB      10.0GB              -
```

- For Physical L-Servers

```
>rcxadm template list <RETURN>
NAME                TYPE        SPEC/MODEL          DISKS               NICS
----                ----        ----------          -----               ----
sample_physical     Physical    "PRIMERGY BX922 S2" 40.0GB              -


>/opt/FJSVrcvmr/bin/rcxadm template list -verbose <RETURN>
NAME                TYPE        SPEC/MODEL          DISKS               NICS REDUNDANCY
POSITIONING
----                ----        ----------          -----               ---- ----------
-----------
sample_physical     Physical    "PRIMERGY BX922 S2" 40.0GB              -    None       -
sample_physical2    Physical    2.0GHz,4,8.0GB      40.0GB              1    None       -
```

- To also display information regarding the redundancy configuration and the positioning:

```
>rcxadm template list -verbose <RETURN>
NAME              TYPE       SPEC/MODEL          DISKS             NICS REDUNDANCY POSITIONING
----              ----       ----                -----             ---- ---------- -----------
no-nic              Virtual     1.0GHz,1,2.0GB      10.0GB,12.0GB       -    None       Fixed
small               Virtual     1.0GHz,1,1.0GB      10.0GB              -    None       Fixed
```

- To display the detailed information for the specified L-Server template:

  - For Virtual L-Servers

```
>rcxadm template show -name small <RETURN>
Name: small
Label: label of the small
ServerType: Virtual
VMType: VMware
CPUArch: IA
CPUPerf: 1.0GHz
NumOfCPU: 1
MemorySize: 1.0GB
DiskSize[0]: 10.0GB
CNA[NumOfFunctions]: 4
Redundancy: None
Positioning: Fixed
AliveMonitoring: on
```

  - For Physical L-Servers

```
>rcxadm template show -name sample_physical2 <RETURN>
Name: sample_physical2
Label: sample of physical template
ServerType: Physical
CPUPerf: 2.0GHz
NumOfCPU: 4
MemorySize: 8.0GB
DiskType[0]: FC
DiskSize[0]: 40.0GB
NumOfNIC: 1
Redundancy: None
FCConnectionPattern: fc_connect
AliveMonitoring: on
```

```
SpareServerForceOFF: on
AllowForceOFF: off
```

Chapter 9 L-Platform Template Management Commands

This chapter explains L-Platform Template Management Commands.

9.1 cfmg_addimageinfo (Registering Image Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_addimageinfo** - Registering Image Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_addimageinfo - Registering Image Information

Format

cfmg_addimageinfo -xml *image_information_file_path* **[-n]**

Description

This command registers image information.
This command also registers image information if there is no cloning image for the L-Server to be imported.
To manage software and patches on the server that will be imported, use this command to register image information before importing the L-Server.
If there is a cloning image, register with this command without specifying the -n option, or register using the [L-Platform Template] window.
The image information registered by this command will not be displayed in the [L-Platform Template] window.

Options

-xml

This option specifies the absolute or relative path to the image information file, using a string of printable ASCII characters.
If the path includes spaces, enclose the path in double quotes.

-n (optional)

Even if the target cloning image does not exist in Resource Management, this option registers the image information without an error.

Point

When specifying the -n option, specify arbitrary character strings in "resourceId" and "imageName".

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_addimageinfo -xml sample.xml
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.2 cfmg_addnetinfo (Registering Segment Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_addnetinfo** - Registering Segment Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_addnetinfo - Registering Segment Information

Format

cfmg_addnetinfo -xml *segment_information_file_path*

Description

This command registers segment information.

Options

-xml

This option specifies the absolute or relative path to the segment information file, using a string of printable ASCII characters. If the path includes spaces, enclose the path in double quotes.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_addnetinfo -xml sample.xml
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.3 cfmg_addsoft (Registering Software Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_addsoft** - Registering Software Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_addsoft - Registering Software Information

Format

cfmg_addsoft [-name *software_name*] **-xml** *software_information_file_path*

Description

This command registers software information.
The software ID that has been allocated is output using the following XML format.

```
<?xml version="1.0" encoding="UTF-8"?>
<result>
    <id>[software ID]</id>
</result>
```

Options

-name (optional)

This option specifies the name of the software to be registered in the software information file, using a string of up to 85 printable ASCII characters.

If the software name includes spaces, enclose the name in double quotes.
If this option is specified, it takes priority over information in the software information file.
If this option is omitted, the software name in the software information is enabled.
If this option is omitted and there is no software name written in the software information, an error will occur.

-xml

This option specifies the absolute or relative path to the software information file, using a string of printable ASCII characters.
If the path includes spaces, enclose the path in double quotes.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_addsoft -xml software.xml
<?xml version="1.0" encoding="Windows-31J"?>
<result>
    <id>SW00000112</id>
</result>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.4 cfmg_addtemplate (Registering Template Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_addtemplate** - Registering Template Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_addtemplate - Registering Template Information

Format

cfmg_addtemplate [-id *Template_ID*] **[-name** *Template_name*] **-xml** *Template_information_file_path*

Description

This command registers template information.

The template ID that has been allocated is output using the following XML format:

```
<?xml version="1.0" encoding="UTF-8"?>
<result>
    <id>[Template ID]</id>
</result>
```

Options

-id (optional)

This option specifies the template ID using a string of up to 32 printable ASCII.

A registration error will occur if the template ID is already being used.
If this option is specified, it takes priority over information in the template information file.

If this option is omitted, an ID will be automatically created.

-name (optional)

This option specifies the name of the template using a string of up to 85 printable ASCII characters.

If the software name includes spaces, enclose the name in double quotes.
If this option is specified, it takes priority over information in the template information file.
If this option is omitted, the template name in the template information is enabled.
If this option is omitted and there is no template name written in the template information, an error will occur.

-xml

This option specifies the absolute or relative path to the template information file, using a string of printable ASCII characters.
If the path includes spaces, enclose the path in double quotes.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_addtemplate -xml sample1.xml
<?xml version="1.0" encoding="Windows-31J"?>
<result>
    <id>template-12c95768de8</id>
</result>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.5 cfmg_deleteimageinfo (Deleting Image Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_deleteimageinfo** - Deleting Image Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_deleteimageinfo - Deleting Image Information

Format

cfmg_deleteimageinfo [-f] -id *Cloning_Image_ID*

Description

This command deletes image information.

Options

-f (optional)

This option executes the deletion without confirmation.
If this option is omitted, a confirmation prompt will be output before the deletion takes place.

-id

This option specifies the cloning image id of the image information file to be deleted.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_deleteimageinfo -id image-1372772cae66
Do you want to delete the image information? (Y/N) y
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.6 cfmg_deletenetinfo (Deleting Segment Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_deletenetinfo** - Deleting Segment Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_deletenetinfo - Deleting Segment Information

Format

cfmg_deletenetinfo [-f] -id *Resource_ID*

Description

This command deletes segment information.

Options

-f (optional)

This option executes the deletion without confirmation.
If this option is omitted, a confirmation message will be output before the deletion takes place.

-id

This option specifies the resource ID to be deleted.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_deletenetinfo -id ST01-M_1446
Do you want to delete the segment? (Y/N) y
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.7 cfmg_deletesoft (Deleting Software Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_deletesoft** - Deleting Software Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_deletesoft - Deleting Software Information

Format

cfmg_deletesoft [-f] -id *Software_ID*

Description

This command deletes software information.

Options

-f (optional)

This option executes the deletion without confirmation.
If this option is omitted, a confirmation prompt will be output before the deletion takes place.

-id

This option specifies the software ID for the software information file to be deleted.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_deletesoft -id SW00000112
Do you want to delete the software information? (Y/N) y
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.8 cfmg_deletetemplate (Deleting Template Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_deletetemplate** - Deleting Template Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_deletetemplate - Deleting Template Information

Format

cfmg_deletetemplate [-f] -id *Template_ID*

Description

This command deletes template information.

Options

-f (optional)

This option executes the deletion without confirmation.
If this option is omitted, a confirmation prompt will be output before the deletion takes place.

-id

This option specifies the template ID of the template information to be deleted.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_deletetemplate -id template-12c95768de8
Do you want to delete the template? (Y/N) y
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.9 cfmg_listimageinfo (Displaying Image Information List)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_listimageinfo** - Displaying Image Information List

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_listimageinfo - Displaying Image Information List

Format

cfmg_listimageinfo [-v] [-utf8] [-a]

Description

This command outputs an XML list of registered image information.

All of the image information that has been registered is output in the following format (detailed format).
In the simple format, only the underlined information is output.

```
<?xml version="1.0" encoding="UTF-8"?>
<images>
    <image>
        <id>[Cloning image ID]</id>
        <name>[image information name]</name>
        <resourceId>[Resource ID]</resourceId>
        <imageName>[Cloning image name]</imageName>
        <ownerOrg>[Owner (tenant)]</ownerOrg>
        <ownerUser>[Owner (user)]</ownerUser>
        <useFlag>[Use flag]</useFlag>
        <publicFlag>[Public flag]</publicFlag>
        <publicCategory>[Public category]</publicCategory>
        <serverCategory>[Sever category]</serverCategory>
        <serverApplication>[Server application]</serverApplication>
        <serverType>[Default server type]</serverType>
        <cpuBit>[CPU bit number]</cpuBit>
        <sysvolSize>[System disk size]</sysvolSize>
        <maxCpuPerf>[Maximum CPU performance]</maxCpuPerf>
        <numOfMaxCpu>[Maximum number of CPUs]</numOfMaxCpu>
        <maxMemorySize>[Maximum memory size]</maxMemorySize>
        <numOfMaxDisk>[Maximum number of data disks]</numOfMaxDisk>
        <maxDiskSize>[Maximum data disk size]</maxDiskSize>
        <maxSysvolSize>[Maximum system disk size]</maxSysvolSize>
        <numOfMaxNic>[Maximum number of NICs]</numOfMaxNic>
        <initialPassword>[Initial password]</initialPassword>
        <icon>[Icon type]</icon>
        <virtualization>[Image type]</virtualization>
        <virtualizationMethod>[Virtualization method]</virtualizationMethod>
        <filterPool>[Filter string]</filterPool>
        <showFlag>[Show flag]</showFlag>
        <productName>[Product name]</productName>
        <price>[Unit price]</price>
        <chargeType>[Billing method]</chargeType>
        <unitName>[Charge unit]</unitName>
        <currencyUnit>[Currency code]</currencyUnit>
        <currencySign>[Currency symbol]</currencySign>
        <numOfDecimals>[Number of decimal places]</numOfDecimals>
        <dataDiskFlag>[Data disk use]</dataDiskFlag>
        <vmType>[Virtual machine type]</vmType>
        <storeType>[Storage location type]</storeType>
        <relation>[Related software name]</relation>
        <adminUser>[Administrator user name]</adminUser>
        <rootPassword>[Root role password]</rootPassword>
        <softwares>
            ...
        </softwares>
        <patches>
            <patch>
                 <softwareid>[Software ID]</softwareid>
                <patchid>[Patch ID]</patchid>
                <componentName>[Component name]</componentName>
                <description>[Description]</description>
            </patch>
            ...
        </patches>
        <vdisks>
            <vdisk>
                <no>[Disk number]</no>
                <diskSize>[Disk capacity]</diskSize>
            </vdisk>
            ...
        </vdisks>
```

```
    </image>
</images>
```

Point

If registered image information does not exist, information will be output in the following format:

```
<?xml version="1.0" encoding="UTF-8"?>
<images />
```

Options

-v (optional)

This option outputs the list in detailed format.
If this option is omitted, the list is output in the simple format.

-utf8 (optional)

This option outputs the list in UTF-8 format.
This option is only enabled for Windows Manager versions.
If this option is omitted, the list is output in ISO-8859-1 format.
For Linux Manager versions, the list is output in UTF-8 irrespective of this option.

-a (optional)

This option displays a list of the image information as well as the image information that has been automatically generated by the cfmg_importlserver command.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_listimageinfo -v
<?xml version="1.0" encoding="Windows-31J"?>
<images>
    <image>
        <id>ST01-M_896</id>
        <name>RHELx64_IMG</name>
        <resourceId>[Resource ID]</resourceId>
        <imageName>[Cloning image ID]</imageName>
        <ownerOrg>cfmgadm</ownerOrg>
        <ownerUser>cfmgadm</ownerUser>
        <publicCategory>PUBLIC</publicCategory>
        <serverCategory>GENERAL</serverCategory>
        <serverApplication>AP</serverApplication>
        <serverType>extra_small</serverType>
        <cpuBit>32</cpuBit>
        <sysvolSize>15.0</sysvolSize>
        <maxCpuPerf>10.0</maxCpuPerf>
        <numOfMaxCpu>1</numOfMaxCpu>
        <maxMemorySize>10.0</maxMemorySize>
        <numOfMaxDisk>10</numOfMaxDisk>
        <maxDiskSize>30.0</maxDiskSize>
        <maxSysvolSize>30.0</maxSysvolSize>
        <numOfMaxNic>1</numOfMaxNic>
```

```
        <icon>unit_tag_web.png</icon>
        <virtualization>hvm</virtualization>
        <virtualizationMethod>pv</virtualizationMethod>
        <filterPool>web</filterPool>
        <dataDiskFlag>true</dataDiskFlag>
        <showFlag>0</showFlag>
        <softwares>
            <software>
                <name>Red Hat Enterprise Linux 5 (for Intel64)</name>
                <id>SW00000011</id>
                <ownerOrg>Unyou_Org</ownerOrg>
                <ownerUser>UO_User01</ownerUser>
                <category>OS</category>
                <osCategory>linux64</osCategory>
                <version>5.5</version>
                <officialVersion />
                <patch />
                <license />
                <support />
                <productId />
                <productName />
                <price />
                <chargeType />
                <expectedUsage />
            </software>
        </softwares>
        <vdisks>
            <vdisk>
                <no>1</no>
                <diskSize>40.0</diskSize>
            </vdisk>
        </vdisks>
    </image>
</images>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.10 cfmg_listnetinfo (Displaying Segment Information List)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_listnetinfo** - Displaying Segment Information List

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_listnetinfo - Displaying Segment Information List

Format

cfmg_listnetinfo [-utf8]

Description

This command outputs an XML list of registered segment information.

This command outputs all of the registered segment information in the following format:

```
<?xml version="1.0" encoding="UTF-8"?>
<networkCategories>
    <category>
        <ownerOrg>[Owner (tenant)]</ownerOrg>
        <ownerUser>[Owner (user)]</ownerUser>
        <resourceId>[Resource ID]</resourceId>
        <type>[Network type]</type>
        <segmentType>[Segment type information]</segmentType>
    </category>
    ...
</networkCategories>
```

Point

If registered segments do not exist, information will be output in the following format:

```
<?xml version="1.0" encoding="UTF-8"?>
<networkCategories />
```

Options

-utf8 (optional)

This option outputs the list in UTF-8 format.
This option is only enabled for Windows Manager versions.
If this option is omitted, the list is output in ISO-8859-1 format.
For Linux Manager versions, the list is output in UTF-8 irrespective of this option.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_listnetinfo -v
<?xml version="1.0" encoding="Windows-31J"?>
<networkCategories>
    <category>
        <resourceId>ST01-M_1446</resourceId>
        <type>BUSINESS</type>
        <segmentType>DMZ</segmentType>
        <ownerOrg>cfmgadm</ownerOrg>
        <ownerUser>cfmgadm</ownerUser>
    </category>
</networkCategories>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.11 cfmg_listsoft (Displaying Software Information List)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_listsoft** - Displaying Software Information List

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_listsoft - Displaying Software Information List

Format

```
cfmg_listsoft [-v] [-utf8]
```

Description

This command lists registered software information in XML format.

All of the software information that has been registered is output in the following format (detailed format).
In the simple format, only the underlined information is output.

```
<?xml version="1.0" encoding="UTF-8"?>
<softwares>
    <software>
        <id>[Software ID]</id>
        <name>[Software name]</name>
        <ownerOrg>[Owner (tenant)]</ownerOrg>
        <ownerUser>[Owner (user)]</ownerUser>
        <useFlag>[Use flag]</useFlag>
        <publicFlag>[Public flag]</publicFlag>
        <category>[Software category]</category>
        <osCategory>[Operating system category]</osCategory>
        <version>[Version]</version>
        <officialVersion>[Official version]</officialVersion>
        <patch>[Patch version number]</patch>
        <license>[License]</license>
        <support>[Support]</support>
        <productId>[Model number]</productId>
        <productName>[Product name]</productName>
        <price>[Unit price]</price>
        <chargeType>[Billing method]</chargeType>
        <expectedUsage>[Expected monthly usage]</expectedUsage>
    </software>
    ...
</softwares>
```

Point

If registered software information does not exist, information will be output in the following format.

```
<?xml version="1.0" encoding="UTF-8"?>
<softwares />
```

Options

-v (optional)

This option outputs the list in detailed format.
If this option is omitted, the list is output in the simple format.

-utf8 (optional)

This option outputs the list in UTF-8 format.
This option is only enabled for Windows Manager versions.
If this option is omitted, the list is output in ISO-8859-1 format.
For Linux Manager versions, the list is output in UTF-8 irrespective of this option.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_listsoft
<?xml version="1.0" encoding="Windows-31J"?>
<softwares>
    <software>
        <id>SW00000112</id>
        <category>OS</category>
        <name>Red Hat Enterprise Linux 5 (for Intel64)</name>
        <ownerOrg>Unyou_Org</ownerOrg>
        <ownerUser>UO_User01</ownerUser>
    </software>
</softwares>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.12 cfmg_listtemplate (Displaying Template Information List)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_listtemplate** - Displaying Template Information List

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_listtemplate - Displaying Template Information List

Format

cfmg_listtemplate [-v] [-utf8] [-a]

Description

This command outputs an XML list of registered template information.

All of the template information that has been registered is output in the following format (detailed format).
In the simple format, only the underlined information is output.

```
<?xml version="1.0" encoding="UTF-8"?>
<templates>
    <template>
        <id>[Template ID]</id>
        <name>[Template name]</name>
        <baseTemplateId>[Base template ID]</baseTemplateId>
        <baseTemplateName>[Base template name]</baseTemplateName>
        <ownerOrg>[Owner (tenant)]</ownerOrg>
        <ownerUser>[Owner (user)]</ownerUser>
        <useFlag>[Use flag]</useFlag>
        <publicCategory>[Public category]</publicCategory>
        <designSheetPath>[Path to the design sheet]</designSheetPath>
        <releaseDate>[Release date]</releaseDate>
        <numOfMaxVnet>[Maximum number of VNETs]</numOfMaxVnet>
        <numOfMaxVm>[Maximum number of VMs]</numOfMaxVm>
        <description>[Description]</description>
        <keyword>[Search keyword]</keyword>
        <estimate>[Rough cost estimate]</estimate>
        <license>[License]</license>
        <support>[Support]</support>
        <productId>[Model number]</productId>
        <productName>[Product name]</productName>
        <price>[Unit price]</price>
        <chargeType>[Billing method]</chargeType>
        <unitName>[Charge unit]</unitName>
        <currencyUnit>[Currency code]</currencyUnit>
        <currencySign>[Currency symbol]</currencySign>
        <numOfDecimals>[Number of decimal places]</numOfDecimals>
        <expectedUsage>[Expected monthly usage]</expectedUsage>
        <showFlag>[Show flag]</showFlag>
        <vnets>
            <vnet>
                <id>[Network ID]</id>
                <name>[Name]</name>
                <numOfMaxVm>[Maximum number of VMs]</numOfMaxVm>
                <resourceId>[Resource ID]</resourceId>
                <category>[Network category]</category>
                <segmentType>[Segment type information]</segmentType>
                <order>[Display order]</order>
            </vnet>
            ...
        </vnets>
        <numOfGip>[Number of global IP addresses]</numOfGip>
        <numOfMaxGip>[Maximum number of global IP addresses]</numOfMaxGip>
        <connector>[Connection destination]</connector>
        <slbDesignType>[UI type of SLB]</slbDesignType>
        <lnetdevs>
            <lnetdev>
                <name>[LNetDev name]</name>
                <type>[LNetDev type]</type>
                <lnetdevIfs>
                    <lnetdevIf>
                        <name>[Interface name]</name>
                        <networkId>[Network ID]</networkId>
                    </lnetdevIf>
                    ...
                </lnetdevIfs>
```

```
            <ruleset>
                <name>[Ruleset name]</name>
                <designtype>[UI type]</designtype>
                <lplatformModel>[L-Platform model]</lplatformModel>
                <description>[Ruleset description]</description>
                <deviceModel>[Device model]</deviceModel>
                <parameters>
                    <parameter>
                        <name>[Parameter name]</name>
                        <label>[Tenant Display Name]</label>
                        <segmentlabel>[Segment Display Name]
                        </segmentlabel>
                        <serverlabel>[Server Display Name]</serverlabel>
                        <view>[Display flag]</view>
                        <required>[Required prameter]</required>
                        <syntax>[Syntax]</syntax>
                        <value>[Parameter value]</value>
                        <summary>[Parameter Summary]</summary>
                        <description>[Parameter description]</description>
                    </parameter>
                    ...
                </parameters>
                <parameterGroups>
                    <parameterGroup>
                        <name>[Parameter group name]</name>
                        <id>[Parameter group ID]</id>
                        <parameters>
                            <parameter>
                                <name>[Parameter name]</name>
                                <label>[Display name]</label>
                                <view>[Display flag]</view>
                                <value>[Parameter value]</value>
                                <description>[Parameter description]</description>
                            </parameter>
                                ...
                        </parameters>
                        <parameterSecondGroups>
                            <parameterSecondGroup>
                                <name>[Second parameter group name]</name>
                                <id>[Second parameter group ID]</id>
                                <parameters>
                                    <parameter>
                                        <name>[Parameter name]</name>
                                        <label>[Display name]</label>
                                        <view>[Display flag]</view>
                                        <value>[Parameter value]</value>
                                        <description>[Parameter description]</description>
                                    </parameter>
                                    ...
                                </parameters>
                            </parameterSecondGroup>
                        ...
                        </parameterSecondGroups>
                    </parameterGroup>
                    ...
                </parameterGroups>
            </ruleset>
        </lnetdev>
    </lnetdevs>
    <servers>
        <server>
            <no>[Server serial number]</no>
            <imageId>[Cloning image ID]</imageId>
```

```
                <useDataDisk>[Data disk use]</useDataDisk>
                <name>[Server name]</name>
                <serverType>[Server type]</serverType>
                <pool>[Deployment destination pool resource name]</pool>
                <sparePool>[Spare pool resource name]</sparePool>
                <storagePool>[Storage pool resource name]</storagePool>
                <diskResourceId>[Disk resource ID]</diskResourceId>
                <diskResourceName>[Disk resource name]</diskResourceName>
                <powerPriority>[Startup priority level]</powerPriority>
                <nicgroups>
                    <nicgroup>
                        <index>[NIC group index]</index>
                        <networkId>[IP Address network ID]</networkId>
                        <management>[Management NIC]</management>
                    </nicgroup>
                    ...
                </nicgroups>
                <vnics>
                    <vnic>
                        <no>[NIC serial number]</no>
                        <networkId>[IP address network ID]</networkId>
                        <management>[Control NIC]</management>
                        <group>[NIC group index]</group>
                    </vnic>
                    ...
                </vnics>
                <vdisks>
                    <vdisk>
                        <no>[Disk serial number]</no>
                        <diskSize>[Disk capacity]</diskSize>
                        <resourceId>[Resource ID]</resourceId>
                        <resourceName>[Disc Resource Name]</resourceName>
                        <storagePool>[Storage pool resource name]</storagePool>
                        <contained>[Disk contained in image]</contained>
                    </vdisk>
                    ...
                </vdisks>
                <image>
                    ...
                </image>
            </server>
            ...
        </servers>
    </template>
    ...
</templates>
```

Point

If template information does not exist, information will be output in the following format:

```
<?xml version="1.0" encoding="UTF-8"?>
<templates />
```

Options

-v (optional)

This option outputs the list in detailed format.
If this option is omitted, the list is output in the simple format.

-utf8 (optional)

This option outputs the list in UTF-8 format.
This option is only enabled for Windows Manager versions.
If this option is omitted, the list is output in ISO-8859-1 format.
For Linux Manager versions, the list is output in UTF-8 irrespective of this option.

-a (optional)

This option displays a list of the templates that have been generated automatically by the cfmg_importlserver command.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_listtemplate
<?xml version="1.0" encoding="Windows-31J"?>
<templates>
    <template>
        <id>template-12c95768de8</id>
        <name>TEMPLATE_SAMPLE1</name>
        <ownerOrg>cfmgadm</ownerOrg>
        <ownerUser>cfmgadm</ownerUser>
        <useFlag>true</useFlag>
        <publicCategory>PUBLIC</publicCategory>
        <description>Web/AP/DB 1 Server model</description>
        <estimate>0.0000</estimate>
        <license>0</license>
        <support>0</support>
        <productId />
        <productName />
        <price />
        <chargeType />
        <expectedUsage />
        <showFlag>1</showFlag>
    </template>
</templates>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.13 cfmg_listvmimage (Displaying a Cloning Image List)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_listvmimage** - Displaying a Cloning Image List

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_listvmimage - Displaying a Cloning Image List

Format

```
cfmg_listvmimage [-utf8]
```

Description

This command outputs an XML list of the cloning images that have been registered with Resource Management.

All cloning images that have been registered with Resource Management will be output in the following format:

```
<?xml version="1.0" encoding="UTF-8"?>
<images>
    <image>
        <id>[Resource ID]</id>
        <name>[Cloning image name]</name>
        <comment>[Comment]</comment>
        <type>[Cloning image type]</type>
        <version>[Cloning image version]</version>
        <time>[Date and time when the cloning image was created]</time>
        <serverType>[Server type]</serverType>
        <virtualizationMethod>[Virtualization method]</virtualizationMethod>
        <dataDiskFlag>[Data disk use]</dataDiskFlag>
        <vmType>[Virtual machine type]</vmType>
        <storeType>[Storage location type]</storeType>
        <vdisks>
            <vdisk>
                <no>[Disk number]</no>
                <diskSize>[Disk capacity]</diskSize>
                <diskAttributes>[Disk format]</diskAttributes>
            </vdisk>
            ...
        </vdisks>
    </image>
    ...
</images>
```

Point

If image information registered with Resource Management does not exist, information will be output in the following format:

```
<?xml version="1.0" encoding="UTF-8"?>
<images />
```

Options

-utf8 (optional)

This option outputs the list in UTF-8 format.
This option is only enabled for Windows Manager versions.
If this option is omitted, the list is output in ISO-8859-1 format.
For Linux Manager versions, the list is output in UTF-8 irrespective of this option.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_listvmimage
<?xml version="1.0" encoding="Windows-31J"?>
<images>
    <image>
        <id>ST01-M_896</id>
        <name>RHELx64_IMG</name>
        <comment />
        <type>cloning</type>
        <version>1</version>
        <time>2010-11-17-15:20:17+09:00</time>
        <serverType>extra_small</serverType>
        <virtualizationMethod>pv</virtualizationMethod>
        <dataDiskFlag>true</dataDiskFlag>
        <vmType>RHEL-KVM</vmType>
        <storeType>Virtual Disk</storeType>
        <vdisks>
            <vdisk>
                <no>0</no>
                <diskSize>20.0</diskSize>
                <diskAttributes>thin</diskAttributes>
            </vdisk>
            <vdisk>
                <no>1</no>
                <diskSize>40.0</diskSize>
                <diskAttributes>thin</diskAttributes>
            </vdisk>
        </vdisks>
    </image>
</images>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.14 cfmg_listvnet (Displaying a Virtual Network List)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_listvnet** - Displaying a Virtual Network List

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_listvnet - Displaying a Virtual Network List

Format

cfmg_listvnet [-utf8]

Description

This command outputs in XML format a list of the network resources that have been registered with Resource Management.
All of the network resources that have been registered with Resource Management are output in the following format:

```
<?xml version="1.0" encoding="UTF-8"?>
<networks>
    <network>
        <id>[Resouce ID]</id>
        <name>[Resource name]</name>
        <tenantName>[Tenant name]</tenantName>
        <category>[Network category]</category>
        <extid>[VLAN ID]</extid>
        <type>[Network type]</type>
        <segmentType>[Segment type information]</segmentType>
        <comment>[Comment]</comment>
        <locked>[The locked status of the resource]</locked>
        <addrset>
            <name>[Address set name]</name>
            <subnet>[Subnet address]</subnet>
            <mask>[Subnet mask]</mask>
            <start>[Start address]</start>
            <end>[End address]</end>
        </addrset>
        <exclude>
            <range>
                <start>[Start address]</start>
                <end>[End address]</end>
            </range>
            <range>
                <start>[Start address]</start>
                <end>[End address]</end>
            </range>
        </exclude>
        <status>
            <num>[Total number of addresses]</num>
            <used>[Number of used addresses]</used>
            <avail>[Number of available addresses]</avail>
        </status>
    </network>
</networks>
```

Point

If network resources registered with Resource Management do not exist, information is output in the following format:

```
<?xml version="1.0" encoding="UTF-8"?>
<networks />
```

Options

-utf8 (optional)

This option outputs the list in UTF-8 format.
This option is only enabled for Windows Manager versions.
If this option is omitted, the list is output in ISO-8859-1 format.
For Linux Manager versions, the list is output in UTF-8 irrespective of this option.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_listvnet
<?xml version="1.0" encoding="Windows-31J"?>
<networks>
    <network>
        <id>ST01-M_1446</id>
        <name>gyomu-3</name>
        <tenantName>tenant1</tenantName>
        <category>BUSINESS</category>
        <extid>10</extid>
        <type />
        <segmentType>DMZ</segmentType>
        <comment>DMZ LAN</comment>
        <locked>true</locked>
        <addrset>
            <name>192.168.xxx.xxx</name>
            <subnet>192.168.xxx.xxx</subnet>
            <mask>255.255.xxx.xxx</mask>
            <start>192.168.xxx.xxx</start>
            <end>192.168.xxx.xxx</end>
        </addrset>
        <exclude>
            <range>
                <start>192.168.xxx.xxx</start>
                <end>192.168.xxx.xxx</end>
            </range>
            <range>
                <start>192.168.xxx.xxx</start>
                <end>192.168.xxx.xxx</end>
            </range>
        </exclude>
        <status>
            <num>20</num>
            <used>3</used>
            <avail>17</avail>
        </status>
    </network>
</networks>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.15 cfmg_showtemplate (Changing L-Platform Access Setting)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_showtemplate** - Changing L-Platform Access Setting

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_showtemplate - Changing L-Platform Access Setting

Format

cfmg_showtemplate -id *Template_ID* **{-on | off}**

Description

This command makes L-Platform template public or private.

Options

-id

This option specifies the template ID that makes the L-Platform template public or private.

-on

This option makes the L-Platform template public.

-off

This option makes the L-Platform template private.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_showtemplate -id template-12c95768de8 -on
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

9.16 cfmg_updateimageinfo (Updating Image Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_updateimageinfo** - Updating Image Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_updateimageinfo - Updating Image Information

Format

cfmg_updateimageinfo -xml *Image_information_file_path*

Description

This command updates image information.

Point

To update image information, first use the cfmg_showtemplate command to set any system templates that are using that image information to "Private" and then update the image information.

Options

-xml

This option specifies the absolute or relative path to the image information file, using a string of printable ASCII characters.
If the path includes spaces, enclose the path in double quotes.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_updateimageinfo -xml sample.xml
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Chapter 10 L-Platform Commands

This chapter describes the commands for L-Platform.

10.1 cfmg_deletelplatform (Delete L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_deletelplatform** - Delete L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_deletelplatform - Delete L-Platform

Format

cfmg_deletelplatform [-f] -id *L-Platform_ID*

Description

This command deletes an L-Platform whose cancellation has resulted in an error.

Because the operation is conducted without waiting for returns to be completed, errors that occur during the operation will not be output to the event log and the log file.

Check the [Resources] tab to confirm if returns were completed normally.

Options

-f (optional)

Do not perform an inquiry.

-id

Specify the L-Platform ID for deletion.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege.

Location

Admin server.

Example

```
> cfmg_deletelplatform -id div1-7NN3BLVA4
Are you sure to delete the L-Platform? (Y/N) y
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.2 cfmg_deletelserver (Release L-Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_deletelserver** - Release L-Server

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_deletelserver - Release L-Server

Format

cfmg_deletelserver -id *L-Platform_ID* **[-server** *Server_name***] [-f]**

Description

Release the server from the L-Platform.

The servers can be released from each L-Platform in batches.

The L-Server corresponding to the released servers are moved directly under the tenant in the [Resources] tab of the ROR console.

Options

-id

Specify the L-Platform ID of the L-Platform where the server to be released is.

-server (Optional)

Specify the server name of the server to be released.

All servers in the L-Platform will be released in a batch if this is omitted.

This option cannot be specified if there is only one server in the L-Platform. Omit this item and release by each L-Platform.

-f (Optional)

Enquiries are not made.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege.

Location

Admin server.

Example

```
> cfmg_deletelserver -id tenant1-123456789 -server server1 -f
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.3 cfmg_deletesysdata (Unnecessary Data Deletion)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_deletesysdata** - Unnecessary Data Deletion

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_deletesysdata - Unnecessary Data Deletion

Format

cfmg_deletesysdata [-f] [-n] -id *L-Platform_ID* **[-server** *Server_name***]**

Description

Information about L-Platforms and servers that is no longer required but still remains on the [L-Platforms] tab of the ROR console can be deleted.
This command does not delete the L-Server and server entities.

Options

-f (optional)

No enquiry is performed.

-n (optional)

No existence check is performed.

-id

Specifies the L-Platform ID of the deletion target.

-server (optional)

Specifies the server name of the deletion target.
The command deletes the L-Platform if this option is omitted.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_deletesysdata -id div1-7NN3BLVA4 -server WEB1
Do you want to delete the L-Platform ? (Y/N) y
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.4 cfmg_deletevdiparams (Delete VDI Coordination Parameters) [Windows Manager]

Name

*Installation_folder***RCXCFMG\bin\cfmg_deletevdiparams - Delete VDI Coordination Parameters**

Format

cfmg_deletevdiparams -lplatform *L-Platform_ID* **-serverid** *server_ID*

Description

Deletes the VDI coordination parameters which are displayed on the ROR console.
When VDI coordination parameters are no longer necessary as the server is no longer being managed by a VDI management product, use this command to delete the VDI coordination parameters.

Options

-lplatform

Specify the ID of the L-Platform including the servers that are the target of update.

-serverid

Specify the ID of servers that are the target of update.
The server ID is output as the "lserverId" of the ListLServer command.
Refer to "14.3.18 ListLServer (Gets a List of Servers in an L-Platform)" for information on ListLServer command.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_deletevdiparams -lplatform tenantA-7NN3BLVA4 -serverid tenantA-7NN3BLVA4-S-0001
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.5 cfmg_importlserver (Import L-Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_importlserver** - Import L-Server

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_importlserver - Import L-Server

Format

```
cfmg_importlserver -user User_ID -org Tenant_name [-lplatform L-Platform_ID] -lserver L-Server_name [-image Cloning_image_ID] [-os Software_ID] [-vmpool VM pool_name | Server_pool_name] [-sparepool Spare_server_pool_name] [-storagepool Storage_pool_name] [-host Host_name]
```

Description

This command imports the L-Server with the specified L-Server name as an L-Platform.

This command creates an L-Platform in the tenant specified in the -org option and moves the L-Server specified in the -lserver option to the created L-Platform.

The following L-Servers can be imported to an existing L-Platform by specifying the -lplatform option:

- New L-Platforms created in the [L-Platforms] tab of the ROR console
- L-Platforms created with the L-Platform API and L-Platform API related operation commands
- L-Platforms created when the -lplatform option in this command is not specified

Point

- When an L-Server for infrastructure administrator is imported to an L-Platform, the operation privileges of the L-Server are transferred to the tenant administrator or the tenant user.

  When this L-Server is released from the L-Platform by the cfmg_deletelserver command, the L-Server is changed back to the one for infrastructure administrator.

- An L-Platform template is generated when this command is executed. An L-Platform template that has been generated by this command will not be displayed in the [L-Platform Template] window. Specifying the -a option in the cfmg_listtemplate command or the cfmg_listimageinfo command will allow an L-Platform template that has been generated by this command to be displayed.

- When using accounting, snapshots collected before import are not subject to accounting

Note

- L-Servers without network interface cards (NICs) cannot be imported.
- An L-Server that exists under a tenant cannot be imported to another tenant.
- If an L-Server exists in a location other than under a tenant is to be imported, the power of the L-Server to be imported must be switched off.
- Do not import physical L-Servers that have VM hosts installed. Refer to "Appendix A Installing VM Hosts on Physical L-Servers" in the "Setup Guide CE" for information on installing VM hosts on a physical L-Server.
- When Solaris zones are constructed on the guest domain and the guest domain is registered as a VM host, virtual L-Server linked with the guest domain cannot be taken into L-Platform.
- Only L-Servers located within a single-tenant or resource folder can be imported.
  To import L-Servers located within a multi-tenant or resource folder, move them to single level or lower using the ROR console for the resource management.
  Refer to "Chapter 21 Resource Folder Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on tenants and resource folders.
- When importing an L-Server that does not use an L-Server template, it is necessary to register a usable L-Server template in the L-Platform beforehand.
  When you want to specify a particular L-Server template in the L-Server being imported, register image information that specifies the L-Server template beforehand, then specify that image information with the -image option. When image information is not specified, then any L-Server template of those registered will be set.

Options

-user

Specifies the user ID of the tenant administrator, tenant user or dual-role administrator who will be configured as the owner of the imported L-Platform.

-org

Specifies the tenant ID to be set in the L-Platform to be imported.

-lplatform(optional)

Specify the L-Platform ID of the L-Platform that is the destination for the import.

A new L-Platform is created for the import if this is omitted.

-lserver

Specify the L-Server name of the L-Server that is to be imported.

Specify a name not longer than 64 characters as follows:

- For L-Servers deployed in a resource folder or tenant

  Specify by using the resource folder name and tenant name separated by a "/".
  For example: /folder1/server1

- For L-Servers that are not deployed in a resource folder or tenant

  The "/" at the beginning may be omitted.
  For example: server2

If the resulting name is longer than 64 characters, make it shorter than or equal to 64 characters by changing the name of the L-Server or resource folder.
If the names cannot be changed, move the L-Server to the root folder.

-image (optional)

Specifies the image ID if image information is to be set in the L-Server to be imported.

If this option has not been specified, default image information will be used.

To manage software information or patch information, register image information in advance, and then specify it in this command.

If a cloning image does not exist, specify the -n option in the cfmg_addimageinfo command to register image information.

To set the "Type" of a server displayed on the [L-Platforms] tab of the ROR console, specify this option too. If it has not been specified, the "Type" will be set to the name of an arbitrary registered L-Server template.

If the server virtualization software is OVM for SPARC, L-Server templates cannot be registered, and therefore image information cannot be registered. Accordingly, the "Type" will not be set.

If ordinary image information has been specified, to delete it, the L-Platform that has been imported must be returned.

-os (optional)

Specifies the software ID of the software information of the operating system to be set in the L-Server to be imported.

If the -image option has been specified, this option will be ignored even if it is specified.

Software information other than that of the operating system cannot be specified.

If both this option and the -image option have been omitted, the software ID "SW00000001" information will be set.

The default will be the following operating system information:

- "Windows Server 2008 Standard (32bit)"

The cfmg_listsoft command can be used to reference the software IDs.

-vmpool (optional)

Specifies the VM or server pool name to be set for the L-Server to be imported.

Specify as follows:

- For VM pools deployed in a resource folder or tenant

  Specify by using the resource folder name and tenant name separated by a "/".
  Example: /folder1/VMPool

- For VM pools that are not deployed in a resource folder or tenant

  The "/" at the beginning is required.
  Example: /VMPool

Neither CPU nor memory size can be changed when reconfiguring L-Platform that is in use.

If the accounting is being used and this option has not been specified, accounting calculations cannot be performed for CPU and memory in relation to the VM or server pool.

-sparepool (optional)

Specifies the spare server pool name to be set for a physical L-Server to be imported.

Specify as follows:

- If the server pool is located in a resource folder or tenant:

  Specify by using the resource folder name and tenant name separated by a "/".
  Example: /folder1/ServerPool

- Otherwise:

  The "/" at the beginning is required.
  Example: /ServerPool

This option will be ignored if anything other than a physical server is specified.

-storagepool (optional)

Specifies the storage pool name to be set in the L-Server to be imported.

Specify as follows:

- For storage pools deployed in a resource folder or tenant

  Specify by using the resource folder name and tenant name separated by a "/".
  Example: /folder1/StoragePool

- For storage pools that are not deployed in a resource folder or tenant

  The "/" at the beginning is required.
  Example: /StoragePool

- When a disk, such as an RDM (Raw Device Mapping) disk, is not registered in a storage pool

  Specify a hyphen ("-"). When a hyphen ("-") is specified, "-" is also displayed on the [L-Platforms] tab of the ROR console as the storage pool name.

If there are a number of disks, specify the storage pool names in order of disk number, with each delimited by a comma.

If the number of disks is larger than that of the specified storage pool names, the storage pool name specified at the end will be set for the excess disks.

If this option has not been specified, a storage pool name will not be set. Disk size cannot be changed when reconfiguring L-Platforms in use.

If the accounting is being used and this option has not been specified, accounting calculations cannot be performed for disks in relation to the storage pool.

-host (optional)

Specifies the host name to be set in the L-Server to be imported.

When the OS of the L-Server is Windows, specify using up to 15 characters. For other OSs, specify using up to 32 characters.

When "server name" is specified in "Setting the Host Names for Virtual Servers", the specified host name will be set for server name. When importing into an existing L-Platform by specifying the -lplatform option, note that a server name that already exists in the L-Platform cannot be used as the host name. If not specified, it will be automatically generated following "Setting the Host Names for

Virtual Servers".
When the server name is specified in "Setting the Host Names for Virtual Servers" and the length of the name of the L-Server to import exceeds the limit, the first 15 characters will be set as the server and host names (For OSs other than Windows, the first 63 characters will be set).
When importing into an L-Platform by specifying the lplatform option, note that a server name that already exists in the L-Platform cannot be used as the host name.
For details refer to "9.4 Setting the Host Names for Virtual Servers" in the "Setup Guide CE".

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_importlserver -user user3 -org div3 -lplatform tenant1-123 -lserver lsv3
<?xml version="1.0" encoding="Windows-31J"?>
<result>
        <templateId>template-12fe41c4b58</templateId>
        <vsysId>tenant1-123</vsysId>
</result>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

Outputs the L-Platform ID and template ID.

non-zero

An error has occurred.

10.6 cfmg_listhostnamecounter (Display List of Serial Numbers for Host Name Settings)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_listhostnamecounter** - Display List of Serial Numbers for Host Name Settings

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_listhostnamecounter - Display List of Serial Numbers for Host Name Settings

Format

```
cfmg_listhostnamecounter
```

Description

This command displays a list of serial numbers for the host names that are being managed.

The serial numbers that are displayed will be the next numbers to be added.

If the serial numbers exceed this, "---" will be displayed.

Refer to "9.4 Setting the Host Names for Virtual Servers" in the "Setup Guide CE" for details.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_listhostnamecounter
<?xml version="1.0" encoding="Windows-31J"?>
<result>
        <counter>
                <key>div01</key>
                <count>2</count>
        </counter>
</result>
```

Remarks: Encoding will be "UTF-8" with the Linux Manager.

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.7 cfmg_resethostnamecounter (Reset Serial Numbers for Host Name Settings)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_resethostnamecounter** - Reset Serial Numbers for Host Name Settings

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_resethostnamecounter - Reset Serial Numbers for Host Name Settings

Format

cfmg_resethostnamecounter {-key *Key_name* **| -all}**

Description

This command resets the serial numbers for the host names that are being managed.

Refer to "9.4 Setting the Host Names for Virtual Servers" in the "Setup Guide CE" for details.

Point

- If a reset is executed, the serial numbers will return to 1.
- If the serial numbers have been reset, even if a serial number has already been used, server deployment will be performed using the same host name.

Options

-key

Specifies the key name to be reset. The cfmg_listhostnamecounter command can be used to display the key names.

-all

Resets all of the serial numbers.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_resethostnamecounter
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.8 cfmg_syncdiskinfo (Synchronize Disk Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\cfmg_syncdiskinfo** - Synchronize Disk Information

[Linux Manager]
/opt/FJSVcfmg/bin/cfmg_syncdiskinfo - Synchronize Disk Information

Format

cfmg_syncdiskinfo

Description

When a disk attached to a physical L-Server has been changed by a switchover of operating or standby status of storage, this command adjusts the L-Platform configuration information to the changed disk information.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_syncdiskinfo
Completed synchronization.
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.9 cfmg_updatevdiconnectinfo (Update VDI Management Server Connection Information) [Windows Manager]

Name

*Installation_folder***RCXCFMG\bin\cfmg_updatevdiconnectinfo** - Update VDI Management Server Connection Information

Format

cfmg_updatevdiconnectinfo [-f] -old *current_connection_information* **-new** *connection_information_after_update*

Description

Updates VDI management server connection information displayed on the [L-Platforms] tab of the ROR console, in batches.

Options

-f (Optional)

If this option is specified, the connection information is updated even if the value of "-new" is set on the existing server.

-old

VDI management server connection information of the update target.
Specify a character string that contains up to 1024 ASCII characters, excluding control characters.

-new

VDI management server connection information after update.
Specify a character string that contains up to 1024 ASCII characters, excluding control characters.
An error occurs if a value that is already set for an existing server is specified without the "-f" option.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_updatevdiconnectinfo -old 10.10.10.10 -new 10.11.11.11
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.10 cfmg_updatevdiparams (Update VDI Coordination Parameters) [Windows Manager]

Name

Installation_folder\RCXCFMG\bin\cfmg_updatevdiparams - Update VDI Coordination Parameters

Format

```
cfmg_updatevdiparams -lplatform L-Platform_ID -serverid server_ID [-vdiuser vdi_user] [-vdipool
VDI_pool_name] [-vdiconnectinfo VDI_management_server_connection_information][-vdiserver
VDI_management_server]
```

Description

Updates the VDI coordination parameters which are output on the ROR console.
Use this command to update information when the value is not correct after changing the settings of the VDI management product.

Options

-lplatform

Specify the ID of the L-Platform including the servers that are the target of update.

-serverid

Specify the ID of servers that are the target of update.
The server ID is output as the "lserverId" of the ListLServer command.
Refer to "14.3.18 ListLServer (Gets a List of Servers in an L-Platform)" for information on ListLServer command.

-vdiuser (Optional)

Specify the VDI user.
Specify the character string of one connection information within 84 characters composed of alphanumeric and signs (ASCII character) except "/ [ ] : ; | = , + * ? < > @ "", control characters, and space.
If omitted, the value is not changed. Specify this value when the original value is not set (VDI coordination is disabled).

-vdipool (Optional)

Specify the VDI pool.
Specify the character string of one connection information within 64 characters composed of alphanumeric character, underscore ("_"), and hyphen ("-").
If omitted, the value is not changed. Specify this value when the original value is not set (VDI coordination is disabled).

-vdiconnectinfo (Optional)

Specify the VDI management server connection information.
Specify a character string that contains up to 1024 ASCII characters, excluding control characters.
If omitted, the value is not changed. Specify this value when the original value is not set (VDI coordination is disabled).

-vdiserver (Optional)

Specify the VDI management server.
Specify the character string of one connection information within 15 characters composed of alphanumeric and hyphen ("-"). The first

character is assumed to be an alphabet.
If omitted, the value is not changed. Specify this value when the original value is not set (VDI coordination is disabled).

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

```
> cfmg_updatevdiparams -lplatform tenantA-7NN3BLVA4 -serverid tenantA-7NN3BLVA4-S-0001 -vdiuser
testuser -vdipool tenantA-pool -vdiconnectinfo view-server
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

10.11 listUnapprovalLplatform (List of L-Platform Applications)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\MyPortal\bin\listUnapprovalLplatform** - List of L-Platform Applications

[Linux Manager]
/opt/FJSVctmyp/bin/listUnapprovalLplatform.sh - List of L-Platform Applications

Format

[Windows Manager]

`listUnapprovalLplatform`

[Linux Manager]

`listUnapprovalLplatform.sh`

Description

The status of L-Platforms that are pending approval or awaiting review in the application process will be UNAPPROVAL.

This command displays a list of L-Platforms with the UNAPPROVAL status.

```
<Application type>, <tenant name>, <owner (user)>, <L-Platform ID>, <L-Platform name>
unapproval L-Platform : <number of pending L-Platforms>
```

The application types are as follows:

- SUBSCRIPTION (Application to use)
- RECONFIGURATION (Specification change)
- UNSUBSCRIPTION (Cancellation)

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> listUnapprovalLplatform
SUBSCRIPTION,SE0C92RW,admin01,SE0C92RW-R7CMAALFU,RHEL5_x86_SimpleType test01
SUBSCRIPTION,SE0C92RW,user01,SE0C92RW-Q6CVNE3XQ,user01 direct application
SUBSCRIPTION,RKUVRN9I,ctuser01,RKUVRN9I-4KOI076TF,st_recover5_forChangeSpec_2_10_dentest2
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-7NS07C0M5,windows2008
SUBSCRIPTION,0JFIHRXO,user04,0JFIHRXO-T9E4JHHXU,RHEL55x64_NIC4
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-VBG4XA7E2,service1
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-XDHP35MWX,service2
RECONFIGURATION,0JFIHRXO,admin01,0JFIHRXO-S8EA4MQU0,RHEL5_x86_SimpleType3
SUBSCRIPTION,0JFIHRXO,user02,0JFIHRXO-1HN6VXPEV,user02 application
UNSUBSCRIPTION,SE0C92RW,user04,SE0C92RW-Q6CVOYK9J,no specifications change
unapproval L-Platform : 10
```

[Linux Manager]

```
# listUnapprovalLplatform.sh
SUBSCRIPTION,SE0C92RW,admin01,SE0C92RW-R7CMAALFU,RHEL5_x86_SimpleType test01
SUBSCRIPTION,SE0C92RW,user01,SE0C92RW-Q6CVNE3XQ,user01 direct application
SUBSCRIPTION,RKUVRN9I,ctuser01,RKUVRN9I-4KOI076TF,st_recover5_forChangeSpec_2_10_dentest2
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-7NS07C0M5,windows2008
SUBSCRIPTION,0JFIHRXO,user04,0JFIHRXO-T9E4JHHXU,RHEL55x64_NIC4
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-VBG4XA7E2,service1
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-XDHP35MWX,service2
RECONFIGURATION,0JFIHRXO,admin01,0JFIHRXO-S8EA4MQU0,RHEL5_x86_SimpleType3
SUBSCRIPTION,0JFIHRXO,user02,0JFIHRXO-1HN6VXPEV,user02 application
UNSUBSCRIPTION,SE0C92RW,user04,SE0C92RW-Q6CVOYK9J,no specifications change
unapproval L-Platform : 10
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Example

If the exit status is 1, a message notifying abnormal end is displayed.

- If connection with the L-Platform management function failed

```
VSYS error:
VSYS connection failed.
```

- If an error was returned from the L-Platform management function

```
VSYS error:
<Contents of L-Platform management function error>
```

10.12 recoverAllService (Disable L-Platform Application)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\MyPortal\bin\recoverAllService** - Disable L-Platform Application

[Linux Manager]
/opt/FJSVctmyp/bin/recoverAllService.sh - Disable L-Platform Application

Format

[Windows Manager]

```
recoverAllService
```

[Linux Manager]

```
recoverAllService.sh
```

Description

When resources are restored from data created by online backup, some unneeded L-Platform applications may remain.
In that case, use this command to nullify these applications.

The following information will be displayed when this command is executed:

```
<Application type>, <tenant name>, <owner (user)>, <L-Platform ID>, <L-Platform name>
recovered service : <Number of restored L-Platforms>
```

The application types are as follows:

- SUBSCRIPTION (Application to use)
- RECONFIGURATION (Specification change)
- UNSUBSCRIPTION (Cancellation)

This command will nullify all the pending L-Platform applications.
Using such as Information in the [Home] tab, notify the tenant administrator and tenant users to submit their pending L-Platform applications again because they have been nullified.
Refer to "8.4 Editing Information in the [Home] Tab" in the "Operation Guide CE" for details.
This operation is not needed if only offline backup has been performed.
To use this command, the manager software must be running.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> recoverAllService
SUBSCRIPTION,SE0C92RW,admin01,SE0C92RW-R7CMAALFU,RHEL5_x86_SimpleType test01
SUBSCRIPTION,SE0C92RW,user01,SE0C92RW-Q6CVNE3XQ,user01 direct application
SUBSCRIPTION,RKUVRN9I,ctuser01,RKUVRN9I-4KOI076TF,st_recover5_forChangeSpec_2_10_dentest2
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-7NS07C0M5,windows2008
SUBSCRIPTION,0JFIHRXO,user04,0JFIHRXO-T9E4JHHXU,RHEL55x64_NIC4
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-VBG4XA7E2,service1
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-XDHP35MWX,service2
RECONFIGURATION,0JFIHRXO,admin01,0JFIHRXO-S8EA4MQU0,RHEL5_x86_SimpleType3
SUBSCRIPTION,0JFIHRXO,user02,0JFIHRXO-1HN6VXPEV,user02 application
UNSUBSCRIPTION,SE0C92RW,user04,SE0C92RW-Q6CVOYK9J,no specifications change
recovered service : 10
```

[Linux Manager]

```
# recoverAllService.sh
SUBSCRIPTION,SE0C92RW,admin01,SE0C92RW-R7CMAALFU,RHEL5_x86_SimpleType test01
SUBSCRIPTION,SE0C92RW,user01,SE0C92RW-Q6CVNE3XQ,user01 direct application
SUBSCRIPTION,RKUVRN9I,ctuser01,RKUVRN9I-4KOI076TF,st_recover5_forChangeSpec_2_10_dentest2
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-7NS07C0M5,windows2008
SUBSCRIPTION,0JFIHRXO,user04,0JFIHRXO-T9E4JHHXU,RHEL55x64_NIC4
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-VBG4XA7E2,service1
SUBSCRIPTION,TSM0X72G,user03,TSM0X72G-XDHP35MWX,service2
RECONFIGURATION,0JFIHRXO,admin01,0JFIHRXO-S8EA4MQU0,RHEL5_x86_SimpleType3
SUBSCRIPTION,0JFIHRXO,user02,0JFIHRXO-1HN6VXPEV,user02 application
UNSUBSCRIPTION,SE0C92RW,user04,SE0C92RW-Q6CVOYK9J,no specifications change
recovered service : 10
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

 Example

If the exit status is 1, a message notifying abnormal end is displayed.

- If connection with the L-Platform management function failed

```
VSYS error:
VSYS connection failed.
```

- If an error was returned from the L-Platform management function

```
VSYS error:
<Contents of L-Platform management function error>
```

10.13 recoverService (Disable L-Platform Application)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\MyPortal\bin\recoverService** - Disable L-Platform Application

[Linux Manager]
/opt/FJSVctmyp/bin/recoverService.sh - Disable L-Platform Application

Format

[Windows Manager]

recoverService *L-Platform_ID*

[Linux Manager]

recoverService.sh *L-Platform_ID*

Description

This command allows the L-Platform specified using the L-Platform ID to be canceled again.
This command can only be executed for an L-Platform that resulted in an error while cancelling it or is currently undergoing an application to cancel it.

If the L-Platform ID of an L-Platform template undergoing a configuration saves has been specified, the relevant L-Platform template undergoing a configuration save will be deleted.
If other than the L-Platform ID of an L-Platform template undergoing a configuration save or of an L-Platform undergoing an application to cancel L-Platform has been specified, an L-Platform management function error will be returned.

Options

L-Platform-ID

Specifies the L-Platform ID of the L-Platform that is to be allowed to be canceled again.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> recoverService tenantA-123456789
Command succeeded.
```

[Linux Manager]

```
# recoverService.sh tenantA-123456789
Command succeeded.
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Example

- If <L-Platform ID> is not specified or if two or more are specified, the following error message will be displayed. The exit status will be 1:

  [Windows Manager]

  ```
  [recoverService] ctmyp1005: Required parameter is missing.
  Usage: recoverService.bat L-Platform-ID
  ```

  [Linux Manager]

  ```
  [recoverService] ctmyp1005: Required parameter is missing.
  Usage: recoverService.sh L-Platform-ID
  ```

- If the exit status is not 0, a message notifying abnormal end is displayed.

  - If connection with the L-Platform management function failed

    ```
    VSYS error:
    VSYS connection failed.
    ```

  - If an error was returned from the L-Platform management function

    ```
    VSYS error:
    <Contents of L-Platform management function error>
    ```

Chapter 11 Accounting Commands

This chapter explains the commands related to accounting.

11.1 ctchg_chgschedule (Change Periodic Log Schedule Settings)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\Charging\bin\ctchg_chgschedule** - Change Periodic Log Schedule Settings

[Linux Manager]
/opt/FJSVctchg/bin/ctchg_chgschedule.sh - Change Periodic Log Schedule Settings

Format

[Windows Manager]

```
ctchg_chgschedule [-l]
```

[Linux Manager]

```
ctchg_chgschedule.sh [-l]
```

Description

This command changes the time and the frequency at which the periodic log is obtained.

Execute this command after setting the time and the frequency to be changed in the operational settings file for metering.

Refer to "8.7.3 Metering Log Settings" in the "Operation Guide CE" for details.

Options

-l (optional)

Specify this option to reference the current settings.

[Windows Manager]

When the display language is not English, referencing may fail with the current settings when this command is executed with this option. Take action as described for "ctchg0605" in "9.1 Messages ctchg0000 to ctchg0703" in "Messages".

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ctchg_chgschedule
INFO: ctchg0102:Command succeeded.
```

[Linux Manager]

```
# ctchg_chgschedule.sh
INFO: ctchg0102:Command succeeded.
```

Exit Status

This command returns the following values:

0

The command executed successfully.

1

An error has occurred.

2

A warning error has occurred.

Point

If the exit status is 0, the normal end message is as follows:

- When changing the schedule settings

```
> ctchg_chgschedule
INFO: ctchg0102:Command succeeded.
```

- When referencing the schedule settings

```
> ctchg_chgschedule -l
periodic_log_use=yes
periodic_log_schedule_time=00:00
periodic_log_schedule_type=DAILY
INFO : ctchg0102: Command succeeded.
```

11.2 ctchg_getmeterlog (Output Metering Logs)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\Charging\bin\ctchg_getmeterlog** - Output Metering Logs

[Linux Manager]
/opt/FJSVctchg/bin/ctchg_getmeterlog.sh - Output Metering Logs

Format

[Windows Manager]

ctchg_getmeterlog [-start *YYYY-MM-DD* **-end** *YYYY-MM-DD*] **[-event | -period] -outputfile** *metering_log_file* **[-overwrite] [-format** *format*]

[Linux Manager]

ctchg_getmeterlog.sh [-start *YYYY-MM-DD* **-end** *YYYY-MM-DD*] **[-event | -period] -outputfile** *metering_log_file* **[-overwrite] [-format** *format*]

Description

- This command outputs metering logs as CSV files or XML files.
- It is recommended to backup the metering log regularly. Backup to other locations regularly using the task scheduler (Windows) or cron (Linux), etc.
- Determining the metering log may take some time, so execute the metering log output command at 01:00 or later on the day after the end day of the obtaining period.

Options

-start (optional)

Specifies the start day of the obtaining period

If the two parameters -start and -end are omitted, the metering log of the previous day will be output.

-end (optional)

Specifies the end day of the obtaining period

-event (optional)

Obtains the event log only

If -event and -period are omitted, both logs will be output.

-period (optional)

Obtains the periodic log only

-outputfile

Specifies the output file name

If a directory path is not included, the file will be created in the current directory.

-overwrite (optional)

If an output file with the same name already exists, it will be overwritten.

When this parameter is omitted, an error will be output if a file with the same name already exists.

-format (optional)

Specify csv or xml.

When this parameter is omitted, the metering log will be output as a csv file.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Note

- To execute the command by the user other than the Infrastructure administrator with OS administrator privilege, change the OS file system permissions manually.
  The required permissions are shown below.

[Windows Manager]

No	Target file/directory	Required permissions
1	*Installation_folder*\RCXCTMG\Charging\bin	Read and execute
2	*Installation_folder*\RCXCTMG\Charging\bin\ctchg_getmeterlog.bat	Read and execute
3	*Installation_folder*\RCXCTMG\Charging\bin\meterlog.jar	Read
4	*Installation_folder*\RCXCTMG\Charging\conf	Read and execute
5	*Installation_folder*\RCXCTMG\Charging\conf\metering.properties	Read
6	*Installation_folder*\RCXCTMG\Charging\lib	Read and execute
7	*Installation_folder*\RCXCTMG\Charging\lib\log4j-1.2.15.jar	Read
8	*Installation_folder*\RCXCTMG\Charging\log	Read and execute

No	Target file/directory	Required permissions
9	*Installation_folder*\RCXCTMG\Charging\log\ctchg_command.log	Read and write
10	*Installation_folder*\RCXCTMG\Charging\log\ctchg_command_debug.log	Read and write

[Linux Manager]

No	Target file/directory	Required permissions
1	/opt/FJSVctchg/bin	Read and execute
2	/opt/FJSVctchg/bin/ctchg_getmeterlog.sh	Read and execute
3	/opt/FJSVctchg/bin/meterlog.jar	Read
4	/opt/FJSVctchg/lib	Read and execute
5	/opt/FJSVctchg/lib/log4j-1.2.15.jar	Read
6	/etc/opt/FJSVctchg/conf	Read and execute
7	/etc/opt/FJSVctchg/conf/metering.properties	Read
8	/var/opt/FJSVctchg/log	Read and execute
9	/var/opt/FJSVctchg/log/ctchg_command.log	Read and write
10	/var/opt/FJSVctchg/log/ctchg_command_debug.log	Read and write

Example

[Windows Manager]

```
> ctchg_getmeterlog -outputfile workfile
      (Output the metering log of the previous day)
> ctchg_getmeterlog -start 2010-04-01 -end 2010-04-01 -period -outputfile periodfile
      (Output the periodic log for April 1, 2010)
> ctchg_getmeterlog -start 2010-04-01 -end 2011-03-31 -event -outputfile eventfile
      (Output the event log for the financial year 2011)
```

[Linux Manager]

```
# ctchg_getmeterlog.sh -outputfile workfile
      (Output the metaring log of the previous day)
# ctchg_getmeterlog.sh -start 2011-04-01 -end 2011-04-01 -period -outputfile periodfile
       (Output the periodic log for April 1, 2011)
# ctchg_getmeterlog.sh -start 2011-04-01 -end 2012-03-31 -event -outputfile eventfile
       (Output the event log for the financial year 2011)
```

Exit Status

This command returns the following values:

0

The command executed successfully.

1

An error has occurred.

2

A warning error has occurred.

11.3 currencyset (Change Currency Information Setting)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\Charging\bin\currencyset** - Change Currency Information Setting

[Linux Manager]
/opt/FJSVctchg/bin/currencyset.sh - Change Currency Information Setting

Format

[Windows Manager]

```
currencyset {currency_code | -f currency_information_output_file | -reset}
```

[Linux Manager]

```
currencyset.sh {currency_code | -f currency_information_output_file | -reset}
```

Description

This command configures the currency codes and the currency units.

You can specify the -f option and a file name - the command will output information about the configured currency units to the specified file.

You can specify the -reset option to reset the currency units to the default state.

Note

- Stop the manager software before executing this command.
- Do not change the currency information once you start the charging operation.

Options

{ *currency_code* | -f *currency_information_output_file* | -reset}}

currency_code

Specify an ISO 4217 currency code (three alphabetic characters) for the currency code.
The following table shows examples of currency codes and currency unit information - other ISO 4217 currency codes can also be specified.

Currency code	Currency	Currency sign	Number of decimal places
USD	United States Dollar	$	2
JPY	Japanese Yen	¥	0
EUR	Euro	EUR	2
SGD	Singapore dollar	S$	2

Point

Number of decimal places

The maximum number of decimal places that can be used when displaying estimated charges or calculating the usage charge is the number of decimal places of the set currency unit. The unit of the unit price to be specified in the accounting information file depends on the number of decimal places of the set currency unit.
Refer to "15.2.2 Accounting Information File Format" in the "Operation Guide CE" for information on the accounting information file.

-f *currency_information_output_file*

Information about the configured currencies is output to a file using the character encoding UTF-8.
The content of the output file is as shown below:

```
currency.code = currency_code
currency.symbol = currency_symbol
currency.fraction.digits = number_of_decimal_places
```

An error occurs if the specified file already exists. Specify a file name that does not exist.

-reset

Resets the currency unit to the initial value (USD).

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> currencyset EUR
> currencyset -f currencyinfo.txt
> currencyset -reset
```

[Linux Manager]

```
# currencyset.sh EUR
# currencyset.sh -f currencyinfo.txt
# currencyset.sh -reset
```

Exit Status

This command returns the following values:

0

The command executed successfully.

1

An error has occurred.

11.4 productmaintain (Product Master Maintenance)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\Charging\bin\productmaintain** - Product Master Maintenance

[Linux Manager]
/opt/FJSVctchg/bin/productmaintain.sh - Product Master Maintenance

Format

[Windows Manager]

productmaintain {import | export} *accounting_information_file_name*

[Linux Manager]

```
productmaintain.sh {import | export} accounting_information_file_name
```

Description

The following functions are provided for the management of product master accounting information.

- A function to register L-Platform template accounting information in the product master
- A function to output L-Platform template accounting information that has already been registered in the product master to the accounting information file

Note

- [Product Master Registration]
  - The product master contents will be replaced with the contents of the accounting information file.
  - Specifying a size 0 file will delete the entire contents of the product master.
  - If an error occurs, all registration processes will be rendered invalid and the master will revert to its former state.
  - Any amounts for elements that make up the composition of an L-Platform that is not registered in the product master will be treated as \0.
- [Product Master Output]
  - If a file name that already exists is specified as the accounting information file name, it will be overwritten.
  - In the event that the product master contains no information, a file with size 0 will be output.
- Refer to "15.2.2 Accounting Information File Format" in the "Operation Guide CE" for information on the accounting information file.
- Manually set the OS file system authorizations in the event that a user other than a system administrator wishes to execute registration. The necessary authorizations are as listed below.

[Windows Manager]

No	Target file/directory	Required permissions
1	*Installation_folder*\RCXCTMG\Charging\bin	Read and execute
2	*Installation_folder*\RCXCTMG\Charging\bin\productmaintain.bat	Read and execute
3	*Installation_folder*\RCXCTMG\Charging\bin\productmaintain.jar	Read
4	*Installation_folder*\RCXCTMG\Charging\lib	Read and execute
5	*Installation_folder*\RCXCTMG\Charging\lib\log4j-1.2.15.jar	Read
6	*Installation_folder*\RCXCTMG\Charging\conf	Read and execute
7	*Installation_folder*\RCXCTMG\Charging\conf\productmaintain.properties	Read
8	*Installation_folder*\RCXCTMG\Charging\log	Read and execute
9	*Installation_folder*\RCXCTMG\Charging\log\Productmaintain.log	Read and write
10	*Installation_folder*\RCXCTMG\Charging\log\Productmaintain_debug.log	Read and write

[Linux Manager]

No	Target file/directory	Required permissions
1	/opt/FJSVctchg/bin	Read and execute
2	/opt/FJSVctchg/bin/productmaintain.sh	Read and execute
3	/opt/FJSVctchg/bin/productmaintain.jar	Read
4	/opt/FJSVctchg/lib	Read and execute

No	Target file/directory	Required permissions
5	/opt/FJSVctchg/lib/log4j-1.2.15.jar	Read
6	/etc/opt/FJSVctchg/conf	Read and execute
7	/etc/opt/FJSVctchg/conf/productmaintain.properties	Read
8	/var/opt/FJSVctchg/log	Read and execute
9	/var/opt/FJSVctchg/log/Productmaintain.log	Read and write
10	/var/opt/FJSVctchg/log/Productmaintain_debug.log	Read and write

Options

{import | export}

Specify the accounting information file name.
Accounting information file data is registered in the product master when import is specified.
Product master data is output to the accounting information file when export is specified.
The accounting information file name must be specified using the absolute path.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> productmaintain import c:\work\mmt.csv
   (Product Master Registration)
> productmaintain export c:\work\mmt.csv
   (Product Master Output)
```

[Linux Manager]

```
# productmaintain.sh import /work/mmt.csv
   (Product Master Registration)
# productmaintain.sh export /work/mmt.csv
   (Product Master Output)
```

Exit Status

This command returns the following values:

0

The command executed successfully.

1

An error has occurred.

Chapter 12 Role Customization Commands

This chapter explains the commands used to operate roles for Resource Orchestrator.

12.1 rcxadm role

Name

[Windows Manager]
*Installation_folder***SVROR\Manager\bin\rcxadm role** - role operations

[Linux Manager]
/opt/FJSVrcvmr/bin/rcxadm role - role operations

Format

```
rcxadm role create -name name -base base_rolename [-label label -comment comment]
rcxadm role create -name name -init
rcxadm role modify -name name -file file.xml
rcxadm role delete -name name
rcxadm role list
rcxadm role show -name name -format {text|xml} [-outfile outfile]
```

Description

rcxadm role is the command used to manage role definitions.

Subcommands

create

Creates a role based on a basic role.
Or it restores the basic role which was deleted.

modify

Modifies the role definition.

delete

Deletes the role.

list

Displays a list of roles in text format.

Table 12.1 Role Information

Item Name	Description
NAME	Role name
LABEL	Label for the role
COMMENT	Comment for the role

show

Displays the detailed information for the specified role definition in text format or XML format.
In text format, the following information is displayed.

Table 12.2 Detailed Role Information

Item Name	Description
NAME	Role name
LABEL	Label for the role
COMMENT	Comment for the role
OPERATION AUTHORITY	Operation authority Displays operations that can be performed.

For XML format, the information in "15.9 Roles" is displayed.

Options

-name *name*

Specify the role name.

-base *base_rolename*

Specify the name of the basic role that has been copied.

-label *label*

Specify the label for the role.

-comment *comment*

Specify the comment for the role.

-init

Restores the basic role.

-file *file*.xml

Specify the XML file that defines the role to change.
When changing the operation authority, specify all operation names the role has permission for.
For details on the XML file definition, refer to "15.9 Roles".

-format {text|xml}

Specify the display format. When -format is omitted, it is displayed in text format.
It is possible to change role definitions using the output results in XML format.

-outfile *outfile*

Specify the file that stores the output information. Information is output in UTF-8 format.
Set it when changing the role definition using the output results in XML format with multibyte characters included.
When the specified file already exists, an error occurs.

Requirements

Permissions

- OS Administrator
- Infrastructure administrator
- Administrator

Location

Admin server

Example

- To display the list of roles:

```
>rcxadm role list <RETURN>

NAME                 LABEL                  COMMENT
------------------   -------------------    ----------------------
administrator        -                      -
operator             -                      -
...
infra_admin_custom   infra_admin custom1    infra admin for tenantA
```

- To display the detailed information for the specified role:

```
>rcxadm role show -name administrator <RETURN>
NAME:         administrator
LABEL:        administrator
COMMENT:      administrator
OPERATION AUTHORITY:
LPlatform
  create
  modify
  ...
LServer
  create
  ...
  ...
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Chapter 13 Maintenance Commands

This chapter describes the commands for maintenance.

13.1 cmdbrefresh (Refresh Configuration Information of System Condition)

Name

[Windows Manager]
*Installation_folder***CMDB\FJSVcmdbm\bin\cmdbrefresh** - Refresh Configuration Information of System Condition

[Linux Manager]
/opt/FJSVctdsb-cmdb/CMDB/FJSVcmdbm/bin/cmdbrefresh.sh - Refresh Configuration Information of System Condition

Format

[Windows Manager]

```
cmdbrefresh -a -q
```

[Linux Manager]

```
cmdbrefresh.sh -a -q
```

Description

This command refreshes the configuration information displayed in system condition view.

Use this command in any of the following scenarios: when information is not being displayed correctly in system condition view, when using the Disaster Recovery function, or for backup restore.

The configuration information that was managed on the backup site before the recovery data is imported is kept.

Options

-a

Update all.

-q

Update configuration information.

Specify both -a and -q.

Requirements

Permissions

Infrastructure administrator with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> cmdbrefresh -a -q
```

[Linux Manager]

```
# cmdbrefresh.sh -a -q
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Point

The command returns immediately when the update begins and does not wait for the asynchronous update to complete.

The end of update can be seen in event log or system log with the following six messages.

The time for the update depends on the number of VMs and it takes tens of minutes or less to complete the update.

[Windows Manager]

event log

Level	Source	Event ID	Message
information	FCMDB	10004	Update check processing has started. 'MDR Service for Software Configuration Manager'
information	FCMDB	10004	Update check processing has started. 'MDR Service for SQC'
information	FCMDB	10004	Update check processing has started. 'MDR Service for ROR'
information	FCMDB	10005	Update check processing has completed. 'MDR Service for Software Configuration Manager'
information	FCMDB	10005	Update check processing has completed. 'MDR Service for SQC'
information	FCMDB	10005	Update check processing has completed. 'MDR Service for ROR'

[Linux Manager]

system log

Message
Update check processing has started. 'MDR Service for Software Configuration Manager'
Update check processing has started. 'MDR Service for SQC'
Update check processing has started. 'MDR Service for ROR'
Update check processing has completed. 'MDR Service for Software Configuration Manager'
Update check processing has completed. 'MDR Service for SQC'
Update check processing has completed. 'MDR Service for ROR'

13.2 ctmg_collectinfo (Collection of Investigation Data)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\bin\ctmg_collectinfo** - Collection of Investigation Data

[Linux Manager]
/opt/FJSVctmg/bin/ctmg_collectinfo.sh - Collection of Investigation Data

Format

[Windows Manager]

ctmg_collectinfo [-noperf] *folder*

[Linux Manager]

ctmg_collectinfo.sh [-noperf] *folder*

Description

ctmg_collectinfo collects investigation data for the admin server of this product.

Before requesting a problem investigation, collect investigation data with this command.

Point

- When the settings have not changed from initial values, the disk space needed to collect data is about 300M bytes. Because changes in system configuration and settings may require more disk space, prepare enough space on the disk to store the data.
- When you specify a folder, keep the following point in mind.
  - Specify the name of the folder to store data in not more than 46 bytes. If a name more than 46 bytes was specified, some information could be inaccurate.
- When the file was changed during collection, collection may fail with the message "file changed as we read it". In that case, re-execute the command.
- [Windows Manager]
  If the -noperf option is not specified, the progress dialog will be displayed once or twice. At that time, do not click the [Cancel] button.

Options

-noperf (optional)

Specify when omitting investigation information of dashboard function and activity status function to decrease the total amount of the output.

folder

Specify the folder name to store investigation data of this product for folder.

A folder path that includes spaces cannot be specified.

If the specified folder does not exist, it will be created automatically.

If the specified folder contains a file or a subfolder that has the same name with one of the investigation data files, it will be overwritten.

Requirements

Permissions

System administrator

Location

Admin server

Example

[Windows Manager]

```
> ctmg_collectinfo folder1
```

[Linux Manager]

```
# ctmg_collectinfo.sh folder1
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

13.3 ctmg_resetbackuperror (Recover Base Backup Error)

Name

[Windows Manager]
*Installation_folder***RCXCTMG\bin\ctmg_resetbackuperror** - Recover Base Backup Error

[Linux Manager]
/opt/FJSVctmg/bin/ctmg_resetbackuperror.sh - Recover Base Backup Error

Format

[Windows Manager]

ctmg_resetbackuperror

[Linux Manager]

ctmg_resetbackuperror.sh

Description

This command recovers base backup error, when following operation is done during taking base backup by online backup of the admin server.

- Force-quit by Ctrl+C during backup command
- Shutdown of the manager during backup command

Requirements

Permissions

System administrator

Location

Admin server

Example

[Windows Manager]

```
> ctmg_resetbackuperror
Successfully reset the base-backup error.
```

[Linux Manager]

```
# ctmg_resetbackuperror.sh
Successfully reset the base-backup error.
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Point

- This command will end successfully even if there is no error to recover.
- If the exit status is 0, a message notifying normal end is displayed.

```
Successfully reset the base-backup error.
```

- If the exit status is not 0, a message notifying abnormal end is displayed.

```
Failed to reset the base-backup error.
```

13.4 inst_collectinfo (Collection of Investigation Data during Installation)

Name

[Windows Manager]
Installation_medium\DISK1**Common\install_tool\inst_collectinfo** - Collection of Investigation Data during Installation

[Linux Manager]
DVD-ROM_mount_point/DISK1/**Common/install_tool/inst_collectinfo.sh** - Collection of Investigation Data during Installation

Format

[Windows Manager]

inst_collectinfo *folder*

[Linux Manager]

inst_collectinfo.sh *folder*

Description

inst_collectinfo collects investigation data when an error occurs while installing Resource Orchestrator.

Before requesting a problem investigation, collect investigation data with this command.

Point

- About 450 MB of disk size is required to collect the data. Because changes in system configuration and settings may require more disk space, prepare enough space on the disk to store the data.

- When you specify a folder or a directory, keep the following point in mind.
  - Specify the name of the folder to store data in not more than 46 bytes. If a name more than 46 bytes was specified, some information could be inaccurate.

Options

folder

Specify the name of the folder for storing investigation data of Resource Orchestrator.
A folder path that includes spaces cannot be specified.
If the specified folder does not exist, it will be created automatically.
If the specified folder contains a file or a subfolder that has the same name as one of the investigation data files, it will be overwritten.

Requirements

Permissions

OS Administrator

Location

Admin server

Example

[Windows Manager]

```
> inst_collectinfo folder1
```

[Linux Manager]

```
# inst_collectinfo.sh folder1
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Chapter 14 L-Platform API Related Operations

This chapter explains L-Platform API related operations with commands.

Point

- Refer to "Chapter 2 L-Platform API Reference" in the "Reference Guide (API) CE" for information on the APIs.
- Refer to "Request parameters" and "Response" for each API described in "Chapter 2 L-Platform API Reference" in the "Reference Guide (API) CE" for information on option settings values and execution results for each command.

14.1 Operations on L-Platform Templates

This section explains the L-Platform APIs commands relating to operations on L-Platform templates.

14.1.1 GetLPlatformDescriptorAttributes (Gets Template Attributes)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLPlatformDescriptorAttributes** - Gets Template Attributes

[Linux Manager]
/opt/FJSVcfmg/bin/GetLPlatformDescriptorAttributes.sh - Gets Template Attributes

Format

[Windows Manager]

```
GetLPlatformDescriptorAttributes -version version_ID -locale the_language_for_communicating -userId
user_ID -password password -orgId tenant_name -lplatformDescriptorId L-Platform_template_ID
```

[Linux Manager]

```
GetLPlatformDescriptorAttributes.sh -version version_ID -locale the_language_for_communicating -
userId user_ID -password password -orgId tenant_name -lplatformDescriptorId L-Platform_template_ID
```

Description

This command gets attribute information for L-Platform templates.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformDescriptorId

Specify the L-Platform template ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetLPlatformDescriptorAtributes -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -lplatformDescriptorId template-138141e01cc
<?xml version= "1.0" encoding="UTF-8"?>
<GetLPlatformDescriptorAttributesResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformdescriptor>
    <creatorName>user3</creatorName>
    <description>desc</description>
    <registrant>user3</registrant>
    <lplatformdescriptorId>template-138141e01cc</lplatformdescriptorId>
    <lplatformdescriptorName>Win2k8x86_0826_net</lplatformdescriptorName>
  </lplatformdescriptor>
</GetLPlatformDescriptorAttributesResponse>
```

[Linux Manager]

```
# GetLPlatformDescriptorAttributes.sh -version 2.0 -locale en -userId user3 -password password -
orgId tenantA -lplatformDescriptorId template-138141e01cc
<?xml version="1.0" encoding="UTF-8"?>
<GetLPlatformDescriptorAttributesResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformdescriptor>
    <creatorName>user3</creatorName>
    <description>desc</description>
    <registrant>user3</registrant>
    <lplatformdescriptorId>template-138141e01cc</lplatformdescriptorId>
    <lplatformdescriptorName>Win2k8x86_0826_net</lplatformdescriptorName>
  </lplatformdescriptor>
</GetLPlatformDescriptorAttributesResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.2 GetLPlatformDescriptorConfiguration (Gets Template Configuration Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLPlatformDescriptorConfiguration** - Gets Template Configuration Information

[Linux Manager]
/opt/FJSVcfmg/bin/GetLPlatformDescriptorConfiguration.sh - Gets Template Configuration Information

Format

[Windows Manager]

GetLPlatformDescriptorConfiguration -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformDescriptorId** *L-Platform_template_ID*

[Linux Manager]

GetLPlatformDescriptorConfiguration.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformDescriptorId** *L-Platform_template_ID*

Description

This command gets configuration information for the template.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformDescriptorId

Specify the L-Platform template ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetLPlatformDescriptorConfiguration -version 2.0 -locale en -userId user3 -password password -
orgId tenantA -lplatformDescriptorId template-1325738ea5b
<?xml version="1.0" encoding="UTF-8"?>
<GetLPlatformDescriptorConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
```

```
<lplatformdescriptor>
  <creatorName>user3</creatorName>
  <description>firewall</description>
  <firewalls>
    <firewall>
      <interfaces>
        <interface>
          <name>network-param-0001</name>
          <networkId>1ot2#FWS#</networkId>
        </interface>
        <interface>
          <name>network-param-0002</name>
          <networkId>1ot4#FWS#</networkId>
        </interface>
      </interfaces>
      <name>Firewall</name>
      <ruleset>
        <description>rule1</description>
        <designtype>UserCustomize</designtype>
        <lplatformModel>Firewall+SLB</lplatformModel>
        <name>rule1</name>
        <parameters>
          <parameter>
            <description>param1</description>
            <name>param_var_001</name>
            <required>true</required>
            <summary>param1 summary</summary>
            <syntax>INTEGER(0..255)</syntax>
            <value>200</value>
            <view>false</view>
          </parameter>
          <parameter>
            <description>param2</description>
            <name>param_var_002</name>
            <required>true</required>
            <summary>param2 summary</summary>
            <syntax>DisplayString(SIZE(0..255))</syntax>
            <value/>
            <view>true</view>
          </parameter>
          <parameter>
            <description>param3 desc</description>
            <name>param_var_003</name>
            <required>true</required>
            <summary>param3 summary</summary>
            <syntax>INTEGER(0..65535)</syntax>
            <value>400</value>
            <view>true</view>
          </parameter>
        </parameters>
      </ruleset>
    </firewall>
  </firewalls>
  <registrant>tpladm1</registrant>
  <slbs>
    <slb>
      <interfaces>
        <interface>
          <name>network-param-0001</name>
          <networkId>1ot2#FWS#</networkId>
        </interface>
        <interface>
          <name>network-param-0002</name>
```

```
          <networkId>1ot4#FWS#</networkId>
        </interface>
      </interfaces>
      <name>SLB</name>
      <ruleset>
        <description>rule1 description</description>
        <lplatformModel>Firewall+SLB</lplatformModel>
        <name>rule1</name>
        <parameters>
          <parameter>
            <description>param1</description>
            <name>param_var_001</name>
            <required>true</required>
            <summary>param1 summary</summary>
            <syntax>INTEGER(0..255)</syntax>
            <value>200</value>
            <view>false</view>
          </parameter>
          <parameter>
            <description>param2</description>
            <name>param_var_002</name>
            <required>true</required>
            <summary>param2 summary</summary>
            <syntax>DisplayString(SIZE(0..255))</syntax>
            <value/>
            <view>true</view>
          </parameter>
          <parameter>
            <description>param3</description>
            <name>param_var_003</name>
            <required>true</required>
            <summary>param3 summary</summary>
            <syntax>INTEGER(0..65535)</syntax>
            <value>400</value>
            <view>true</view>
          </parameter>
        </parameters>
     </ruleset>
    </slb>
  </slbs>
  <networks>
    <network>
      <name>network-param-0001</name>
      <networkCategory>BUSINESS</networkCategory>
      <networkId>1ot2#FWS#</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1234</resourceId>
      <segmentType>DMZ</segmentType>
    </network>
    <network>
      <name>network-param-0002</name>
      <networkCategory>BUSINESS</networkCategory>
      <networkId>1ot4#FWS#</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1235</resourceId>
      <segmentType>SECURE</segmentType>
    </network>
  </networks>
  <lservers>
    <lserver>
      <creator>cfmgadm</creator>
      <diskimageId>image-1324e093f4e</diskimageId>
      <diskimageName>g-physical-0001</diskimageName>
```

```
      <pool>/VMHostPool</pool>
      <priority>128</priority>
      <sparePool/>
      <storagePool>/StoragePool</storagePool>
      <disks>
        <disk>
          <contained>false</contained>
          <diskNo>1</diskNo>
          <size>30.0</size>
          <storagePool>/StoragePool</storagePool>
        </disk>
      </disks>
      <nics>
        <nic>
          <management>1</management>
          <networkId>1ot2#FWS#</networkId>
          <nicNo>1</nicNo>
        </nic>
        <nic>
          <management>0</management>
          <networkId>1ot2#FWS#</networkId>
          <nicNo>2</nicNo>
        </nic>
      </nics>
      <lserverName>server1</lserverName>
      <lserverNo>0</lserverNo>
      <serverType>Economy</serverType>
    </lserver>
    <lserver>
      <creator>cfmgadm</creator>
      <diskimageId>image-1324e09f82f</diskimageId>
      <diskimageName>g-vm-0002</diskimageName>
      <pool>/VMHostPool</pool>
      <priority>128</priority>
      <sparePool/>
      <storagePool>/StoragePool</storagePool>
      <storeType>Virtual Disk</storeType>
      <vmType>RHEL-KVM</vmType>
      <nics>
        <nic>
          <management>1</management>
          <networkId>1ot4#FWS#</networkId>
          <nicNo>1</nicNo>
        </nic>
        <nic>
          <management>0</management>
          <networkId>1ot4#FWS#</networkId>
          <nicNo>2</nicNo>
        </nic>
        <nic>
          <management>0</management>
          <networkId>1ot4#FWS#</networkId>
          <nicNo>3</nicNo>
        </nic>
      </nics>
      <lserverName>vserevr-1</lserverName>
      <lserverNo>1</lserverNo>
      <serverType>over_commit</serverType>
    </lserver>
  </lservers>
  <lplatformdescriptorId>template-1325738ea5b</lplatformdescriptorId>
  <lplatformdescriptorName>firewall-test</lplatformdescriptorName>
```

```
  </lplatformdescriptor>
</GetLPlatformDescriptorConfigurationResponse>
```

[Linux Manager]

```
# GetLPlatformDescriptorConfiguration.sh -version 2.0 -locale en -userId user3 -password password
-orgId tenantA -lplatformDescriptorId template-1325738ea5b
<?xml version="1.0" encoding="UTF-8"?>
<GetLPlatformDescriptorConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformdescriptor>
    <creatorName>user3</creatorName>
    <description>firewall</description>
    <firewalls>
      <firewall>
        <interfaces>
          <interface>
            <name>network-param-0001</name>
            <networkId>1ot2#FWS#</networkId>
          </interface>
          <interface>
            <name>network-param-0002</name>
            <networkId>1ot4#FWS#</networkId>
          </interface>
        </interfaces>
        <name>Firewall</name>
        <ruleset>
          <description>rule1</description>
          <designtype>UserCustomize</designtype>
          <lplatformModel>Firewall+SLB</lplatformModel>
          <name>rule1</name>
          <parameters>
            <parameter>
              <description>param1</description>
              <name>param_var_001</name>
              <required>true</required>
              <summary>param1 summary</summary>
              <syntax>INTEGER(0..255)</syntax>
              <value>200</value>
              <view>false</view>
            </parameter>
            <parameter>
              <description>param2</description>
              <name>param_var_002</name>
              <required>true</required>
              <summary>param2 summary</summary>
              <syntax>DisplayString(SIZE(0..255))</syntax>
              <value/>
              <view>true</view>
            </parameter>
            <parameter>
              <description>param3 desc</description>
              <name>param_var_003</name>
              <required>true</required>
              <summary>param3 summary</summary>
              <syntax>INTEGER(0..65535)</syntax>
              <value>400</value>
              <view>true</view>
            </parameter>
          </parameters>
        </ruleset>
      </firewall>
```

```
    </firewalls>
    <registrant>tpladm1</registrant>
    <slbs>
      <slb>
        <interfaces>
          <interface>
            <name>network-param-0001</name>
            <networkId>1ot2#FWS#</networkId>
          </interface>
          <interface>
            <name>network-param-0002</name>
            <networkId>1ot4#FWS#</networkId>
          </interface>
        </interfaces>
        <name>SLB</name>
        <ruleset>
          <description>rule1 description</description>
          <lplatformModel>Firewall+SLB</lplatformModel>
          <name>rule1</name>
          <parameters>
            <parameter>
              <description>param1</description>
              <name>param_var_001</name>
              <required>true</required>
              <summary>param1 summary</summary>
              <syntax>INTEGER(0..255)</syntax>
              <value>200</value>
              <view>false</view>
            </parameter>
            <parameter>
              <description>param2</description>
              <name>param_var_002</name>
              <required>true</required>
              <summary>param2 summary</summary>
              <syntax>DisplayString(SIZE(0..255))</syntax>
              <value/>
              <view>true</view>
            </parameter>
            <parameter>
              <description>param3</description>
              <name>param_var_003</name>
              <required>true</required>
              <summary>param3 summary</summary>
              <syntax>INTEGER(0..65535)</syntax>
              <value>400</value>
              <view>true</view>
            </parameter>
          </parameters>
       </ruleset>
      </slb>
    </slbs>
    <networks>
      <network>
        <name>network-param-0001</name>
        <networkCategory>BUSINESS</networkCategory>
        <networkId>1ot2#FWS#</networkId>
        <numOfMaxVm>10</numOfMaxVm>
        <resourceId>mngsrv_1234</resourceId>
        <segmentType>DMZ</segmentType>
      </network>
      <network>
        <name>network-param-0002</name>
        <networkCategory>BUSINESS</networkCategory>
```

```
      <networkId>1ot4#FWS#</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1235</resourceId>
      <segmentType>SECURE</segmentType>
    </network>
  </networks>
  <lservers>
    <lserver>
      <creator>cfmgadm</creator>
      <diskimageId>image-1324e093f4e</diskimageId>
      <diskimageName>g-physical-0001</diskimageName>
      <pool>/VMHostPool</pool>
      <priority>128</priority>
      <sparePool/>
      <storagePool>/StoragePool</storagePool>
      <disks>
        <disk>
          <contained>false</contained>
          <diskNo>1</diskNo>
          <size>30.0</size>
          <storagePool>/StoragePool</storagePool>
        </disk>
      </disks>
      <nics>
        <nic>
          <management>1</management>
          <networkId>1ot2#FWS#</networkId>
          <nicNo>1</nicNo>
        </nic>
        <nic>
          <management>0</management>
          <networkId>1ot2#FWS#</networkId>
          <nicNo>2</nicNo>
        </nic>
      </nics>
      <lserverName>server1</lserverName>
      <lserverNo>0</lserverNo>
      <serverType>Economy</serverType>
    </lserver>
    <lserver>
      <creator>cfmgadm</creator>
      <diskimageId>image-1324e09f82f</diskimageId>
      <diskimageName>g-vm-0002</diskimageName>
      <pool>/VMHostPool</pool>
      <priority>128</priority>
      <sparePool/>
      <storagePool>/StoragePool</storagePool>
      <storeType>Virtual Disk</storeType>
      <vmType>RHEL-KVM</vmType>
      <nics>
        <nic>
          <management>1</management>
          <networkId>1ot4#FWS#</networkId>
          <nicNo>1</nicNo>
        </nic>
        <nic>
          <management>0</management>
          <networkId>1ot4#FWS#</networkId>
          <nicNo>2</nicNo>
        </nic>
        <nic>
          <management>0</management>
          <networkId>1ot4#FWS#</networkId>
```

```
            <nicNo>3</nicNo>
          </nic>
        </nics>
        <lserverName>vserevr-1</lserverName>
        <lserverNo>1</lserverNo>
        <serverType>over_commit</serverType>
      </lserver>
    </lservers>
    <lplatformdescriptorId>template-1325738ea5b</lplatformdescriptorId>
    <lplatformdescriptorName>firewall-test</lplatformdescriptorName>
  </lplatformdescriptor>
</GetLPlatformDescriptorConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.3 GetPoolList (Gets a List of Resource Pools)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetPoolList** - Gets a List of Resource Pools

[Linux Manager]
/opt/FJSVcfmg/bin/GetPoolList.sh - Gets a List of Resource Pools

Format

[Windows Manager]

```
GetPoolList -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name [-type resource_pool_type]
```

[Linux Manager]

```
GetPoolList.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name [-type resource_pool_type]
```

Description

This command gets a list of resource pools.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-type (optional)

Specify the resource pool type.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetPoolList -version 2.0 -locale en -userId user3 -password password -orgId tenantA -type vm
<?xml version="1.0" encoding="UTF-8"?>
<GetPoolListResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <resourcepools>
    <vmpools>
      <vmpool>
        <cpuFree>63.8</cpuFree>
        <cpuTotal>63.8</cpuTotal>
        <maxCpuPerf>2.6</maxCpuPerf>
        <maxMemorySize>13.7</maxMemorySize>
        <memoryFree>27.4</memoryFree>
        <memoryTotal>27.4</memoryTotal>
        <name>/VMHostPool</name>
        <numOfMaxCpu>12.0</numOfMaxCpu>
        <vmpoolResourceId>WIN-5EGJBQPP4SJ_4</vmpoolResourceId>
      </vmpool>
    </vmpools>
  </resourcepools>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</GetPoolListResponse>
```

[Linux Manager]

```
# GetPoolList.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -type vm
<?xml version="1.0" encoding="UTF-8"?>
<GetPoolListResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <resourcepools>
    <vmpools>
      <vmpool>
        <cpuFree>63.8</cpuFree>
        <cpuTotal>63.8</cpuTotal>
        <maxCpuPerf>2.6</maxCpuPerf>
        <maxMemorySize>13.7</maxMemorySize>
        <memoryFree>27.4</memoryFree>
        <memoryTotal>27.4</memoryTotal>
        <name>/VMHostPool</name>
        <numOfMaxCpu>12.0</numOfMaxCpu>
        <vmpoolResourceId>WIN-5EGJBQPP4SJ_4</vmpoolResourceId>
      </vmpool>
    </vmpools>
```

```
  </resourcepools>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</GetPoolListResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.4 GetRulesetConfiguration (Obtain the Configuration Information for the Ruleset)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetRulesetConfiguration** - Obtain the Configuration Information for the Ruleset

[Linux Manager]
/opt/FJSVcfmg/bin/GetRulesetConfiguration.sh - Obtain the Configuration Information for the Ruleset

Format

[Windows Manager]

GetRulesetConfiguration -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-rulesetName** *ruleset_name*

[Linux Manager]

GetRulesetConfiguration.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-rulesetName** *ruleset_name*

Description

This command obtains the configuration information for a ruleset.

This command can be executed on both the firewall and server load balancer rulesets.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-rulesetName

Specify the ruleset name.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetRulesetConfiguration -version 2.0 -locale en -userId user3 -password password -orgId tenantA
-rulesetName Firewall1
<?xml version="1.0" encoding="UTF-8"?>
<GetRulesetConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <interfaces>
    <interface>
      <name>interface1</name>
      <segmentType>SECURE</segmentType>
    </interface>
    <interface>
      <name>interface2</name>
      <segmentType>DMZ</segmentType>
    </interface>
  </interfaces>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <ruleset>
    <description>SLB server1</description>
    <designtype>UserCustomize</designtype>
    <lplatformModel>Firewall only</lplatformModel>
    <name>Firewall1</name>
    <numOfMaxSegment>3</numOfMaxSegment>
    <numOfMaxVm>10</numOfMaxVm>
    <parameters>
      <parameter>
        <description>param1 int 0-65535</description>
        <name>param_var_001</name>
        <value>400</value>
        <view>true</view>
        <summary>param1</summary>
        <syntax>INTEGER(0..65535)</syntax>
        <required>true</required>
      </parameter>
      <parameter>
        <description>param2 int 0-256</description>
        <name>param_var_002</name>
        <value>200</value>
        <view>true</view>
        <summary>param2</summary>
        <syntax>INTEGER(0..256)</syntax>
        <required>true</required>
      </parameter>
    </parameters>
    <rulesetCategory>config</rulesetCategory>
    <type>Firewall</type>
  </ruleset>
</GetRulesetConfigurationResponse>
```

[Linux Manager]

```
# GetRulesetConfiguration.sh -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -rulesetName Firewall1
<?xml version="1.0" encoding="UTF-8"?>
<GetRulesetConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <interfaces>
    <interface>
      <name>interface1</name>
      <segmentType>SECURE</segmentType>
    </interface>
    <interface>
      <name>interface2</name>
      <segmentType>DMZ</segmentType>
    </interface>
  </interfaces>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <ruleset>
    <description>SLB server1</description>
    <designtype>UserCustomize</designtype>
    <lplatformModel>Firewall only</lplatformModel>
    <name>Firewall1</name>
    <numOfMaxSegment>3</numOfMaxSegment>
    <numOfMaxVm>10</numOfMaxVm>
    <parameters>
      <parameter>
        <description>param1 int 0-65535</description>
        <name>param_var_001</name>
        <value>400</value>
        <view>true</view>
        <summary>param1</summary>
        <syntax>INTEGER(0..65535)</syntax>
        <required>true</required>
      </parameter>
      <parameter>
        <description>param2 int 0-256</description>
        <name>param_var_002</name>
        <value>200</value>
        <view>true</view>
        <summary>param2</summary>
        <syntax>INTEGER(0..256)</syntax>
        <required>true</required>
      </parameter>
    </parameters>
    <rulesetCategory>config</rulesetCategory>
    <type>Firewall</type>
  </ruleset>
</GetRulesetConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.5 ListDiskImage (Gets a List of Cloning Images)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListDiskImage** - Gets a List of Cloning Images

[Linux Manager]
/opt/FJSVcfmg/bin/ListDiskImage.sh - Gets a List of Cloning Images

Format

[Windows Manager]

```
ListDiskImage -version version_ID -locale the_language_for_communicating -userId user_ID -password password -orgId tenant_name
```

[Linux Manager]

```
ListDiskImage.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password password -orgId tenant_name
```

Description

This command gets a list of the disk image IDs in the virtual data center.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListDiskImage -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<ListDiskImageResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <diskimages>
    <diskimage>
      <creatorName>cfmgadm</creatorName>
      <diskimageId>image-13f2b6162a3</diskimageId>
```

```
    <diskimageName>g-vm-0002</diskimageName>
    <disks>
      <disk>
        <diskSize>400.0</diskSize>
        <no>3</no>
      </disk>
      <disk>
        <diskSize>500.0</diskSize>
        <no>5</no>
      </disk>
    </disks>
    <maxCpuPerf>1.4</maxCpuPerf>
    <maxDiskSize>500.0</maxDiskSize>
    <maxMemorySize>2.0</maxMemorySize>
    <maxSysvolSize>70.0</maxSysvolSize>
    <name>data_disks</name>
    <numOfMaxCpu>1</numOfMaxCpu>
    <numOfMaxDisk>5</numOfMaxDisk>
    <numOfMaxNic>1</numOfMaxNic>
    <registrant>manage1</registrant>
    <size>70.0</size>
    <softwares>
      <software>
        <category>OS</category>
        <license/>
        <name>Windows Server 2008 R2 Enterprise</name>
        <officialVersion/>
        <osCategory>windows64</osCategory>
        <patch/>
        <softwareId>SW00000007</softwareId>
        <support/>
        <version>6.1</version>
      </software>
    </softwares>
    <vmType>VMware</vmType>
  </diskimage>
  <diskimage>
    <creatorName>cfmgadm</creatorName>
    <diskimageId>image-13d23c1c832</diskimageId>
    <diskimageName>g-vm-0001</diskimageName>
    <maxCpuPerf>3.2</maxCpuPerf>
    <maxDiskSize>30.0</maxDiskSize>
    <maxMemorySize>8.0</maxMemorySize>
    <maxSysvolSize>50.0</maxSysvolSize>
    <name>solaristest</name>
    <numOfMaxCpu>4</numOfMaxCpu>
    <numOfMaxDisk>1</numOfMaxDisk>
    <numOfMaxNic>1</numOfMaxNic>
    <patches>
      <patch>
        <componentName/>
        <description/>
        <patchId>PATCH1</patchId>
        <softwareId>SW00000016</softwareId>
      </patch>
      <patch>
        <componentName/>
        <description/>
        <patchId>PATCH2</patchId>
        <softwareId>SW00000016</softwareId>
      </patch>
    </patches>
    <registrant>manage1</registrant>
```

```
      <size>50.0</size>
      <softwares>
        <software>
          <category>OS</category>
          <license/>
          <name>FreeOS</name>
          <officialVersion/>
          <osCategory>other</osCategory>
          <patch/>
          <softwareId>SW00000016</softwareId>
          <support/>
          <version>1.0</version>
        </software>
      </softwares>
      <vmType>VMware</vmType>
    </diskimage>
  </diskimages>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ListDiskImageResponse>
```

[Linux Manager]

```
# ListDiskImage.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<ListDiskImageResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <diskimages>
    <diskimage>
      <creatorName>cfmgadm</creatorName>
      <diskimageId>image-13f2b6162a3</diskimageId>
      <diskimageName>g-vm-0002</diskimageName>
      <disks>
        <disk>
          <diskSize>400.0</diskSize>
          <no>3</no>
        </disk>
        <disk>
          <diskSize>500.0</diskSize>
          <no>5</no>
        </disk>
      </disks>
      <maxCpuPerf>1.4</maxCpuPerf>
      <maxDiskSize>500.0</maxDiskSize>
      <maxMemorySize>2.0</maxMemorySize>
      <maxSysvolSize>70.0</maxSysvolSize>
      <name>data_disks</name>
      <numOfMaxCpu>1</numOfMaxCpu>
      <numOfMaxDisk>5</numOfMaxDisk>
      <numOfMaxNic>1</numOfMaxNic>
      <registrant>manage1</registrant>
      <size>70.0</size>
      <softwares>
        <software>
          <category>OS</category>
          <license/>
          <name>Windows Server 2008 R2 Enterprise</name>
          <officialVersion/>
          <osCategory>windows64</osCategory>
          <patch/>
          <softwareId>SW00000007</softwareId>
          <support/>
          <version>6.1</version>
        </software>
```

```
      </softwares>
      <vmType>VMware</vmType>
    </diskimage>
    <diskimage>
      <creatorName>cfmgadm</creatorName>
      <diskimageId>image-13d23c1c832</diskimageId>
      <diskimageName>g-vm-0001</diskimageName>
      <maxCpuPerf>3.2</maxCpuPerf>
      <maxDiskSize>30.0</maxDiskSize>
      <maxMemorySize>8.0</maxMemorySize>
      <maxSysvolSize>50.0</maxSysvolSize>
      <name>solaristest</name>
      <numOfMaxCpu>4</numOfMaxCpu>
      <numOfMaxDisk>1</numOfMaxDisk>
      <numOfMaxNic>1</numOfMaxNic>
      <patches>
        <patch>
          <componentName/>
          <description/>
          <patchId>PATCH1</patchId>
          <softwareId>SW00000016</softwareId>
        </patch>
        <patch>
          <componentName/>
          <description/>
          <patchId>PATCH2</patchId>
          <softwareId>SW00000016</softwareId>
        </patch>
      </patches>
      <registrant>manage1</registrant>
      <size>50.0</size>
      <softwares>
        <software>
          <category>OS</category>
          <license/>
          <name>FreeOS</name>
          <officialVersion/>
          <osCategory>other</osCategory>
          <patch/>
          <softwareId>SW00000016</softwareId>
          <support/>
          <version>1.0</version>
        </software>
      </softwares>
      <vmType>VMware</vmType>
    </diskimage>
  </diskimages>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ListDiskImageResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.6 ListFirewallRuleset (Obtain a List of Firewall Rulesets)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListFirewallRuleset** - Obtain a List of Firewall Rulesets

[Linux Manager]
/opt/FJSVcfmg/bin/ListFirewallRuleset.sh - Obtain a List of Firewall Rulesets

Format

[Windows Manager]

ListFirewallRuleset -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

[Linux Manager]

ListFirewallRuleset.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

Description

This command obtains a list of firewall rulesets.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListFirewallRuleset -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<ListFirewallRulesetResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <rulesets>
    <ruleset>
```

```
     <description>3 tier firewall system(scope is within 3 tiers) that used Simple UI</description>
      <lplatformModel>Firewall+SLB</lplatformModel>
      <name>Simple_FW_setting_for_NS</name>
      <numOfMaxSegment>3</numOfMaxSegment>
      <numOfMaxVm>10</numOfMaxVm>
      <rulesetCategory>config</rulesetCategory>
      <type>Firewall</type>
    </ruleset>
    <ruleset>
      <description>Operation to display logs for Simple UI.</description>
      <name>Simple_log_display_for_NS</name>
      <rulesetCategory>operation</rulesetCategory>
      <type>Firewall</type>
    </ruleset>
  </rulesets>
</ListFirewallRulesetResponse>
```

[Linux Manager]

```
# ListFirewallRuleset.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<ListFirewallRulesetResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <rulesets>
    <ruleset>
     <description>3 tier firewall system(scope is within 3 tiers) that used Simple UI</description>
      <lplatformModel>Firewall+SLB</lplatformModel>
      <name>Simple_FW_setting_for_NS</name>
      <numOfMaxSegment>3</numOfMaxSegment>
      <numOfMaxVm>10</numOfMaxVm>
      <rulesetCategory>config</rulesetCategory>
      <type>Firewall</type>
    </ruleset>
    <ruleset>
      <description>Operation to display logs for Simple UI.</description>
      <name>Simple_log_display_for_NS</name>
      <rulesetCategory>operation</rulesetCategory>
      <type>Firewall</type>
    </ruleset>
  </rulesets>
</ListFirewallRulesetResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.7 ListLPlatformDescriptor (Gets a List of Templates)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListLPlatformDescriptor** - Gets a List of Templates

[Linux Manager]
/opt/FJSVcfmg/bin/ListLPlatformDescriptor.sh - Gets a List of Templates

Format

[Windows Manager]

ListLPlatformDescriptor -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **[-keyword** *keyword***]**

[Linux Manager]

ListLPlatformDescriptor.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **[-keyword** *keyword***]**

Description

This command gets a list of the templates in the virtual data center.

At the same time, the command also gets attribute information for templates.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-keyword (optional)

Specify a keyword to use to filter templates in the list.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListLPlatformDescriptor -version 2.0 -locale en -userId user3 -password password -orgId tenantA
-keyword sample
<?xml version="1.0" encoding="UTF-8"?>
<ListLPlatformDescriptorResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformdescriptors>
    <lplatformdescriptor>
      <creatorName>user3</creatorName>
      <description>sample1</description>
      <registrant>cfmgadm</registrant>
      <lplatformdescriptorId>template-138141e01cc</lplatformdescriptorId>
```

```
      <lplatformdescriptorName>sampleTemplate1</lplatformdescriptorName>
    </lplatformdescriptor>
    <lplatformdescriptor>
      <creatorName>cfmgadm</creatorName>
      <description>sample2</description>
      <registrant>user3</registrant>
      <lplatformdescriptorId>template-138241e02dd</lplatformdescriptorId>
      <lplatformdescriptorName>sampleTemplate2</lplatformdescriptorName>
    </lplatformdescriptor>
  </lplatformdescriptors>
</ListLPlatformDescriptorResponse>
```

[Linux Manager]

```
# ListLPlatformDescriptor.sh -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -keyword sample
<?xml version="1.0" encoding="UTF-8"?>
<ListLPlatformDescriptorResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformdescriptors>
    <lplatformdescriptor>
      <creatorName>user3</creatorName>
      <description>sample1</description>
      <registrant>cfmgadm</registrant>
      <lplatformdescriptorId>template-138141e01cc</lplatformdescriptorId>
      <lplatformdescriptorName>sampleTemplate1</lplatformdescriptorName>
    </lplatformdescriptor>
    <lplatformdescriptor>
      <creatorName>user3</creatorName>
      <description>sample2</description>
      <registrant>cfmgadm</registrant>
      <lplatformdescriptorId>template-138241e02dd</lplatformdescriptorId>
      <lplatformdescriptorName>sampleTemplate2</lplatformdescriptorName>
    </lplatformdescriptor>
  </lplatformdescriptors>
</ListLPlatformDescriptorResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.8 ListNetworkResource (Obtain a List of Network Resources)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListNetworkResource** - Obtain a List of Network Resources

[Linux Manager]
/opt/FJSVcfmg/bin/ListNetworkResource.sh - Obtain a List of Network Resources

Format

[Windows Manager]

ListNetworkResource -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **[-networkCategory** *network_type***] [-segmentType** *segment_identifier_information***] [-showTenant** *tenant_name_display***]**

[Linux Manager]

ListNetworkResource.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **[-networkCategory** *network_type***] [-segmentType** *segment_identifier_information***] [-showTenant** *tenant_name_display***]**

Description

This command obtains a list of network resources.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-networkCategory (optional)

Specify the network type.

-segmentType (optional)

Specify segment identifier information.

-showTenant (optional)

Specify the tenant name display option.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListNetworkResource -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
networkCategory MANAGEMENT -segmentType DMZ -showTenant true
<?xml version="1.0" encoding="UTF-8"?>
<ListNetworkResourceResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <networks>
    <network>
      <addressSet>
        <end>192.xxx.xxx.xxx</end>
        <mask>255.xxx.xxx.xxx</mask>
```

```
        <name>addr_set10</name>
        <start>192.xxx.xxx.xxx</start>
        <subnet>192.xxx.xxx.xxx</subnet>
      </addressSet>
      <addressSetStatus>
        <avail>138</avail>
        <num>140</num>
        <used>2</used>
      </addressSetStatus>
      <excludeaddressranges/>
      <locked>true</locked>
      <networkCategory>BUSINESS</networkCategory>
      <resourceId>network-t-0001</resourceId>
      <resourceName>tenantA-DMZ</resourceName>
      <segmentType>DMZ</segmentType>
      <tenantName>tenantA</tenantName>
      <vlanId>11</vlanId>
    </network>
  </networks>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ListNetworkResourceResponse>
```

[Linux Manager]

```
# ListNetworkResource.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
networkCategory MANAGEMENT -segmentType DMZ -showTenant true
<?xml version="1.0" encoding="UTF-8"?>
<ListNetworkResourceResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <networks>
    <network>
      <addressSet>
        <end>192.xxx.xxx.xxx</end>
        <mask>255.xxx.xxx.xxx</mask>
        <name>addr_set10</name>
        <start>192.xxx.xxx.xxx</start>
        <subnet>192.xxx.xxx.xxx</subnet>
      </addressSet>
      <addressSetStatus>
        <avail>138</avail>
        <num>140</num>
        <used>2</used>
      </addressSetStatus>
      <excludeaddressranges/>
      <locked>true</locked>
      <networkCategory>BUSINESS</networkCategory>
      <resourceId>network-t-0001</resourceId>
      <resourceName>tenantA-DMZ</resourceName>
      <segmentType>DMZ</segmentType>
      <tenantName>tenantA</tenantName>
      <vlanId>11</vlanId>
    </network>
  </networks>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ListNetworkResourceResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.9 ListServerType (Gets a List of L-Server Templates)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListServerType** - Gets a List of L-Server Templates

[Linux Manager]
/opt/FJSVcfmg/bin/ListServerType.sh - Gets a List of L-Server Templates

Format

[Windows Manager]

ListServerType -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

[Linux Manager]

ListServerType.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

Description

This command gets a list of the server image types in the virtual data center.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListServerType -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<ListServerTypeResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
```

```
<responseMessage>PAPI00000 Processing was completed.</responseMessage>
<responseStatus>SUCCESS</responseStatus>
<servertypes>
  <servertype>
    <comment>comment1</comment>
    <cpu>
      <cpuArch>IA</cpuArch>
      <cpuPerf>2.6</cpuPerf>
      <cpuReserve>0.0</cpuReserve>
      <cpuShare>1000</cpuShare>
      <numOfCpu>4</numOfCpu>
    </cpu>
    <disks>
      <disk>
        <diskIndex>0</diskIndex>
        <diskSize>100</diskSize>
      </disk>
    </disks>
    <id>template-0001</id>
    <label>vmware-template-1</label>
    <lserverType>Virtual</lserverType>
    <memory>
      <memoryReserve>8</memoryReserve>
      <memoryShare>81920</memoryShare>
      <memorySize>8</memorySize>
    </memory>
    <name>High_Performance</name>
    <nics>
      <numOfNIC>1</numOfNIC>
    </nics>
    <serverPolicy>
      <positioning>Fixed</positioning>
      <redundancy>None</redundancy>
      <repurpose>true</repurpose>
    </serverPolicy>
    <vmType>VMware</vmType>
  </servertype>
  <servertype>
    <comment>comment2</comment>
    <cpu>
      <cpuArch>IA</cpuArch>
      <cpuPerf>2.0</cpuPerf>
      <numOfCpu>2</numOfCpu>
    </cpu>
    <disks>
      <disk>
        <diskIndex>0</diskIndex>
        <diskSize>100</diskSize>
      </disk>
    </disks>
    <id>template-0002</id>
    <label>physical-template-2</label>
    <lserverType>Physical</lserverType>
    <memory>
      <memorySize>4</memorySize>
    </memory>
    <name>Middle_Spec</name>
    <nics>
      <numOfNIC>1</numOfNIC>
    </nics>
    <serverPolicy>
      <aliveMonitoring>false</aliveMonitoring>
      <positioning>Fixed</positioning>
```

```
        <redundancy>HA</redundancy>
        <repurpose>false</repurpose>
      </serverPolicy>
    </servertype>
  </servertypes>
</ListServerTypeResponse>
```

[Linux Manager]

```
# ListServerType.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<ListServerTypeResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <servertypes>
    <servertype>
      <comment>comment1</comment>
      <cpu>
        <cpuArch>IA</cpuArch>
        <cpuPerf>2.6</cpuPerf>
        <cpuReserve>0.0</cpuReserve>
        <cpuShare>1000</cpuShare>
        <numOfCpu>4</numOfCpu>
      </cpu>
      <disks>
        <disk>
          <diskIndex>0</diskIndex>
          <diskSize>100</diskSize>
        </disk>
      </disks>
      <id>template-0001</id>
      <label>vmware-template-1</label>
      <lserverType>Virtual</lserverType>
      <memory>
        <memoryReserve>8</memoryReserve>
        <memoryShare>81920</memoryShare>
        <memorySize>8</memorySize>
      </memory>
      <name>High_Performance</name>
      <nics>
        <numOfNIC>1</numOfNIC>
      </nics>
      <serverPolicy>
        <positioning>Fixed</positioning>
        <redundancy>None</redundancy>
        <repurpose>true</repurpose>
      </serverPolicy>
      <vmType>VMware</vmType>
    </servertype>
    <servertype>
      <comment>comment2</comment>
      <cpu>
        <cpuArch>IA</cpuArch>
        <cpuPerf>2.0</cpuPerf>
        <numOfCpu>2</numOfCpu>
      </cpu>
      <disks>
        <disk>
          <diskIndex>0</diskIndex>
          <diskSize>100</diskSize>
        </disk>
      </disks>
      <id>template-0002</id>
```

```
      <label>physical-template-2</label>
      <lserverType>Physical</lserverType>
      <memory>
        <memorySize>4</memorySize>
      </memory>
      <name>Middle_Spec</name>
      <nics>
        <numOfNIC>1</numOfNIC>
      </nics>
      <serverPolicy>
        <aliveMonitoring>false</aliveMonitoring>
        <positioning>Fixed</positioning>
        <redundancy>HA</redundancy>
        <repurpose>false</repurpose>
      </serverPolicy>
    </servertype>
  </servertypes>
</ListServerTypeResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.1.10 ListSLBRuleset (Obtain a List of Server Load Balancer Rulesets)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListSLBRuleset** - Obtain a List of Server Load Balancer Rulesets

[Linux Manager]
/opt/FJSVcfmg/bin/ListSLBRuleset.sh - Obtain a List of Server Load Balancer Rulesets

Format

[Windows Manager]

ListSLBRuleset -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **[-rulesetCategory** *category_of_the_ruleset***]**

[Linux Manager]

ListSLBRuleset.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **[-rulesetCategory** *category_of_the_ruleset***]**

Description

This command obtains a list of the server load balancer rulesets.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-rulesetCategory (optional)

Specify the category of the ruleset.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListSLBRuleset -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
rulesetCategory config
<?xml version="1.0" encoding="UTF-8"?>
<ListSLBRulesetResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <rulesets>
    <ruleset>
      <description>SLB server1</description>
      <lplatformModel>SLB only</lplatformModel>
      <name>slb_config1</name>
      <numOfMaxSegment>5</numOfMaxSegment>
      <numOfMaxVm>15</numOfMaxVm>
      <rulesetCategory>config</rulesetCategory>
      <type>SLB</type>
    </ruleset>
    <ruleset>
      <description>SLB server2</description>
      <lplatformModel>Firewall+SLB</lplatformModel>
      <name>slb_config2a</name>
      <numOfMaxSegment>5</numOfMaxSegment>
      <numOfMaxVm>15</numOfMaxVm>
      <rulesetCategory>config</rulesetCategory>
      <type>SLB</type>
    </ruleset>
  </rulesets>
</ListSLBRulesetResponse>
```

[Linux Manager]

```
# ListSLBRuleset.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
rulesetCategory config
<?xml version="1.0" encoding="UTF-8"?>
<ListSLBRulesetResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <rulesets>
    <ruleset>
```

```
      <description>SLB server1</description>
      <lplatformModel>SLB only</lplatformModel>
      <name>slb_config1</name>
      <numOfMaxSegment>5</numOfMaxSegment>
      <numOfMaxVm>15</numOfMaxVm>
      <rulesetCategory>config</rulesetCategory>
      <type>SLB</type>
    </ruleset>
    <ruleset>
      <description>SLB server2</description>
      <lplatformModel>Firewall+SLB</lplatformModel>
      <name>slb_config2a</name>
      <numOfMaxSegment>5</numOfMaxSegment>
      <numOfMaxVm>15</numOfMaxVm>
      <rulesetCategory>config</rulesetCategory>
      <type>SLB</type>
    </ruleset>
  </rulesets>
</ListSLBRulesetResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2 Operations on L-Platform Systems

This section explains the L-Platform APIs commands relating to operations on L-Platform systems.

14.2.1 CreateLPlatform (Creates an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\CreateLPlatform** - Creates an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/CreateLPlatform.sh - Creates an L-Platform

Format

[Windows Manager]

CreateLPlatform -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformDescriptorId** *L-Platform_template_ID* **-lplatformName** *L-Platform_name* **[-vdiUser** *VDI_user_name***]**

[Linux Manager]

CreateLPlatform.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformDescriptorId** *L-Platform_template_ID* **-lplatformName** *L-Platform_name* **[-vdiUser** *VDI_user_name***]**

Description

This command creates an L-Platform based on a template.
If the template contains servers with the same name, then each one will be suffixed with a unique number (starting from 1).

This command is executed asynchronously. During deployment the status of the L-Platform shifts to DEPLOYING, while configuring software it shifts to SETUP, and when deployment is complete, the status of the L-Platform becomes NORMAL.
Operation of an L-Platform is not possible until the status of the L-Platform has shifted to NORMAL.
Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

- When a physical server is included in a template, only two commands can be executed simultaneously, due to the limitations of the hardware that is set.
  When creating more than two L-Platforms with physical servers, leave some time between the executions of this command.
- When an L-Platform template that includes a segment specifying [Auto-Select] is specified, configure the settings for the number of CreateLPlatform commands that can be simultaneously executed so that the number of IP addresses required on all L-Platforms that will be deployed concurrently is no greater than the highest number of available IP addresses in those segments that will be selected automatically.
  For example, if two segments will be selected automatically, and these segments have 5 and 4 available IP addresses respectively, up to five CreateLPlatform commands can be executed simultaneously if one IP address per L-Platform is required.
- It is not possible to specify an L-Platform template that does not have a segment or server defined.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformDescriptorId

Specify the L-Platform template ID.

-lplatformName

Specify the L-Platform name.

-vdiUser (optional)

Specify the VDI user name.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> CreateLPlatform -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformDescriptorId template-13820fb2858 -lplatformName lplatform1
<?xml version="1.0" encoding="UTF-8"?>
<CreateLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformId>tenantA-M3PGGWCFX</lplatformId>
</CreateLPlatformResponse>
```

[Linux Manager]

```
# CreateLPlatform.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformDescriptorId template-13820fb2858 -lplatformName lplatform1
<?xml version="1.0" encoding="UTF-8"?>
<CreateLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformId>tenantA-M3PGGWCFX</lplatformId>
</CreateLPlatformResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.2 CreateNetwork (Add Network Segment to L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\CreateNetwork** - Add Network Segment to L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/CreateNetwork.sh - Add Network Segment to L-Platform

Format

[Windows Manager]

CreateNetwork -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **[-resourceId** *resource_ID***] -numOfMaxNic** *maximum_number_of_NICs* **[-networkCategory** *network_type***] [-segmentType** *segment_identifier***] [-name** *network_name***]**

[Linux Manager]

```
CreateNetwork.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID [-resourceId resource_ID] -numOfMaxNic
maximum_number_of_NICs [-networkCategory network_type] [-segmentType segment_identifier] [-name
network_name]
```

Description

This command adds a network segment to an L-Platform.
The network segment being added must be registered beforehand.
An automatically selected segment is added when resourceId is omitted.
Specify networkCategory when resourceId is not specified. A segmentType can be omitted
Do not specify networkCategory and segmentType when resourceId is specified.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-resourceId (optional)

Specify the resource ID of the network to be added.

-numOfMaxNic

Specify the maximum number of NICs.

-networkCategory (optional)

Specify the network type.

-segmentType (optional)

Specify the segment identifier.

-name (optional)

Specify the network name.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> CreateNetwork -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-ARHLFXHB3 -resourceId resource01 -numOfMaxNic 10 -name seg01
<?xml version="1.0" encoding="UTF-8"?>
 <CreateNetworkResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <networkId>ARHLFXHB3-N-1348104767303</networkId>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CreateNetworkResponse>
```

[Linux Manager]

```
# CreateNetwork.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-ARHLFXHB3 -resourceId resource01 -numOfMaxNic 10 -name seg01
<?xml version="1.0" encoding="UTF-8"?>
 <CreateNetworkResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <networkId>ARHLFXHB3-N-1348104767303</networkId>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CreateNetworkResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.3 DestroyLPlatform (Returns an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\DestroyLPlatform** - Returns an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/DestroyLPlatform.sh - Returns an L-Platform

Format

[Windows Manager]

DestroyLPlatform -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

[Linux Manager]

DestroyLPlatform.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** user_ID **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

Description

This command returns an L-Platform. All the resources within the L-Platform are deleted and disabled.

This command cannot be executed in the following cases:

- When there are servers for which configuration modification and deletion cannot be performed in the target L-Platform.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> DestroyLPlatform -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<DestroyLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyLPlatformResponse>
```

[Linux Manager]

```
# DestroyLPlatform.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<DestroyLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyLPlatformResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.4 DestroyNetwork (Delete a Specified Network Segment from an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\DestroyNetwork** - Delete a Specified Network Segment from an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/DestroyNetwork.sh - Delete a Specified Network Segment from an L-Platform

Format

[Windows Manager]

```
DestroyNetwork -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -networkId network_ID
```

[Linux Manager]

```
DestroyNetwork.sh -version version_ID -locale the_language_for_communicating -userId user_ID -
password password -orgId tenant_name -lplatformId L-Platform_ID -networkId network_ID
```

Description

This command deletes a specified network segment from an L-Platform.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-networkId

Specify the network ID to be deleted.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> DestroyNetwork -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -networkId M3PGGWCFX-N-SEGMENT1
<?xml version="1.0" encoding="UTF-8"?>
<DestroyNetworkResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyNetworkResponse>
```

[Linux Manager]

```
# DestroyNetwork.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -networkId M3PGGWCFX-N-SEGMENT1
<?xml version="1.0" encoding="UTF-8"?>
<DestroyNetworkResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyNetworkResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.5 GetLPlatformAttributes (Gets the Attributes of an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLPlatformAttributes** - Gets the Attributes of an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/GetLPlatformAttributes.sh - Gets the Attributes of an L-Platform

Format

[Windows Manager]

GetLPlatformAttributes -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

[Linux Manager]

GetLPlatformAttributes.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

Description

This command gets attribute information for an L-Platform.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetLPlatformAttributes -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<GetLPlatformAttributesResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatform>
    <baseDescriptor>template-132149ef229</baseDescriptor>
    <creator>papi</creator>
    <description />
    <ownerUser>user3</ownerUser>
    <lplatformId>tenantA-M3PGGWCFX</lplatformId>
    <lplatformName>testTemplateA</lplatformName>
  </lplatform>
</GetLPlatformAttributesResponse>
```

[Linux Manager]

```
# GetLPlatformAttributes.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA
-lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<GetLPlatformAttributesResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatform>
    <baseDescriptor>template-132149ef229</baseDescriptor>
    <creator>papi</creator>
    <description />
    <ownerUser>user3</ownerUser>
    <lplatformId>tenantA-M3PGGWCFX</lplatformId>
    <lplatformName>testTemplateA</lplatformName>
  </lplatform>
</GetLPlatformAttributesResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.6 GetLPlatformConfiguration (Gets Configuration Information for an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLPlatformConfiguration** - Gets Configuration Information for an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/GetLPlatformConfiguration.sh - Gets Configuration Information for an L-Platform

Format

[Windows Manager]

GetLPlatformConfiguration -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

[Linux Manager]

GetLPlatformConfiguration.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

Description

This command gets configuration information for an L-Platform.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetLPlatformConfiguration -version 2.0 -locale en -userId user3 -password password -orgId tenantA
-lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<GetLPlatformConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatform>
    <baseDescriptor>template-1325738ea5b</baseDescriptor>
    <bladeLogic>true</bladeLogic>
    <connector>none</connector>
    <creator>tenantA</creator>
    <description>firewall</description>
    <firewalls>
      <firewall>
        <interfaces>
          <interface>
            <name>network-param-0001</name>
            <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
          </interface>
          <interface>
            <name>network-param-0002</name>
            <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
          </interface>
        </interfaces>
        <name>Firewall</name>
        <ruleset>
          <description>rule1</description>
          <designtype>UserCustomize</designtype>
          <name>rule1</name>
          <parameters>
            <parameter>
              <description>param1</description>
              <name>param_var_001</name>
              <required>true</required>
```

```
            <summary>param1 summary</summary>
            <syntax>INTEGER(0..256)</syntax>
            <value>200</value>
            <view>false</view>
          </parameter>
          <parameter>
            <description>param2</description>
            <name>param_var_002</name>
            <required>true</required>
            <summary>param2 summary</summary>
            <syntax>DisplayString(SIZE(0..256))</syntax>
            <value/>
            <view>true</view>
          </parameter>
          <parameter>
            <description>param3</description>
            <name>param_var_003</name>
            <required>true</required>
            <summary>param3 summary</summary>
            <syntax>INTEGER(0..65535)</syntax>
            <value>400</value>
            <view>true</view>
          </parameter>
        </parameters>
      </ruleset>
    </firewall>
  </firewalls>
  <ownerUser>user3</ownerUser>
  <slbs>
    <slb>
      <interfaces>
        <interface>
          <name>network-param-0001</name>
          <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
        </interface>
        <interface>
          <name>network-param-0002</name>
          <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
        </interface>
      </interfaces>
      <name>SLB</name>
      <operationLogExist>false</operationLogExist>
      <operations>
       <operation>
        <operationId>ROR_001</operationId>
        <rulesetName>rule1</rulesetName>
        <status>completed</status>
       </operation>
      </operations>
      <ruleset>
        <description>rule1</description>
        <name>rule1</name>
        <parameters>
          <parameter>
            <description>param1</description>
            <name>param_var_001</name>
            <required>true</required>
            <summary>param1 summary</summary>
            <syntax>INTEGER(0..256)</syntax>
            <value>200</value>
            <view>false</view>
          </parameter>
          <parameter>
```

```
            <description>param2</description>
            <name>param_var_002</name>
            <required>true</required>
            <summary>param2 summary</summary>
            <syntax>DisplayString(SIZE(0..256))</syntax>
            <value/>
            <view>true</view>
          </parameter>
          <parameter>
            <description>param3</description>
            <name>param_var_003</name>
            <required>true</required>
            <summary>param3 summary</summary>
            <syntax>INTEGER(0..65535)</syntax>
            <value>400</value>
            <view>true</view>
          </parameter>
        </parameters>
      </ruleset>
    </slb>
  </slbs>
  <networks>
    <network>
      <name>network-param-0001</name>
      <networkCategory>BUSINESS</networkCategory>
      <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1234</resourceId>
     <segmentType>DMZ</segmentType>
    </network>
    <network>
      <name>network-param-0002</name>
      <networkCategory>BUSINESS</networkCategory>
      <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1235</resourceId>
      <segmentType>Intranet</segmentType>
    </network>
  </networks>
  <lservers>
    <lserver>
      <cpuPerf>1.0</cpuPerf>
      <creator>tenantA</creator>
      <diskimageId>image-1324e093f4e</diskimageId>
      <diskimageName>g-physical-0001</diskimageName>
      <hostName>V8O0NW7TZV0001</hostName>
      <lserverType>Physical</lserverType>
      <memorySize>2.0</memorySize>
      <numOfCpu>2</numOfCpu>
      <pool>/ServerPool</pool>
      <priority>128</priority>
      <requestCpuPerf>1.4</requestCpuPerf>
      <requestMemorySize>2.0</requestMemorySize>
      <requestNumOfCpu>1</requestNumOfCpu>
      <resource>
        <name>tenantA-M3PGGWCFX-S-0001</name>
      </resource>
      <snapshotExist>false</snapshotExist>
      <sparePool>/SparePool</sparePool>
      <storagePool>/StoragePool</storagePool>
      <sysvolSize>100</sysvolSize>
      <disks/>
      <nics>
```

```
        <nic>
          <management>0</management>
          <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
          <nicNo>2</nicNo>
          <privateIp>192.xxx.xxx.xxx</privateIp>
        </nic>
        <nic>
          <management>1</management>
          <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
          <nicNo>1</nicNo>
          <privateIp>192.xxx.xxx.xxx</privateIp>
        </nic>
      </nics>
      <lserverId>tenantA-M3PGGWCFX-S-0001</lserverId>
      <lserverName>physical1</lserverName>
      <serverType>Economy</serverType>
    </lserver>
    <lserver>
      <cpuPerf>1.2</cpuPerf>
      <creator>tenantA</creator>
      <diskimageId>image-1324e09f82f</diskimageId>
      <diskimageName>g-vm-0002</diskimageName>
      <hostName>V8O0NW7TZV0002</hostName>
      <lserverType>Virtual</lserverType>
      <memorySize>1.6</memorySize>
      <numOfCpu>1</numOfCpu>
      <pool>/VMHostPool</pool>
      <priority>128</priority>
     <resource>
        <name>tenantA-M3PGGWCFX-S-0002</name>
      </resource>
      <snapshotExist>true</snapshotExist>
      <storagePool>/StoragePool</storagePool>
      <sysvolSize>100</sysvolSize>
      <disks/>
      <vmType>VMware</vmType>
      <nics>
        <nic>
          <management>0</management>
          <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
          <nicNo>3</nicNo>
          <privateIp>192.xxx.xxx.xxx</privateIp>
        </nic>
        <nic>
          <management>0</management>
          <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
          <nicNo>2</nicNo>
          <privateIp>192.xxx.xxx.xxx</privateIp>
        </nic>
        <nic>
          <management>1</management>
          <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
          <nicNo>1</nicNo>
          <privateIp>192.xxx.xxx.xxx</privateIp>
        </nic>
      </nics>
      <lserverId>tenantA-M3PGGWCFX-S-0002</lserverId>
      <lserverName>virtual1</lserverName>
      <serverType>over_commit</serverType>
    </lserver>
  </lservers>
  <lplatformId>tenantA-M3PGGWCFX</lplatformId>
  <lplatformName>firewall-test</lplatformName>
```

```
  </lplatform>
</GetLPlatformConfigurationResponse>
```

[Linux Manager]

```
# GetLPlatformConfiguration.sh -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<GetLPlatformConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatform>
    <baseDescriptor>template-1325738ea5b</baseDescriptor>
    <bladeLogic>true</bladeLogic>
    <connector>none</connector>
    <creator>tenantA</creator>
    <description>firewall</description>
    <firewalls>
      <firewall>
        <interfaces>
          <interface>
            <name>network-param-0001</name>
            <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
          </interface>
          <interface>
            <name>network-param-0002</name>
            <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
          </interface>
        </interfaces>
        <name>Firewall</name>
        <ruleset>
          <description>rule1</description>
          <designtype>UserCustomize</designtype>
          <name>rule1</name>
          <parameters>
            <parameter>
              <description>param1</description>
              <name>param_var_001</name>
              <required>true</required>
              <summary>param1 summary</summary>
              <syntax>INTEGER(0..256)</syntax>
              <value>200</value>
              <view>false</view>
            </parameter>
            <parameter>
              <description>param2</description>
              <name>param_var_002</name>
              <required>true</required>
              <summary>param2 summary</summary>
              <syntax>DisplayString(SIZE(0..256))</syntax>
              <value/>
              <view>true</view>
            </parameter>
            <parameter>
              <description>param3</description>
              <name>param_var_003</name>
              <required>true</required>
              <summary>param3 summary</summary>
              <syntax>INTEGER(0..65535)</syntax>
              <value>400</value>
              <view>true</view>
            </parameter>
          </parameters>
```

```
      </ruleset>
    </firewall>
  </firewalls>
  <ownerUser>user3</ownerUser>
  <slbs>
    <slb>
      <interfaces>
        <interface>
          <name>network-param-0001</name>
          <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
        </interface>
        <interface>
          <name>network-param-0002</name>
          <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
        </interface>
      </interfaces>
      <name>SLB</name>
      <operationLogExist>false</operationLogExist>
      <operations>
       <operation>
        <operationId>ROR_001</operationId>
        <rulesetName>rule1</rulesetName>
        <status>completed</status>
       </operation>
      </operations>
      <ruleset>
        <description>rule1</description>
        <name>rule1</name>
        <parameters>
          <parameter>
            <description>param1</description>
            <name>param_var_001</name>
            <required>true</required>
            <summary>param1 summary</summary>
            <syntax>INTEGER(0..256)</syntax>
            <value>200</value>
            <view>false</view>
          </parameter>
          <parameter>
            <description>param2</description>
            <name>param_var_002</name>
            <required>true</required>
            <summary>param2 summary</summary>
            <syntax>DisplayString(SIZE(0..256))</syntax>
            <value/>
            <view>true</view>
          </parameter>
          <parameter>
            <description>param3</description>
            <name>param_var_003</name>
            <required>true</required>
            <summary>param3 summary</summary>
            <syntax>INTEGER(0..65535)</syntax>
            <value>400</value>
            <view>true</view>
          </parameter>
        </parameters>
      </ruleset>
    </slb>
  </slbs>
  <networks>
    <network>
      <name>network-param-0001</name>
```

```
      <networkCategory>BUSINESS</networkCategory>
      <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1234</resourceId>
      <segmentType>DMZ</segmentType>
    </network>
    <network>
      <name>network-param-0002</name>
      <networkCategory>BUSINESS</networkCategory>
      <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1235</resourceId>
      <segmentType>Intranet</segmentType>
    </network>
  </networks>
  <lservers>
    <lserver>
      <cpuPerf>1.0</cpuPerf>
      <creator>tenantA</creator>
      <diskimageId>image-1324e093f4e</diskimageId>
      <diskimageName>g-physical-0001</diskimageName>
      <hostName>V8O0NW7TZV0001</hostName>
      <lserverType>Physical</lserverType>
      <memorySize>2.0</memorySize>
      <numOfCpu>2</numOfCpu>
      <pool>/ServerPool</pool>
      <priority>128</priority>
      <requestCpuPerf>1.4</requestCpuPerf>
      <requestMemorySize>2.0</requestMemorySize>
      <requestNumOfCpu>1</requestNumOfCpu>
      <resource>
        <name>tenantA-M3PGGWCFX-S-0001</name>
      </resource>
      <snapshotExist>false</snapshotExist>
      <sparePool>/SparePool</sparePool>
      <storagePool>/StoragePool</storagePool>
      <sysvolSize>100</sysvolSize>
      <disks/>
      <nics>
        <nic>
          <management>0</management>
          <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
          <nicNo>2</nicNo>
          <privateIp>192.xxx.xxx.xxx</privateIp>
        </nic>
        <nic>
          <management>1</management>
          <networkId>M3PGGWCFX-N-1ot2#FWS#</networkId>
          <nicNo>1</nicNo>
          <privateIp>192.xxx.xxx.xxx</privateIp>
        </nic>
      </nics>
      <lserverId>tenantA-M3PGGWCFX-S-0001</lserverId>
      <lserverName>physical1</lserverName>
      <serverType>Economy</serverType>
    </lserver>
    <lserver>
      <cpuPerf>1.2</cpuPerf>
      <creator>tenantA</creator>
      <diskimageId>image-1324e09f82f</diskimageId>
      <diskimageName>g-vm-0002</diskimageName>
      <hostName>V8O0NW7TZV0002</hostName>
      <lserverType>Virtual</lserverType>
```

```
        <memorySize>1.6</memorySize>
        <numOfCpu>1</numOfCpu>
        <pool>/VMHostPool</pool>
        <priority>128</priority>
        <resource>
          <name>tenantA-M3PGGWCFX-S-0002</name>
        </resource>
        <snapshotExist>true</snapshotExist>
        <storagePool>/StoragePool</storagePool>
        <sysvolSize>100</sysvolSize>
        <disks/>
        <vmType>VMware</vmType>
        <nics>
          <nic>
            <management>0</management>
            <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
            <nicNo>3</nicNo>
            <privateIp>192.xxx.xxx.xxx</privateIp>
          </nic>
          <nic>
            <management>0</management>
            <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
            <nicNo>2</nicNo>
            <privateIp>192.xxx.xxx.xxx</privateIp>
          </nic>
          <nic>
            <management>1</management>
            <networkId>M3PGGWCFX-N-1ot4#FWS#</networkId>
            <nicNo>1</nicNo>
            <privateIp>192.xxx.xxx.xxx</privateIp>
          </nic>
        </nics>
        <lserverId>tenantA-M3PGGWCFX-S-0002</lserverId>
        <lserverName>virtual1</lserverName>
        <serverType>over_commit</serverType>
      </lserver>
    </lservers>
    <lplatformId>tenantA-M3PGGWCFX</lplatformId>
    <lplatformName>firewall-test</lplatformName>
  </lplatform>
</GetLPlatformConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.7 GetLPlatformStatus (Gets the Status of an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLPlatformStatus** - Gets the Status of an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/GetLPlatformStatus.sh - Gets the Status of an L-Platform

Format

[Windows Manager]

GetLPlatformStatus -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

[Linux Manager]

GetLPlatformStatus.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

Description

This command gets status information for an L-Platform.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetLPlatformStatus -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<GetLPlatformStatusResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformStatus>SETUP</lplatformStatus>
</GetLPlatformStatusResponse>
```

[Linux Manager]

```
# GetLPlatformStatus.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
```

```
<GetLPlatformStatusResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatformStatus>SETUP</lplatformStatus>
</GetLPlatformStatusResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.8 GetOperationResult (Obtain Operation Log)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetOperationResult** - Obtain Operation Log

[Linux Manager]
/opt/FJSVcfmg/bin/GetOperationResult.sh - Obtain Operation Log

Format

[Windows Manager]

GetOperationResult -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platfrom_ID* **-rulesetName** *ruleset_name* **-operationId** *operation_ID*

[Linux Manager]

GetOperationResult.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platfrom_ID* **-rulesetName** *ruleset_name* **-operationId** *operation_ID*

Description

This command obtains the operation logs for the network device.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-rulesetName

Specify the name of the ruleset.

-operationId

Specify the operation ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetOperationResult -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -rulesetName rule1 -operationId ROR_010
<?xml version="1.0" encoding="UTF-8"?>
<GetOperationResultResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <result>
Time: 2012/06/13(Wed)17:13:34
slb-rule=10020
vip=192.xxx.xxx.xxx
vport=80/tcp
--------- ---------------- ------------------------ ---------- -------
dist-rule class-map
          dist-mode
          real/type backup-priority
                state of real   state of real port   connection timeout
--------- ---------------- ------------------------ ---------- -------
      100 any
          round-robin
          Slb_002_192.xxx.xxx.xxx(192.xxx.xxx.xxx)/primary   --
                     up/active           --                   0      --
--------- ---------------- ------------------------ ---------- -------
</result>
</GetOperationResultResponse>
```

[Linux Manager]

```
# GetOperationResult.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -rulesetName rule1 -operationId ROR_010
<?xml version="1.0" encoding="UTF-8"?>
<GetOperationResultResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <result>
Time: 2012/06/13(Wed)17:13:34
slb-rule=10020
vip=192.xxx.xxx.xxx
vport=80/tcp
--------- ---------------- ------------------------ ---------- -------
dist-rule class-map
          dist-mode
```

```
          real/type backup-priority
                state of real   state of real port   connection timeout
--------- --------------- ------------------------ ---------- -------
      100 any
          round-robin
          Slb_002_192.xxx.xxx.xxx(192.xxx.xxx.xxx)/primary   --
                     up/active           --                   0      --
--------- --------------- ------------------------ ---------- -------
</result>
</GetOperationResultResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.9 ListLPlatform (Gets a List of L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListLPlatform** - Gets a List of L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/ListLPlatform.sh - Gets a List of L-Platform

Synopsis

[Windows Manager]

ListLPlatform -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **[-verbose** *the_detailed_information_display_flag***]**

[Linux Manager]

ListLPlatform.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **[-verbose** *the_detailed_information_display_flag***]**

Function description

This command gets a list of the L-Platform in the virtual data center.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-verbose (optional)

Specify whether to display detailed information.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListLPlatform -version 2.0 -locale en -userId user3 -password password -orgId tenantA -verbose
true
<?xml version="1.0" encoding="UTF-8"?>
<ListLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatforms>
    <lplatform>
      <baseDescriptor>template-1325738ea5b</baseDescriptor>
      <bladeLogic>true</bladeLogic>
      <connector>none</connector>
      <creator>tenantA</creator>
      <description>firewall</description>
      <firewalls>
        <firewall>
          <interfaces>
            <interface>
              <name>network-param-0001</name>
              <networkId>8O0NW7TZV-N-1ot2#FWS#</networkId>
            </interface>
            <interface>
              <name>network-param-0002</name>
              <networkId>8O0NW7TZV-N-1ot4#FWS#</networkId>
            </interface>
          </interfaces>
          <name>Firewall</name>
          <ruleset>
            <description>rule1</description>
            <designtype>UserCustomize</designtype>
            <name>rule1</name>
            <parameters>
              <parameter>
                <description>param1</description>
                <name>param_var_001</name>
                <required>false</required>
                <summary>param1 summary</summary>
                <syntax>INTEGER(0..255)</syntax>
                <value>200</value>
                <view>false</view>
              </parameter>
              <parameter>
                <description>param2</description>
                <name>param_var_002</name>
                <required>true</required>
```

```
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            <syntax>DisplayString(SIZE(0..256))</syntax>
            <value/>
            <view>true</view>
          </parameter>
          <parameter>
            <description>param3</description>
            <name>param_var_003</name>
            <required>false</required>
            <summary>param3 summary</summary>
            <syntax>INTEGER(0..65535)</syntax>
            <value>400</value>
            <view>true</view>
          </parameter>
        </parameters>
      </ruleset>
    </firewall>
  </firewalls>
  <ownerUser>user1</ownerUser>
  <slbs>
    <slb>
      <interfaces>
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          <name>network-param-0001</name>
          <networkId>8O0NW7TZV-N-1ot2#FWS#</networkId>
        </interface>
        <interface>
          <name>network-param-0002</name>
          <networkId>8O0NW7TZV-N-1ot4#FWS#</networkId>
        </interface>
      </interfaces>
      <name>SLB</name>
      <operationLogExist>false</operationLogExist>
      <ruleset>
        <description>rule1</description>
        <name>rule1</name>
        <parameters>
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            <description>param1</description>
            <name>param_var_001</name>
            <required>false</required>
            <summary>param1 summary</summary>
            <syntax>INTEGER(0..255)</syntax>
            <value>200</value>
            <view>false</view>
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            <view>true</view>
```

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        </parameters>
      </ruleset>
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  </slbs>
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      <diskimageName>g-physical-0001</diskimageName>
      <hostName>V8O0NW7TZV0001</hostName>
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        <numOfMaxDisk>0</numOfMaxDisk>
        <numOfMaxNic>3</numOfMaxNic>
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        <serverCategory>GENERAL</serverCategory>
        <softwares>
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            <category>OS</category>
            <license>1</license>
            <name>softNameA</name>
            <officialVersion/>
            <patch/>
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            <version>6.0</version>
          </software>
        </softwares>
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```

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    <resource>
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    <storagePool>/StoragePool</storagePool>
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```

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          <nic>
            <management>0</management>
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            <nicNo>2</nicNo>
            <privateIp>192.xxx.xxx.xxx</privateIp>
          </nic>
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        <lserverStatus>RUNNING</lserverStatus>
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        <segmentType/>
```

```
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      <diskimageName>g-physical-0001</diskimageName>
      <hostName>V6MYJCS7MR0001</hostName>
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      <requestMemorySize>0.1</requestMemorySize>
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      <storagePool>/StoragePool</storagePool>
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          <management>0</management>
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```

```
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    </nics>
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  </lserver>
  <lserver>
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    <creator>tenantA</creator>
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    <diskimageName>g-vm-0002</diskimageName>
    <hostName>V6MYJCS7MR0002</hostName>
    <image>
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      <id>image-1324e09f82f</id>
      <maxCpuPerf>1.4</maxCpuPerf>
      <maxDiskSize>30.0</maxDiskSize>
      <maxMemorySize>2.0</maxMemorySize>
      <maxSysvolSize>30.0</maxSysvolSize>
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      <numOfMaxDisk>1</numOfMaxDisk>
      <numOfMaxNic>15</numOfMaxNic>
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      <serverCategory>GENERAL</serverCategory>
      <softwares>
        <software>
          <category>OS</category>
          <license/>
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          <support/>
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      </softwares>
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    <disks/>
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        <management>1</management>
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        <nicNo>1</nicNo>
        <privateIp>192.xxx.xxx.xxx</privateIp>
      </nic>
      <nic>
        <management>0</management>
        <networkId>6MYJCS7MR-N-j8f0</networkId>
```

```
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          <lserverStatus>STOPPED</lserverStatus>
          <serverType>over_commit</serverType>
        </lserver>
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      <lplatformName>test-mix</lplatformName>
      <lplatformStatus>NORMAL</lplatformStatus>
    </lplatform>
  </lplatforms>
</ListLPlatformResponse>
```

[Linux Manager]

```
# ListLPlatform.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -verbose
true
<?xml version="1.0" encoding="UTF-8"?>
<ListLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lplatforms>
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      <baseDescriptor>template-1325738ea5b</baseDescriptor>
      <bladeLogic>true</bladeLogic>
      <connector>none</connector>
      <creator>tenantA</creator>
      <description>firewall</description>
      <firewalls>
        <firewall>
          <interfaces>
            <interface>
              <name>network-param-0001</name>
              <networkId>8O0NW7TZV-N-1ot2#FWS#</networkId>
            </interface>
            <interface>
              <name>network-param-0002</name>
              <networkId>8O0NW7TZV-N-1ot4#FWS#</networkId>
            </interface>
          </interfaces>
          <name>Firewall</name>
          <ruleset>
            <description>rule1</description>
            <designtype>UserCustomize</designtype>
            <name>rule1</name>
            <parameters>
              <parameter>
                <description>param1</description>
                <name>param_var_001</name>
                <required>false</required>
                <summary>param1 summary</summary>
                <syntax>INTEGER(0..255)</syntax>
                <value>200</value>
```

```
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    </firewall>
  </firewalls>
  <ownerUser>user1</ownerUser>
  <slbs>
    <slb>
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          <networkId>8O0NW7TZV-N-1ot2#FWS#</networkId>
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        <name>rule1</name>
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            <name>param_var_001</name>
            <required>false</required>
            <summary>param1 summary</summary>
            <syntax>INTEGER(0..255)</syntax>
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    </slb>
  </slbs>
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      <networkCategory>BUSINESS</networkCategory>
      <networkId>8O0NW7TZV-N-1ot4#FWS#</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1234</resourceId>
      <segmentType>DMZ</segmentType>
    </network>
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  <lservers>
    <lserver>
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      <diskimageName>g-physical-0001</diskimageName>
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        <serverCategory>GENERAL</serverCategory>
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            <officialVersion/>
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            <softwareId>SW00000003</softwareId>
            <support>1</support>
            <version>6.0</version>
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    <resource>
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    </resource>
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    <storagePool>/StoragePool</storagePool>
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    <disks/>
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    <serverType>Economy</serverType>
  </lserver>
  <lserver>
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    <creator>tenantA</creator>
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    <diskimageName>g-vm-0002</diskimageName>
    <hostName>V8O0NW7TZV0002</hostName>
    <image>
      <cpuBit>64</cpuBit>
      <id>image-1324e09f82f</id>
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      <maxDiskSize>30.0</maxDiskSize>
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      <numOfMaxCpu>1</numOfMaxCpu>
      <numOfMaxDisk>1</numOfMaxDisk>
      <numOfMaxNic>15</numOfMaxNic>
      <serverApplication>AP</serverApplication>
      <serverCategory>GENERAL</serverCategory>
      <softwares>
        <software>
          <category>OS</category>
          <license/>
          <name>Windows Server 2008 R2 Enterprise</name>
          <officialVersion/>
          <patch/>
          <softwareId>SW00000007</softwareId>
          <support/>
          <version>6.1</version>
        </software>
```

```
          </softwares>
          <sysvolSize>30.0</sysvolSize>
          <vmType>VMware</vmType>
        </image>
        <lserverType>Virtual</lserverType>
        <memorySize>1.6</memorySize>
        <numOfCpu>1</numOfCpu>
        <pool>/VMHostPool</pool>
        <priority>128</priority>
        <resource>
          <name>tenantA-8O0NW7TZV-S-0002</name>
        </resource>
        <snapshotExist>true</snapshotExist>
        <storagePool>/StoragePool</storagePool>
        <sysvolSize>100</sysvolSize>
        <disks/>
        <vmType>VMware</vmType>
        <nics>
          <nic>
            <management>0</management>
            <networkId>8O0NW7TZV-N-1ot4#FWS#</networkId>
            <nicNo>3</nicNo>
            <privateIp>192.xxx.xxx.xxx</privateIp>
          </nic>
          <nic>
            <management>0</management>
            <networkId>8O0NW7TZV-N-1ot4#FWS#</networkId>
            <nicNo>2</nicNo>
            <privateIp>192.xxx.xxx.xxx</privateIp>
          </nic>
          <nic>
            <management>1</management>
            <networkId>8O0NW7TZV-N-1ot4#FWS#</networkId>
            <nicNo>1</nicNo>
            <privateIp>192.xxx.xxx.xxx</privateIp>
          </nic>
        </nics>
        <lserverId>tenantA-8O0NW7TZV-S-0002</lserverId>
        <lserverName>virtual</lserverName>
        <lserverStatus>RUNNING</lserverStatus>
        <serverType>over_commit</serverType>
      </lserver>
    </lservers>
    <lplatformId>tenantA-8O0NW7TZV</lplatformId>
    <lplatformName>firewall-test</lplatformName>
    <lplatformStatus>NORMAL</lplatformStatus>
  </lplatform>
  <lplatform>
    <baseDescriptor>template-1324e0c2ac0</baseDescriptor>
    <bladeLogic>true</bladeLogic>
    <creator>tenantA</creator>
    <description/>
    <ownerUser>user2</ownerUser>
    <networks>
      <network>
        <name>ServiceLan</name>
        <networkCategory>BUSINESS</networkCategory>
        <networkId>6MYJCS7MR-N-j8f0</networkId>
        <numOfMaxVm>10</numOfMaxVm>
        <resourceId>mngsrv_1236</resourceId>
        <segmentType/>
      </network>
      <network>
```

```
      <name>AdminLan</name>
      <networkCategory>BUSINESS</networkCategory>
      <networkId>6MYJCS7MR-N-j61j</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1237</resourceId>
      <segmentType/>
    </network>
  </networks>
  <lservers>
    <lserver>
      <cpuPerf>1.0</cpuPerf>
      <creator>tenantA</creator>
      <diskimageId>image-1324e093f4e</diskimageId>
      <diskimageName>g-physical-0001</diskimageName>
      <hostName>V6MYJCS7MR0001</hostName>
      <image>
        <cpuBit>64</cpuBit>
        <id>image-1324e093f4e</id>
        <maxCpuPerf>1.4</maxCpuPerf>
        <maxDiskSize>30.0</maxDiskSize>
        <maxMemorySize>2.0</maxMemorySize>
        <maxSysvolSize>30.0</maxSysvolSize>
        <numOfMaxCpu>1</numOfMaxCpu>
        <numOfMaxDisk>1</numOfMaxDisk>
        <numOfMaxNic>15</numOfMaxNic>
        <serverApplication>AP</serverApplication>
        <serverCategory>GENERAL</serverCategory>
        <softwares>
          <software>
            <category>OS</category>
            <license/>
            <name>Windows Server 2008 R2 Enterprise</name>
            <officialVersion/>
            <patch/>
            <softwareId>SW00000007</softwareId>
            <support/>
            <version>6.1</version>
          </software>
        </softwares>
        <sysvolSize>30.0</sysvolSize>
      </image>
      <lserverType>Physical</lserverType>
      <memorySize>2.0</memorySize>
      <numOfCpu>2</numOfCpu>
      <pool>/ServerPool</pool>
      <priority>128</priority>
      <requestCpuPerf>0.1</requestCpuPerf>
      <requestMemorySize>0.1</requestMemorySize>
      <requestNumOfCpu>1</requestNumOfCpu>
      <resource>
        <name>tenantA-6MYJCS7MR-S-0001</name>
      </resource>
      <snapshotExist>false</snapshotExist>
      <sparePool>/SparePool</sparePool>
      <storagePool>/StoragePool</storagePool>
      <sysvolSize>100</sysvolSize>
      <disks/>
      <nics>
        <nic>
          <management>0</management>
          <networkId>6MYJCS7MR-N-j61j</networkId>
          <nicNo>2</nicNo>
          <privateIp>192.xxx.xxx.xxx</privateIp>
```

```
      </nic>
      <nic>
        <management>1</management>
        <networkId>6MYJCS7MR-N-j61j</networkId>
        <nicNo>1</nicNo>
        <privateIp>192.xxx.xxx.xxx</privateIp>
      </nic>
    </nics>
    <lserverId>tenantA-6MYJCS7MR-S-0001</lserverId>
    <lserverName>physical</lserverName>
    <lserverStatus>STOPPED</lserverStatus>
    <serverType>Economy</serverType>
  </lserver>
  <lserver>
    <cpuPerf>1.2</cpuPerf>
    <creator>tenantA</creator>
    <diskimageId>image-1324e09f82f</diskimageId>
    <diskimageName>g-vm-0002</diskimageName>
    <hostName>V6MYJCS7MR0002</hostName>
    <image>
      <cpuBit>64</cpuBit>
      <id>image-1324e09f82f</id>
      <maxCpuPerf>1.4</maxCpuPerf>
      <maxDiskSize>30.0</maxDiskSize>
      <maxMemorySize>2.0</maxMemorySize>
      <maxSysvolSize>30.0</maxSysvolSize>
      <numOfMaxCpu>1</numOfMaxCpu>
      <numOfMaxDisk>1</numOfMaxDisk>
      <numOfMaxNic>15</numOfMaxNic>
      <serverApplication>AP</serverApplication>
      <serverCategory>GENERAL</serverCategory>
      <softwares>
        <software>
          <category>OS</category>
          <license/>
          <name>Windows Server 2008 R2 Enterprise</name>
          <officialVersion/>
          <patch/>
          <softwareId>SW00000007</softwareId>
          <support/>
          <version>6.1</version>
        </software>
      </softwares>
      <sysvolSize>30.0</sysvolSize>
      <vmType>VMware</vmType>
    </image>
    <lserverType>Virtual</lserverType>
    <memorySize>1.6</memorySize>
    <numOfCpu>1</numOfCpu>
    <pool>/VMHostPool</pool>
    <priority>128</priority>
    <resource>
      <name>tenantA-6MYJCS7MR-S-0002</name>
    </resource>
    <snapshotExist>true</snapshotExist>
    <storagePool>/StoragePool</storagePool>
    <sysvolSize>100</sysvolSize>
    <disks/>
    <vmType>VMware</vmType>
    <nics>
      <nic>
        <management>1</management>
        <networkId>6MYJCS7MR-N-j8f0</networkId>
```

```
              <nicNo>1</nicNo>
              <privateIp>192.xxx.xxx.xxx</privateIp>
            </nic>
            <nic>
              <management>0</management>
              <networkId>6MYJCS7MR-N-j8f0</networkId>
              <nicNo>3</nicNo>
              <privateIp>192.xxx.xxx.xxx</privateIp>
            </nic>
            <nic>
              <management>0</management>
              <networkId>6MYJCS7MR-N-j8f0</networkId>
              <nicNo>2</nicNo>
              <privateIp>192.xxx.xxx.xxx</privateIp>
            </nic>
          </nics>
          <lserverId>tenantA-6MYJCS7MR-S-0002</lserverId>
          <lserverName>virtual2</lserverName>
          <lserverStatus>STOPPED</lserverStatus>
          <serverType>over_commit</serverType>
        </lserver>
      </lservers>
      <lplatformId>tenantA-6MYJCS7MR</lplatformId>
      <lplatformName>test-mix</lplatformName>
      <lplatformStatus>NORMAL</lplatformStatus>
    </lplatform>
  </lplatforms>
</ListLPlatformResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.10 ListNetworkInfo (Gets Network Information for an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListNetworkInfo** - Gets Network Information for an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/ListNetworkInfo.sh - Gets Network Information for an L-Platform

Synopsis

[Windows Manager]

ListNetworkInfo -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

[Linux Manager]

ListNetworkInfo.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

Function description

This command gets network information for the target L-Platform.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListNetworkInfo -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<ListNetworkInfoResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <networks>
    <network>
      <addressSet>
        <end>192.xxx.xxx.xxx</end>
        <mask>255.xxx.xxx.xxx</mask>
        <name>addr_set10</name>
        <start>192.xxx.xxx.xxx</start>
        <subnet>192.xxx.xxx.xxx</subnet>
      </addressSet>
      <addressSetStatus>
        <avail>138</avail>
        <num>140</num>
        <used>2</used>
      </addressSetStatus>
      <name>N01</name>
      <networkCategory>BUSINESS</networkCategory>
      <networkId>M3PGGWCFX-N-INTRANET</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1234</resourceId>
      <segmentType>DMZ</segmentType>
```

```
    </network>
    <network>
      <addressSet>
        <mask>255.xxx.xxx.xxx</mask>
        <name>addr_set20</name>
        <subnet>192.xxx.xxx.xxx</subnet>
      </addressSet>
      <addressSetStatus>
        <avail>116</avail>
        <num>120</num>
        <used>4</used>
      </addressSetStatus>
      <excludeaddressranges>
        <excludeaddressrange>
          <end>192.xxx.xxx.xxx</end>
          <start>192.xxx.xxx.xxx</start>
        </excludeaddressrange>
      </excludeaddressranges>
      <name>N02</name>
      <networkCategory>MANAGEMENT</networkCategory>
      <networkId>M3PGGWCFX-N-INTERNET</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1235</resourceId>
      <segmentType>SECURE</segmentType>
    </network>
  </networks>
</ListNetworkInfoResponse>
```

[Linux Manager]

```
# ListNetworkInfo.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<ListNetworkInfoResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <networks>
    <network>
      <addressSet>
        <end>192.xxx.xxx.xxx</end>
        <mask>255.xxx.xxx.xxx</mask>
        <name>addr_set10</name>
        <start>192.xxx.xxx.xxx</start>
        <subnet>192.xxx.xxx.xxx</subnet>
      </addressSet>
      <addressSetStatus>
        <avail>138</avail>
        <num>140</num>
        <used>2</used>
      </addressSetStatus>
      <excludeaddressranges/>
      <name>N01</name>
      <networkCategory>BUSINESS</networkCategory>
      <networkId>M3PGGWCFX-N-INTRANET</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1234</resourceId>
      <segmentType>DMZ</segmentType>
    </network>
    <network>
      <addressSet>
        <mask>255.xxx.xxx.xxx</mask>
        <name>addr_set20</name>
        <subnet>192.xxx.xxx.xxx</subnet>
```

```
      </addressSet>
      <addressSetStatus>
        <avail>116</avail>
        <num>120</num>
        <used>4</used>
      </addressSetStatus>
      <excludeaddressranges>
        <excludeaddressrange>
          <end>192.xxx.xxx.xxx</end>
          <start>192.xxx.xxx.xxx</start>
        </excludeaddressrange>
      </excludeaddressranges>
      <name>N02</name>
      <networkCategory>MANAGEMENT</networkCategory>
      <networkId>M3PGGWCFX-N-INTERNET</networkId>
      <numOfMaxVm>10</numOfMaxVm>
      <resourceId>mngsrv_1235</resourceId>
      <segmentType>SECURE</segmentType>
    </network>
  </networks>
</ListNetworkInfoResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.11 MoveLPlatform (Changes the Organization that Owns an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\MoveLPlatform** - Changes the Organization that Owns an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/MoveLPlatform.sh - Changes the Organization that Owns an L-Platform

Synopsis

[Windows Manager]

MoveLPlatform -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **[-toUserId** *the_user_ID_after_the_change***] -toOrgId** *the_tenant_name_after_the_change*

[Linux Manager]

MoveLPlatform.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **[-toUserId** *the_user_ID_after_the_change***] -toOrgId** *the_tenant_name_after_the_change*

Function description

This command changes the organization that owns an L-Platform.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the

operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-toUserId (optional)

Specify the user ID after the change.

-toOrgId

Specify the tenant name after the change.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> MoveLPlatform -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -toUserId user5 -toOrgId tenantB
<?xml version="1.0" encoding="UTF-8"?>
<MoveLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</MoveLPlatformResponse>
```

[Linux Manager]

```
# MoveLPlatform.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -toUserId user5 -toOrgId tenantB
<?xml version="1.0" encoding="UTF-8"?>
<MoveLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</MoveLPlatformResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.12 OperateSLB (Operate Server Load Balancer)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\OperateSLB** - Operate Server Load Balancer

[Linux Manager]
/opt/FJSVcfmg/bin/OperateSLB.sh - Operate Server Load Balancer

Synopsis

[Windows Manager]

```
OperateSLB -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -xml path_to_the_XML_file
```

[Linux Manager]

```
OperateSLB.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -xml path_to_the_XML_file
```

Function description

This command executes server load balancer operations.
If there are operation logs that have not been acquired, operations cannot be performed.
It is necessary to specify all parameters defined in the ruleset.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-xml

Specify the path to the XML file that defines server load balancer operations.

<<XML>>

```
<slb>
 <name>[Server load balancer name]</name>
  <ruleset>
   <name>[ruleset name]</name>
     <parameters>
       <parameter>
         <name>[parameter name]</name>
         <value>[value of the parameter]</value>
       </parameter>
            ...
     </parameters>
   </ruleset>
</slb>
```

Tag name	Type	Range	Mandatory	Description
slb	-	-	N	Specify the server load balancer.
name	string	1 byte or more	Y	Specify the name of the server load balancer performing the operations.
ruleset	-	-	N	Specify the server load balancer ruleset.
name	string	1 byte or more	Y	Specify the name of the ruleset for operations.
[parameters]	-	-	N	Specify the ruleset parameters.
[parameter]	-	0 or more	N	Specify the number of parameters.
name	string	1 byte or more	Y	Specify the name of the parameters performing the operations. Specify the name of the parameter in the target ruleset that was obtained by GetRulesetConfiguration.
value	string	0 byte or more	O	Specify the value of the parameters performing the operations.

The symbols in the "Mandatory" column have the following meaning:
Y: If the tag is specified, be sure to specify a value. (Mandatory)
O: The value can be omitted. (Optional)
N: There is no need to set a value. (Unnecessary) Only the tag itself is specified.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> OperateSLB -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -xml C:\sample.xml
<?xml version="1.0" encoding="UTF-8"?>
<OperateSLBResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <operationId>ROR_001</operationId>
```

```
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</OperateSLBResponse>
```

[Linux Manager]

```
# OperateSLB.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -xml /XML/sample.xml
<?xml version="1.0" encoding="UTF-8"?>
<OperateSLBResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <operationId>ROR_001</operationId>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</OperateSLBResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.13 StartLPlatform (Performs Batch Power-On for Servers Included in an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\StartLPlatform** - Performs Batch Power-On for Servers Included in an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/StartLPlatform.sh - Performs Batch Power-On for Servers Included in an L-Platform

Synopsis

[Windows Manager]

StartLPlatform -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

[Linux Manager]

StartLPlatform.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

Function description

This command performs batch power-on for the servers included in an L-Platform.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> StartLPlatform -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<StartLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StartLPlatformResponse>
```

[Linux Manager]

```
# StartLPlatform.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<StartLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StartLPlatformResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.14 StartTenantLServers (Performs Batch Power-On for Servers Included in a Tenant)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\StartTenantLServers** - Performs Batch Power-On for Servers Included in a Tenant

[Linux Manager]
/opt/FJSVcfmg/bin/StartTenantLServers.sh - Performs Batch Power-On for Servers Included in a Tenant

Synopsis

[Windows Manager]

StartTenantLServers -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

[Linux Manager]

StartTenantLServers.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

Function description

This command performs batch power-on for the servers included in a Tenant.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> StartTenantLServers -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<StartTenantLServersResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StartTenantLServersResponse>
```

[Linux Manager]

```
# StartTenantLServers.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<StartTenantLServersResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
```

```
  <responseStatus>SUCCESS</responseStatus>
</StartTenantLServersResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.15 StopLPlatform (Performs Batch Power-Off for Servers Included in an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\StopLPlatform** - Performs Batch Power-Off for Servers Included in an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/StopLPlatform.sh - Performs Batch Power-Off for Servers Included in an L-Platform

Synopsis

[Windows Manager]

StopLPlatform -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

[Linux Manager]

StopLPlatform.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

Function description

This command performs batch power-off for the servers included in an L-Platform.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> StopLPlatform -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<StopLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StopLPlatformResponse>
```

[Linux Manager]

```
# StopLPlatform.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX
<?xml version="1.0" encoding="UTF-8"?>
<StopLPlatformResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StopLPlatformResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.16 StopTenantLServers (Performs Batch Power-Off for Servers Included in a Tenant)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\StopTenantLServers** - Performs Batch Power-Off for Servers Included in a Tenant

[Linux Manager]
/opt/FJSVcfmg/bin/StopTenantLServers.sh - Performs Batch Power-Off for Servers Included in a Tenant

Synopsis

[Windows Manager]

StopTenantLServers -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_D* **-password** *password* **-orgId** *tenant_name*

[Linux Manager]

StopTenantLServers.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

Function description

This command performs batch power-off for the servers included in a Tenant.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> StopTenantLServers -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<StopTenantLServersResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StopTenantLServersResponse>
```

[Linux Manager]

```
# StopTenantLServers.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<StopTenantLServersResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StopTenantLServersResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.17 UpdateFirewallConfiguration (Modify Firewall Configuration)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\UpdateFirewallConfiguration** - Modify Firewall Configuration

[Linux Manager]
/opt/FJSVcfmg/bin/UpdateFirewallConfiguration.sh - Modify Firewall Configuration

Synopsis

[Windows Manager]

```
UpdateFirewallConfiguration -version version_ID -locale the_language_for_communicating -userId
user_ID -password password -orgId tenant_name -lplatformId L-Platform_ID -xml path_to_the_XML_file
```

[Linux Manager]

```
UpdateFirewallConfiguration.sh -version version_ID -locale the_language_for_communicating -userId
user_ID -password password -orgId tenant_name -lplatformId L-Platform_ID -xml path_to_the_XML_file
```

Function description

This command modifies the firewall configuration.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command does not enable you to change the settings for a firewall that does not use a ruleset.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-xml

Specify the path to the XML file that defines firewall setting changes.

<<XML>>

```
<firewall>
  <ruleset>
   <parameters>
     <parameter>
      <name>[parameter name]</name>
      <value>[value of the parameters]</value>
     </parameter>
     ...
   </parameters>
  </ruleset>
</firewall>
```

Tag name	Type	Range	Mandatory	Description
firewall	-	-	N	Specify the firewall.
ruleset	-	-	N	Specify the firewall ruleset.
parameters	-	-	N	Specify the ruleset parameters.
parameter	-	1 or more	N	Specify the number of parameters.
name	string	1 byte or more	Y	Specify the name of the parameters performing the operations. Specify the name of the parameter in the target ruleset that was obtained by GetLPlatformConfiguration.
value	string	0 byte or more	O	Specify the value of the parameters performing the operations.

The symbols in the "Mandatory" column have the following meaning:
Y: If the tag is specified, be sure to specify a value. (Mandatory)
O: The value can be omitted. (Optional)
N: There is no need to set a value. (Unnecessary) Only the tag itself is specified.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> UpdateFirewallConfiguration -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -lplatformId tenantA-M3PGGWCFX -xml C:\sample.xml
<?xml version="1.0" encoding="UTF-8"?>
<UpdateFirewallConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateFirewallConfigurationResponse>
```

[Linux Manager]

```
# UpdateFirewallConfiguration.sh -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -lplatformId tenantA-M3PGGWCFX -xml /XML/sample.xml
<?xml version="1.0" encoding="UTF-8"?>
<UpdateFirewallConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateFirewallConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.2.18 UpdateSLBConfiguration (Modify Server Load Balancer Configuration)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\UpdateSLBConfiguration** - Modify Server Load Balancer Configuration

[Linux Manager]
/opt/FJSVcfmg/bin/UpdateSLBConfiguration.sh - Modify Server Load Balancer Configuration

Synopsis

[Windows Manager]

```
UpdateSLBConfiguration -version version_ID -locale the_language_for_communicating -userId user_ID -
password password -orgId tenant_name -lplatformId L-Platform_ID -xml path_to_the_XML_file
```

[Linux Manager]

```
UpdateSLBConfiguration.sh -version version_ID -locale the_language_for_communicating -userId user_ID
-password password -orgId tenant_name -lplatformId L-Platform_ID -xml path_to_the_XML_file
```

Function description

This command modifies the server load balancer configuration.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-xml

Specify the path to the XML file that defines server load balancer setting changes.

<<XML>>

```
<slb>
 <name>[Name of the server load balancer]</name>
  <ruleset>
   <parameters>
    <parameter>
     <name>[parameter name]</name>
     <value>[value of the parameters]</value>
    </parameter>
    ...
   </parameters>
  </ruleset>
</slb>
```

Tag name	Type	Range	Mandatory	Description
slb	-	-	N	Specify the server load balancer.
name	string	1 byte or more	Y	Specify the name of the server load balancer performing the operations.
ruleset	-	-	N	Specify the server load balancer ruleset.
parameters	-	-	N	Specify the name of the ruleset for operations.
parameter	-	1 or more	N	Specify the ruleset parameters.
name	string	1 byte or more	Y	Specify the number of parameters. Specify the name of the parameter in the target ruleset that was obtained by GetLPlatformConfiguration.
value	string	0 byte or more	O	Specify the value of the parameters performing the operations.

The symbols in the "Mandatory" column have the following meaning:
Y: If the tag is specified, be sure to specify a value. (Mandatory)
O: The value can be omitted. (Optional)
N: There is no need to set a value. (Unnecessary) Only the tag itself is specified.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> UpdateSLBConfiguration -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -xml C:\sample.xml
<?xml version="1.0" encoding="UTF-8"?>
<UpdateSLBConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateSLBConfigurationResponse>
```

[Linux Manager]

```
# UpdateSLBConfiguration.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA
-lplatformId tenantA-M3PGGWCFX -xml /XML/sample.xml
<?xml version="1.0" encoding="UTF-8"?>
<UpdateSLBConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateSLBConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3 Operations on Server

This section explains the L-Platform APIs commands relating to operations on server.

14.3.1 AddPatch (Adds Patch Information)

Name

[Windows Manager]
Installation_folder **\RCXCFMG\bin\AddPatch** - Adds Patch Information

[Linux Manager]
/opt/FJSVcfmg/bin/AddPatch.sh - Adds Patch Information

Format

[Windows Manager]

AddPatch -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-softwareId** *software_ID* **-patchId** *patch_ID* **[-componentName** *component_name***] [-description** *description_of_the_patch***]**

[Linux Manager]

AddPatch.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-softwareId** *software_ID* **-patchId** *patch_ID* **[-componentName** *component_name***] [-description** *description_of_the_patch***]**

Description

This command adds patch information to a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-softwareId

Specify the software ID.

-patchId

Specify the patch ID.

-componentName (optional)

Specify the name of the component applying the patch.

-description (optional)

Specify a description for the patch.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> AddPatch -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -softwareId SW00000004 -patchId patch01 -
componentName comp1 -description update
<?xml version="1.0" encoding="UTF-8"?>
<AddPatchResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</AddPatchResponse>
```

[Linux Manager]

```
# AddPatch.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -softwareId SW00000004 -patchId patch01 -
componentName comp1 -description update
<?xml version="1.0" encoding="UTF-8"?>
<AddPatchResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
```

```
  <responseStatus>SUCCESS</responseStatus>
</AddPatchResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.2 CancelError (Cancels the Error Status of a Backup or Restoration Task)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\CancelError** - Cancels the Error Status of a Backup or Restoration Task

[Linux Manager]
/opt/FJSVcfmg/bin/CancelError.sh - Cancels the Error Status of a Backup or Restoration Task

Format

[Windows Manager]

CancelError -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-taskId** *task_ID*

[Linux Manager]

CancelError.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-taskId** *task_ID*

Description

This command releases the error status of any backup or restoration task that has been specified.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-taskId

Specify the backup or restore task ID that will cancel the error.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> CancelError -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -taskId task001
<?xml version="1.0" encoding="UTF-8"?>
<CancelErrorResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CancelErrorResponse>
```

[Linux Manager]

```
# CancelError.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -taskId task001
<?xml version="1.0" encoding="UTF-8"?>
<CancelErrorResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CancelErrorResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.3 ChangeDiskSize (Increases Data Disk Capacity)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ChangeDiskSize** - Increases Data Disk Capacity

[Linux Manager]

/**opt/FJSVcfmg/bin/ChangeDiskSize.sh** - Increases Data Disk Capacity

Format

[Windows Manager]

```
ChangeDiskSize -version version_ID -locale the_language_for_communicating -userId user_ID -password password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskId the_ID_of_the_extension_disk -diskSize the_size_of_the_data_disk
```

[Linux Manager]

```
ChangeDiskSize.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskId the_ID_of_the_extension_disk -diskSize the_size_of_the_data disk
```

Description

Increases the capacity of the data disk of a server.

This command is executed asynchronously. When this command is successfully executed, the status of the L-Platform shifts to "RECONFIG_ING" (configuration modification in progress) during the process. When the process is complete, the L-Platform returns to "NORMAL" (normal operation).
While the L-Platform is in the "RECONFIG_ING" status, operation of the L-Platform is not possible.
Monitor the status of the L-Platform using GetLPlatformStatus and wait for the L-Platform to shift to "NORMAL" before performing another operation.

This command can only be used if the server virtualization software on the server is VMware or Hyper-V.

This command cannot be executed in the following cases:

- When the target server is a server for which configuration modification or deletion cannot be performed
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".
- When the target server has snapshots on it
- When disks not managed by ROR, such as RDM (Raw Device Mapping), are connected to the server
- When the server virtualization software is Hyper-V, and the server is running

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-diskId

Specify the disk ID.

-diskSize

Specify the size of the data disk.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Examples

[Windows Manager]

```
> ChangeDiskSize -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -diskId tenantA-M3PGGWCFX-D-0001
-diskSize 30
<?xml version="1.0" encoding="UTF-8"?>
<ChangeDiskSizeResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ChangeDiskSizeResponse>
```

[Linux Manager]

```
# ChangeDiskSize.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -diskId tenantA-M3PGGWCFX-D-0001
-diskSize 30
<?xml version="1.0" encoding="UTF-8"?>
<ChangeDiskSizeResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ChangeDiskSizeResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.4 CreateImage (Collects the Cloning Image of a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\CreateImage** - Collects the Cloning Image of a Server

[Linux Manager]
/opt/FJSVcfmg/bin/CreateImage.sh - Collects the Cloning Image of a Server

Format

[Windows Manager]

CreateImage -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-name** *image_name* **-imagePool** *the_resource_ID_of_the_image_pool* **-comment** *comment* **[-allDisk** *collect_the_cloning_master_together_with_the_expanded_disk***]**

[Linux Manager]

CreateImage.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-name** *image_name* **-imagePool** *the_resource_ID_of_the_image_pool* **-comment** *comment* **[-allDisk** *collect_the_cloning_master_together_with_the_expanded_disk***]**

Description

This command collects the cloning image of a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-name

Specify the name of the image to be created.

-imagePool

Specify the image pool name.

-comment

Specify a comment.

-allDisk (optional)

Specify whether to collect the cloning master together with the expanded disk.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> CreateImage -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001  -name disk1image -imagePool /ImagePool -
comment disk1 -allDisk true
<?xml version="1.0" encoding="UTF-8"?>
<CreateImageResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CreateImageResponse>
```

[Linux Manager]

```
# CreateImage.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -name disk1image -imagePool /
ImagePool -comment disk1 -allDisk true
<?xml version="1.0" encoding="UTF-8"?>
<CreateImageResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CreateImageResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.5 CreateLServer (Creates a New Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\CreateLServer** - Creates a New Server

[Linux Manager]
/opt/FJSVcfmg/bin/CreateLServer.sh - Creates a New Server

Format

[Windows Manager]

CreateLServer -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverName** *server_name* **-serverType** *server_type* **[-lserverType** *server_type***] -diskImageId** *disk_image_ID* **-controlNetworkId** *the_ID_of_the_network_connected_to_the_control_NIC* **[-networkId** *the_ID_of_a_network_other_than_the_control_NIC***] [-pool** *the_resource_name_of_the_VM_pool_or_server_pool***] [-storagePool** *the_resource_name_of_the_storage_pool***] [-cpuPerf** *CPU_performance***] [-numOfCpu** *number_of_CPUs***] [-cpuReserve** *reserved_CPU_performance***] [-cpuShare** *CPU_allotment_ratio***] [-memorySize** *amount_of_memory***] [-memoryReserve** *reserved_memory_capacity***] [-memoryShare** *memory_allotment_ratio***] [-macAddress** *address_set_resource_name_of_the_MAC_address***] [-priority**

priority_startup_levels_when_performing_batch_power_supply_controls] [-diskResourceId *disk_resource_ID*]

[Linux Manager]

CreateLServer.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverName** *server_name* **-serverType** *server_type* **[-lserverType** *server_type*] **-diskImageId** *disk_image_ID* **-controlNetworkId** *the_ID_of_the_network_connected_to_the_control_NIC* **[-networkId** *the_ID_of_a_network_other_than_the_control_NIC*] **[-pool** *the_resource_name_of_the_VM_pool_or_server_pool*] **[-storagePool** *the_resource_name_of_the_storage_pool*] **[-cpuPerf** *CPU_performance*] **[-numOfCpu** *number_of_CPUs*] **[-cpuReserve** *reserved_CPU_performance*] **[-cpuShare** *CPU_allotment_ratio*] **[-memorySize** *amount_of_memory*] **[-memoryReserve** *reserved_memory_capacity*] **[-memoryShare** *memory_allotment_ratio*] **[-macAddress** *address_set_resource_name_of_the_MAC_address*] **[-priority** *priority_startup_levels_when_performing_batch_power_supply_controls*] **[-diskResourceId** *disk_resource_ID*]

Description

This command creates a server within an L-Platform. The user must always specify the ID of the disk image that is used as the initial content required for the startup disk.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command cannot be executed in the following cases:

- Specifying an image for which use of VDI coordination is enabled.

Note

When creating a physical server, only two commands can be simultaneously executed, due to the limitations of the hardware that is set. When creating more than two physical servers, leave some time between the executions of this command.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverName

Specify the server name.

-serverType

Specify the server type.

-lserverType (optional)

This option does not need to be specified.

-diskImageId

Specify the disk image ID.

-controlNetworkId

Specify the network ID connecting the control NIC.

-networkId (optional)

Specify a network ID other than the control NIC.

-pool (optional)

Specify the VM pool or server pool resource name.

-storagePool (optional)

Specify the storage pool resource name.

-cpuPerf (optional)

Specify CPU performance.

-numOfCpu (optional)

Specify the number of CPUs.

-cpuReserve (optional)

Specify CPU reserve performance.
When using Resource Orchestrator and server virtualization software, if the recognized physical CPU performance values are different, specify a value less than the smaller of the two.

-cpuShare (optional)

[When VM type is VMware]

Specify the CPU share.

[When VM type is Hyper-V]

Specify CPU weight.

-memorySize (optional)

Specify memory size.

-memoryReserve (optional)

[When VM type is VMware]

Specify memory reserve size.

[When VM type is Hyper-V]

Specify memory reserve size.

-memoryShare (optional)

[When VM type is VMware]

Specify memory share.

[When VM type is Hyper-V]

Specify memory weight.

-macAddress (optional)

Specify the address set resource name of the MAC address.

-priority (optional)

Specify the startup priority when using batch power control.

-diskResourceId (optional)

Specify the resource ID of an existing disk that is to be used as the system disk.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> CreateLServer -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverName server02 -serverType economy -lserverType Virtual -
diskImageId image-13820fa6e3e -controlNetworkId M3PGGWCFX-N-seg -pool /VMHostPool -storagePool /
StoragePool -cpuPerf 1.0 -numOfCpu 1 -cpuReserve 0.7 -cpuShare 1000 -memorySize 1.0 -memoryReserve
0.5 -memoryShare 1000 -priority 64
<?xml version="1.0" encoding="UTF-8"?>
<CreateLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lserverId>tenantA-M3PGGWCFX-S-0002</lserverId>
</CreateLServerResponse>
```

[Linux Manager]

```
# CreateLServer.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverName server02 -serverType economy -lserverType Virtual -
diskImageId image-13820fa6e3e -controlNetworkId M3PGGWCFX-N-seg -pool /VMHostPool -storagePool /
StoragePool -cpuPerf 1.0 -numOfCpu 1 -cpuReserve 0.7 -cpuShare 1000 -memorySize 1.0 -memoryReserve
0.5 -memoryShare 1000 -priority 64
<?xml version="1.0" encoding="UTF-8"?>
<CreateLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lserverId>tenantA-M3PGGWCFX-S-0002</lserverId>
</CreateLServerResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.6 CreateNic (Add NIC to Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\CreateNic** - Add NIC to Server

[Linux Manager]
/opt/FJSVcfmg/bin/CreateNic.sh - Add NIC to Server

Format

[Windows Manager]

```
CreateNic -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -networkId network_ID [-
ipAddress IP_address]
```

[Linux Manager]

```
CreateNic.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -networkId network_ID [-
ipAddress IP_address]
```

Description

This command adds an NIC to a server.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command can only be executed when the server virtualization software on the server is VMware, Hyper-V, RHEL-KVM, or OVM for SPARC.
If the target server has snapshots, NIC addition cannot be done.

When NIC is added, the automatic setting of Internet Protocol address on guest OS is not done.
Log in guest OS after adding NIC, and set IP address displayed in detailed information of L-Server to guest OS manually.
Confirm added NIC can be correctly communicated with the external instrument after IP address is set.
When two or more NIC is added, it is recommended to add it one by one.

If the target server is an OVM for SPARC server, only the management information for this product is added or deleted. The actual NIC of the VM guest is not added or deleted.
Add or delete the actual NICs with the server virtualization software.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-networkId

Specify the network ID connecting the added NIC.

-ipAddress (optional)

Specify the IP address to be allocated to the added NIC.
Specifying an IP address does not automatically set the IP address to a guest OS.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> CreateNic -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -networkId M3PGGWCFX-N-seg1 -ipAddress
192.xxx.xxx.xxx
<?xml version="1.0" encoding="UTF-8"?>
<CreateNicResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CreateNicResponse>
```

[Linux Manager]

```
# CreateNic.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -networkId M3PGGWCFX-N-seg1 -ipAddress
192.xxx.xxx.xxx
<?xml version="1.0" encoding="UTF-8"?>
<CreateNicResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CreateNicResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.7 CreateSnapshot (Takes a Snapshot)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\CreateSnapshot** - Takes a Snapshot

[Linux Manager]
/opt/FJSVcfmg/bin/CreateSnapshot.sh - Takes a Snapshot

Format

[Windows Manager]

```
CreateSnapshot -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -comment comment
```

[Linux Manager]

```
CreateSnapshot.sh -version version_ID -locale the_language_for_communicating -userId user_ID -
password password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -comment comment
```

Description

This command creates a snapshot for a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-comment

Specify a comment.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> CreateSnapshot -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -comment setup
<?xml version="1.0" encoding="UTF-8"?>
<CreateSnapshotResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CreateSnapshotResponse>
```

[Linux Manager]

```
# CreateSnapshot.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -comment setup
<?xml version="1.0" encoding="UTF-8"?>
<CreateSnapshotResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</CreateSnapshotResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.8 DestroyLServer (Deletes Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\DestroyLServer** - Deletes Server

[Linux Manager]
/opt/FJSVcfmg/bin/DestroyLServer.sh - Deletes Server

Format

[Windows Manager]

```
DestroyLServer -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID [-force forced_deletion]
```

[Linux Manager]

```
DestroyLServer.sh -version version_ID -locale the_language_for_communicating -userId user_ID -
password password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID [-force
forced_deletion]
```

Description

This command removes a server.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-force

Specify whether servers that are distribution targets for the server load balancer will be forcibly deleted.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
>DestroyLServer -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<DestroyLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyLServerResponse>
```

[Linux Manager]

```
# DestroyLServer.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<DestroyLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyLServerResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.9 DestroyNic (Delete Specified NIC from Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\DestroyNic** - Delete Specified NIC from Server

[Linux Manager]
/opt/FJSVcfmg/bin/DestroyNic.sh - Delete Specified NIC from Server

Format

[Windows Manager]

DestroyNic -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-nicNo** *NIC_number* **[-force** *forced_deletion***]**

[Linux Manager]

DestroyNic.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-nicNo** *NIC_number* **[-force** *forced_deletion***]**

Description

This commandI deletes a specified NIC from a server.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the

operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command can only be executed when the server virtualization software on the server is VMware, Hyper-V, RHEL-KVM, or OVM for SPARC.

If the target server has snapshots, NIC deletion cannot be done.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

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

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-nicNo

Specify the NIC number.

-force

Specify whether NICs that are distribution targets for the server load balancer will be forcibly deleted.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> DestroyNic -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -nicNo 2
<?xml version="1.0" encoding="UTF-8"?>
<DestroyNicResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyNicResponse>
```

[Linux Manager]

```
# DestroyNic.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -nicNo 2
<?xml version="1.0" encoding="UTF-8"?>
<DestroyNicResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyNicResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.10 DestroyPatch (Deletes Patch Information)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\DestroyPatch** - Deletes Patch Information

[Linux Manager]
/opt/FJSVcfmg/bin/DestroyPatch.sh - Deletes Patch Information

Format

[Windows Manager]

DestroyPatch -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-softwareId** *software_ID* **-patchId** *patch_ID*

[Linux Manager]

DestroyPatch.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-softwareId** *software_ID* **-patchId** *patch_ID*

Description

This command deletes patch information for a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-softwareId

Specify the software ID.

-patchId

Specify the patch ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> DestroyPatch -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -softwareId SW000000001 -patchId patch01
<?xml version="1.0" encoding="UTF-8"?>
<DestroyPatchResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyPatchResponse>
```

[Linux Manager]

```
# DestroyPatch.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -softwareId SW000000001 -patchId
patch01
<?xml version="1.0" encoding="UTF-8"?>
<DestroyPatchResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyPatchResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.11 DestroySnapshot (Deletes Snapshots)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\DestroySnapshot** - Deletes Snapshots

[Linux Manager]
/opt/FJSVcfmg/bin/DestroySnapshot.sh - Deletes Snapshots

Format

[Windows Manager]

```
DestroySnapshot -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -snapshotId snapshot_ID
```

[Linux Manager]

```
DestroySnapshot.sh -version version_ID -locale the_language_for_communicating -userId user_ID -
password password -orgId tenant_name -lplatformId L-Platform_ID -snapshotId snapshot_ID
```

Description

This command deletes snapshots.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-snapshotId

Specify the snapshot ID to delete.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> DestroySnapshot -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -snapshotId snap01
<?xml version="1.0" encoding="UTF-8"?>
<DestroySnapshotResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroySnapshotResponse>
```

[Linux Manager]

```
# DestroySnapshot.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -snapshotId snap01
<?xml version="1.0" encoding="UTF-8"?>
<DestroySnapshotResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroySnapshotResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.12 ExpandSysvolSize (Increase System Disk Size for a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ExpandSysvolSize** - Increase System Disk Size for a Server

[Linux Manager]
/opt/FJSVcfmg/bin/ExpandSysvolSize.sh - Increase System Disk Size for a Server

Format

[Windows Manager]

ExpandSysvolSize -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-sysvolSize** *system_disk_size*

[Linux Manager]

ExpandSysvolSize.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-sysvolSize** *system_disk_size*

Description

This command increases the system disk size for a server.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command can only be used if the server virtualization software on the server is VMware or Hyper-V.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".
- When the target server has snapshots on it
- When disks not managed by ROR, such as RDM (Raw Device Mapping), are connected to the server
- When the server virtualization software is Hper-V, and the server is running

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-sysvolSize

Specify the system disk size.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ExpandSysvolSize -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -sysvolSize 30
<?xml version="1.0" encoding="UTF-8"?>
<ExpandSysVolSizeResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ExpandSysVolSizeResponse>
```

[Linux Manager]

```
# ExpandSysvolSize.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -sysvolSize 30
<?xml version="1.0" encoding="UTF-8"?>
<ExpandSysVolSizeResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ExpandSysVolSizeResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.13 GetLServerAttributes (Gets the Attributes of a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLServerAttributes** - Gets the Attributes of a Server

[Linux Manager]
/opt/FJSVcfmg/bin/GetLServerAttributes.sh - Gets the Attributes of a Server

Format

[Windows Manager]

GetLServerAttributes -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

[Linux Manager]

GetLServerAttributes.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

Description

This command gets attribute information for a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetLServerAttributes -version 2.0 -locale en -userId user3 -password password -orgId papi -
lplatformId papi-TAFRIXZ53 -lserverId papi-TAFRIXZ53-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetLServerAttributesResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lserver>
    <creator>papi</creator>
    <diskimageId>image-141cafdcb24</diskimageId>
    <diskimageName>RHEL62X8664</diskimageName>
    <hostName>VTAFRIXZ530001</hostName>
    <resource>
      <name>papi-TAFRIXZ53-S-0001</name>
    </resource>
    <disks>
      <disk>
        <attachedTo>papi-TAFRIXZ53-S-0001</attachedTo>
        <creator>papi</creator>
        <size>0.2</size>
        <diskId>papi-TAFRIXZ53-D-0001</diskId>
        <diskName>DISK0</diskName>
      </disk>
    </disks>
    <lserverId>papi-TAFRIXZ53-S-0001</lserverId>
    <lserverName>PRE_IMG</lserverName>
    <serverType>sample_medium</serverType>
  </lserver>
</GetLServerAttributesResponse>
```

[Linux Manager]

```
# GetLServerAttributes.sh -version 2.0 -locale en -userId user3 -password password -orgId papi -
lplatformId papi-TAFRIXZ53 -lserverId papi-TAFRIXZ53-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetLServerAttributesResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lserver>
    <creator>papi</creator>
    <diskimageId>image-141cafdcb24</diskimageId>
    <diskimageName>RHEL62X8664</diskimageName>
    <hostName>VTAFRIXZ530001</hostName>
    <resource>
      <name>papi-TAFRIXZ53-S-0001</name>
    </resource>
    <disks>
      <disk>
        <attachedTo>papi-TAFRIXZ53-S-0001</attachedTo>
        <creator>papi</creator>
        <size>0.2</size>
        <diskId>papi-TAFRIXZ53-D-0001</diskId>
        <diskName>DISK0</diskName>
      </disk>
    </disks>
    <lserverId>papi-TAFRIXZ53-S-0001</lserverId>
    <lserverName>PRE_IMG</lserverName>
    <serverType>sample_medium</serverType>
  </lserver>
</GetLServerAttributesResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.14 GetLServerConfiguration (Gets Configuration Information for a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLServerConfiguration** - Gets Configuration Information for a Server

[Linux Manager]
/opt/FJSVcfmg/bin/GetLServerConfiguration.sh - Gets Configuration Information for a Server

Format

[Windows Manager]

GetLServerConfiguration -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

[Linux Manager]

GetLServerConfiguration.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

Description

This command gets configuration information for a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
>GetLServerConfiguration.bat -version 2.0 -locale en -orgId tenantD -userId manage1 -password
manage1 -lplatformId tenantD-HY43YHSWA -lserverId tenantD-HY43YHSWA-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetLServerConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lserver>
    <cpuPerf>1.4</cpuPerf>
    <cpuReserve>0.8</cpuReserve>
    <cpuShare>800</cpuShare>
    <creator>tenantD</creator>
    <diskimageId>image-13f2b6162a3</diskimageId>
    <diskimageName>g-vm-0002</diskimageName>
    <hostName>VHY43YHSWA0001</hostName>
    <image>
      <cpuBit>64</cpuBit>
      <id>image-13f2b6162a3</id>
      <maxCpuPerf>1.4</maxCpuPerf>
      <maxDiskSize>500.0</maxDiskSize>
```

```
    <maxMemorySize>2.0</maxMemorySize>
    <maxSysvolSize>70.0</maxSysvolSize>
    <numOfMaxCpu>1</numOfMaxCpu>
    <numOfMaxDisk>5</numOfMaxDisk>
    <numOfMaxNic>1</numOfMaxNic>
    <serverApplication>WEB</serverApplication>
    <serverCategory>GENERAL</serverCategory>
    <softwares>
      <software>
        <category>OS</category>
        <license/>
        <name>Windows Server 2008 R2 Enterprise</name>
        <officialVersion/>
        <patch/>
        <softwareId>SW00000007</softwareId>
        <support/>
        <version>6.1</version>
      </software>
    </softwares>
    <sysvolSize>70.0</sysvolSize>
    <vmType>VMware</vmType>
  </image>
  <lserverType>Virtual</lserverType>
  <memoryReserve>1.0</memoryReserve>
  <memoryShare>2000</memoryShare>
  <memorySize>2.0</memorySize>
  <numOfCpu>1</numOfCpu>
  <pool>/VMPool</pool>
  <priority>128</priority>
  <resource>
    <name>tenantD-HY43YHSWA-S-0001</name>
  </resource>
  <snapshotExist>false</snapshotExist>
  <storagePool>/StoragePool</storagePool>
  <sysvolSize>70.0</sysvolSize>
  <disks>
    <disk>
      <attachedTo>tenantD-HY43YHSWA-S-0001</attachedTo>
      <creator>tenantD</creator>
      <size>400.0</size>
      <storagePool>/StoragePool</storagePool>
      <diskId>tenantD-HY43YHSWA-D-0001</diskId>
      <diskName>DISK0</diskName>
    </disk>
    <disk>
      <attachedTo>tenantD-HY43YHSWA-S-0001</attachedTo>
      <creator>tenantD</creator>
      <size>500.0</size>
      <storagePool>/StoragePool</storagePool>
      <diskId>tenantD-HY43YHSWA-D-0002</diskId>
      <diskName>DISK1</diskName>
    </disk>
  </disks>
  <vmType>VMware</vmType>
  <nics>
    <nic>
      <management>1</management>
      <networkId>HY43YHSWA-N-360r#FWS#</networkId>
      <nicNo>1</nicNo>
      <privateIp>192.168.21.60</privateIp>
    </nic>
  </nics>
  <lserverId>tenantD-HY43YHSWA-S-0001</lserverId>
```

```
    <lserverName>AP1</lserverName>
    <serverType>over_commit</serverType>
  </lserver>
</GetLServerConfigurationResponse>
```

[Linux Manager]

```
# GetLServerConfiguration.sh -version 2.0 -locale en -orgId tenantD -userId manage1 -password
manage1 -lplatformId tenantD-HY43YHSWA -lserverId tenantD-HY43YHSWA-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetLServerConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lserver>
    <cpuPerf>1.4</cpuPerf>
    <cpuReserve>0.8</cpuReserve>
    <cpuShare>800</cpuShare>
    <creator>tenantD</creator>
    <diskimageId>image-13f2b6162a3</diskimageId>
    <diskimageName>g-vm-0002</diskimageName>
    <hostName>VHY43YHSWA0001</hostName>
    <image>
      <cpuBit>64</cpuBit>
      <id>image-13f2b6162a3</id>
      <maxCpuPerf>1.4</maxCpuPerf>
      <maxDiskSize>500.0</maxDiskSize>
      <maxMemorySize>2.0</maxMemorySize>
      <maxSysvolSize>70.0</maxSysvolSize>
      <numOfMaxCpu>1</numOfMaxCpu>
      <numOfMaxDisk>5</numOfMaxDisk>
      <numOfMaxNic>1</numOfMaxNic>
      <serverApplication>WEB</serverApplication>
      <serverCategory>GENERAL</serverCategory>
      <softwares>
        <software>
          <category>OS</category>
          <license/>
          <name>Windows Server 2008 R2 Enterprise</name>
          <officialVersion/>
          <patch/>
          <softwareId>SW00000007</softwareId>
          <support/>
          <version>6.1</version>
        </software>
      </softwares>
      <sysvolSize>70.0</sysvolSize>
      <vmType>VMware</vmType>
    </image>
    <lserverType>Virtual</lserverType>
    <memoryReserve>1.0</memoryReserve>
    <memoryShare>2000</memoryShare>
    <memorySize>2.0</memorySize>
    <numOfCpu>1</numOfCpu>
    <pool>/VMPool</pool>
    <priority>128</priority>
    <resource>
      <name>tenantD-HY43YHSWA-S-0001</name>
    </resource>
    <snapshotExist>false</snapshotExist>
    <storagePool>/StoragePool</storagePool>
    <sysvolSize>70.0</sysvolSize>
    <disks>
      <disk>
```

```
        <attachedTo>tenantD-HY43YHSWA-S-0001</attachedTo>
        <creator>tenantD</creator>
        <size>400.0</size>
        <storagePool>/StoragePool</storagePool>
        <diskId>tenantD-HY43YHSWA-D-0001</diskId>
        <diskName>DISK0</diskName>
      </disk>
      <disk>
        <attachedTo>tenantD-HY43YHSWA-S-0001</attachedTo>
        <creator>tenantD</creator>
        <size>500.0</size>
        <storagePool>/StoragePool</storagePool>
        <diskId>tenantD-HY43YHSWA-D-0002</diskId>
        <diskName>DISK1</diskName>
      </disk>
    </disks>
    <vmType>VMware</vmType>
    <nics>
      <nic>
        <management>1</management>
        <networkId>HY43YHSWA-N-360r#FWS#</networkId>
        <nicNo>1</nicNo>
        <privateIp>192.168.21.60</privateIp>
      </nic>
    </nics>
    <lserverId>tenantD-HY43YHSWA-S-0001</lserverId>
    <lserverName>AP1</lserverName>
    <serverType>over_commit</serverType>
  </lserver>
</GetLServerConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.15 GetLServerInitialPassword (Gets the Password for the Initial Administrator for the Operating System of a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLServerInitialPassword** - Gets the Password for the Initial Administrator for the Operating System of a Server

[Linux Manager]
/opt/FJSVcfmg/bin/GetLServerInitialPassword.sh - Gets the Password for the Initial Administrator for the Operating System of a Server

Format

[Windows Manager]

GetLServerInitialPassword -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

[Linux Manager]

GetLServerInitialPassword.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

Description

This command gets the initial password for the administrator for the operating system of a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetLServerInitialPassword -version 2.0 -locale en -userId user3 -password password -orgId tenantA
-lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetLServerInitialPasswordResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <initialPassword>password</initialPassword>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</GetLServerInitialPasswordResponse>
```

[Linux Manager]

```
# GetLServerInitialPassword.sh -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetLServerInitialPasswordResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <initialPassword>password</initialPassword>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
```

```
  <responseStatus>SUCCESS</responseStatus>
</GetLServerInitialPasswordResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.16 GetLServerStatus (Gets the Status of a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetLServerStatus** - Gets the Status of a Server

[Linux Manager]
/opt/FJSVcfmg/bin/GetLServerStatus.sh - Gets the Status of a Server

Format

[Windows Manager]

```
GetLServerStatus -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID
```

[Linux Manager]

```
GetLServerStatus.sh -version version_ID -locale the_language_for_communicating -userId user_ID -
password password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID
```

Description

This command gets status information for a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetLServerStatus -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetLServerStatusResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lserverStatus>RUNNING</lserverStatus>
</GetLServerStatusResponse>
```

[Linux Manager]

```
# GetLServerStatus.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetLServerStatusResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lserverStatus>RUNNING</lserverStatus>
</GetLServerStatusResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.17 GetSnapshotHistory (Gets a History of Snapshots and Restorations)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\GetSnapshotHistory** - Gets a History of Snapshots and Restorations

[Linux Manager]
/opt/FJSVcfmg/bin/GetSnapshotHistory.sh - Gets a History of Snapshots and Restorations

Format

[Windows Manager]

GetSnapshotHistory -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform ID* **-lserverId** *server ID*

[Linux Manager]

GetSnapshotHistory.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

Description

This command gets a history of snapshots and restorations.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> GetSnapshotHistory -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetSnapshotHistoryResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <histories>
    <history>
      <action>SNAPSHOT</action>
      <endTime>2013/10/19 19:47:09</endTime>
      <progress>100</progress>
      <snapshotId>rorv3-66_1752</snapshotId>
      <startTime>2013/10/19 19:46:32</startTime>
      <status>completed</status>
    </history>
    <history>
      <action>RESTORE</action>
      <endTime>2013/10/19 19:48:14</endTime>
      <progress>100</progress>
      <snapshotId>rorv3-66_1752</snapshotId>
      <startTime>2013/10/19 19:47:38</startTime>
```

```
      <status>completed</status>
    </history>
  </histories>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</GetSnapshotHistoryResponse>
```

[Linux Manager]

```
# GetSnapshotHistory.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<GetSnapshotHistoryResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <histories>
    <history>
      <action>SNAPSHOT</action>
      <endTime>2013/10/19 19:47:09</endTime>
      <progress>100</progress>
      <snapshotId>rorv3-66_1752</snapshotId>
      <startTime>2013/10/19 19:46:32</startTime>
      <status>completed</status>
    </history>
    <history>
      <action>RESTORE</action>
      <endTime>2013/10/19 19:48:14</endTime>
      <progress>100</progress>
      <snapshotId>rorv3-66_1752</snapshotId>
      <startTime>2013/10/19 19:47:38</startTime>
      <status>completed</status>
    </history>
  </histories>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</GetSnapshotHistoryResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.18 ListLServer (Gets a List of Servers in an L-Platform)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListLServer** - Gets a List of Servers in an L-Platform

[Linux Manager]
/opt/FJSVcfmg/bin/ListLServer.sh - Gets a List of Servers in an L-Platform

Format

[Windows Manager]

ListLServer -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

[Linux Manager]

ListLServer.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID*

Description

This command gets a list of server IDs within an L-Platform.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
>ListLServer -version 2.0 -locale en -orgId tenantD -userId manage1 -password manage1 -lplatformId
tenantD-HY43YHSWA
<?xml version="1.0" encoding="UTF-8"?>
<ListLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lservers>
    <lserver>
      <creator>tenantD</creator>
      <diskimageId>image-13f2b6162a3</diskimageId>
      <diskimageName>g-vm-0002</diskimageName>
      <lserverType>Virtual</lserverType>
      <resource>
        <name>tenantD-HY43YHSWA-S-0001</name>
      </resource>
      <snapshotExist>false</snapshotExist>
      <disks>
        <disk>
          <attachedTo>tenantD-HY43YHSWA-S-0001</attachedTo>
          <creator>tenantD</creator>
```

```
          <size>400.0</size>
          <diskId>tenantD-HY43YHSWA-D-0001</diskId>
          <diskName>DISK0</diskName>
        </disk>
        <disk>
          <attachedTo>tenantD-HY43YHSWA-S-0001</attachedTo>
          <creator>tenantD</creator>
          <size>500.0</size>
          <diskId>tenantD-HY43YHSWA-D-0002</diskId>
          <diskName>DISK1</diskName>
        </disk>
      </disks>
      <lserverId>tenantD-HY43YHSWA-S-0001</lserverId>
      <lserverName>AP1</lserverName>
      <serverType>over_commit</serverType>
    </lserver>
    <lserver>
      <creator>tenantD</creator>
      <diskimageId>image-13bb0a794a0</diskimageId>
      <diskimageName>g-vm-0001</diskimageName>
      <lserverType>Virtual</lserverType>
      <resource>
        <name>tenantD-HY43YHSWA-S-0002</name>
      </resource>
      <snapshotExist>false</snapshotExist>
      <disks/>
      <lserverId>tenantD-HY43YHSWA-S-0002</lserverId>
      <lserverName>AP2</lserverName>
      <serverType>over_commit_large</serverType>
    </lserver>
    <lserver>
      <creator>tenantD</creator>
      <diskimageId>image-142128952ad</diskimageId>
      <diskimageName>g-physical-0002</diskimageName>
      <lserverType>Physical</lserverType>
      <resource>
        <name>tenantD-HY43YHSWA-S-0003</name>
      </resource>
      <snapshotExist>false</snapshotExist>
      <disks/>
      <lserverId>tenantD-HY43YHSWA-S-0003</lserverId>
      <lserverName>Physical-more-nic</lserverName>
      <serverType>Middle_Spec</serverType>
    </lserver>
  </lservers>
</ListLServerResponse>
```

[Linux Manager]

```
# ListLServer.sh -version 2.0 -locale en -orgId tenantD -userId manage1 -password manage1 -
lplatformId tenantD-HY43YHSWA
<?xml version="1.0" encoding="UTF-8"?>
<ListLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <lservers>
    <lserver>
      <creator>tenantD</creator>
      <diskimageId>image-13f2b6162a3</diskimageId>
      <diskimageName>g-vm-0002</diskimageName>
      <lserverType>Virtual</lserverType>
      <resource>
        <name>tenantD-HY43YHSWA-S-0001</name>
```

```
      </resource>
      <snapshotExist>false</snapshotExist>
      <disks>
        <disk>
          <attachedTo>tenantD-HY43YHSWA-S-0001</attachedTo>
          <creator>tenantD</creator>
          <size>400.0</size>
          <diskId>tenantD-HY43YHSWA-D-0001</diskId>
          <diskName>DISK0</diskName>
        </disk>
        <disk>
          <attachedTo>tenantD-HY43YHSWA-S-0001</attachedTo>
          <creator>tenantD</creator>
          <size>500.0</size>
          <diskId>tenantD-HY43YHSWA-D-0002</diskId>
          <diskName>DISK1</diskName>
        </disk>
      </disks>
      <lserverId>tenantD-HY43YHSWA-S-0001</lserverId>
      <lserverName>AP1</lserverName>
      <serverType>over_commit</serverType>
    </lserver>
    <lserver>
      <creator>tenantD</creator>
      <diskimageId>image-13bb0a794a0</diskimageId>
      <diskimageName>g-vm-0001</diskimageName>
      <lserverType>Virtual</lserverType>
      <resource>
        <name>tenantD-HY43YHSWA-S-0002</name>
      </resource>
      <snapshotExist>false</snapshotExist>
      <disks/>
      <lserverId>tenantD-HY43YHSWA-S-0002</lserverId>
      <lserverName>AP2</lserverName>
      <serverType>over_commit_large</serverType>
    </lserver>
    <lserver>
      <creator>tenantD</creator>
      <diskimageId>image-142128952ad</diskimageId>
      <diskimageName>g-physical-0002</diskimageName>
      <lserverType>Physical</lserverType>
      <resource>
        <name>tenantD-HY43YHSWA-S-0003</name>
      </resource>
      <snapshotExist>false</snapshotExist>
      <disks/>
      <lserverId>tenantD-HY43YHSWA-S-0003</lserverId>
      <lserverName>Physical-more-nic</lserverName>
      <serverType>Middle_Spec</serverType>
    </lserver>
  </lservers>
</ListLServerResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.19 ListSnapshot (Gets a List of Snapshots)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListSnapshot** - Gets a List of Snapshots

[Linux Manager]
/opt/FJSVcfmg/bin/ListSnapshot.sh - Gets a List of Snapshots

Format

[Windows Manager]

```
ListSnapshot -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID
```

[Linux Manager]

```
ListSnapshot.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID
```

Description

This command gets a list of snapshots.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListSnapshot -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<ListSnapshotResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <snapshots>
    <snapshot>
      <comment>setup</comment>
      <snapshotId>image000001</snapshotId>
      <snapshotTime>2010-11-12 10:00:11</snapshotTime>
    </snapshot>
    <snapshot>
      <comment>register</comment>
      <snapshotId>image000002</snapshotId>
      <snapshotTime>2010-11-12 20:00:11</snapshotTime>
    </snapshot>
  </snapshots>
</ListSnapshotResponse>
```

[Linux Manager]

```
# ListSnapshot.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<ListSnapshotResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <snapshots>
    <snapshot>
      <comment>setup</comment>
      <snapshotId>image000001</snapshotId>
      <snapshotTime>2010-11-12 10:00:11</snapshotTime>
    </snapshot>
    <snapshot>
      <comment>register</comment>
      <snapshotId>image000002</snapshotId>
      <snapshotTime>2010-11-12 20:00:11</snapshotTime>
    </snapshot>
  </snapshots>
</ListSnapshotResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.20 RestoreLServer (Restores a Server from a Snapshot)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\RestoreLServer** - Restores a Server from a Snapshot

[Linux Manager]
/opt/FJSVcfmg/bin/RestoreLServer.sh - Restores a Server from a Snapshot

Format

[Windows Manager]

RestoreLServer -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-snapshotId** *snapshot_ID*

[Linux Manager]

RestoreLServer.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-snapshotId** *snapshot_ID*

Description

This command restores a server to the status of a snapshot.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-snapshotId

Specify the snapshot ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> RestoreLServer -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -snapshotId snap01
<?xml version="1.0" encoding="UTF-8"?>
```

```
<RestoreLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</RestoreLServerResponse>
```

[Linux Manager]

```
# RestoreLServer.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -snapshotId snap01
<?xml version="1.0" encoding="UTF-8"?>
<RestoreLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</RestoreLServerResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.21 StartLServer (Starts a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\StartLServer** - Starts a Server

[Linux Manager]
/opt/FJSVcfmg/bin/StartLServer.sh - Starts a Server

Format

[Windows Manager]

StartLServer -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

[Linux Manager]

StartLServer.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID*

Description

This command starts the operating system in a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> StartLServer -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<StartLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StartLServerResponse>
```

[Linux Manager]

```
# StartLServer.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001
<?xml version="1.0" encoding="UTF-8"?>
<StartLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StartLServerResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.22 StopLServer (Stops a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\StopLServer** - Stops a Server

[Linux Manager]
/opt/FJSVcfmg/bin/StopLServer.sh - Stops a Server

Format

[Windows Manager]

```
StopLServer -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID [-force
forcibly_terminate_the_server]
```

[Linux Manager]

```
StopLServer.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID [-force
forcibly_terminate_the_server]
```

Description

This command stops the operating system in a server.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-force (optional)

Specify whether to terminate the server forcibly.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> StopLServer -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -force true
<?xml version="1.0" encoding="UTF-8"?>
<StopLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StopLServerResponse>
```

[Linux Manager]

```
# StopLServer.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -force true
<?xml version="1.0" encoding="UTF-8"?>
<StopLServerResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</StopLServerResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.23 UpdateIPAddress (Updates a Server IP Address)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\UpdateIPAddress - Updates a Server IP Address**

[Linux Manager]
/opt/FJSVcfmg/bin/UpdateIPAddress.sh - Updates a Server IP Address

Format

[Windows Manager]

UpdateIPAddress -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-nicNo** *NIC_serial_number* **-ipAddress** *IP_address_after_update*

[Linux Manager]

UpdateIPAddress.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **-nicNo** *NIC_serial_number* **-ipAddress** *IP_address_after_update*

Description

This command updates the IP address allocated to the server.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.

When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".
- The target server is a physical server.
- The target NIC is the distribution target of an SLB.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-nicNo

Specify the NIC sequential number (an integer equal to or greater than "1") to update the IP address of.

-ipAddresse

Specify the IP address after update.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> UpdateIPAddress -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -nicNo 2 -ipAddress 192.168.10.10
<?xml version="1.0" encoding="UTF-8"?>
<UpdateLServerConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
```

```
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateLServerConfigurationResponse>
```

[Linux Manager]

```
# UpdateIPAddress.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -nicNo 2 -ipAddress 192.168.10.10
<?xml version="1.0" encoding="UTF-8"?>
<UpdateLServerConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateLServerConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.24 UpdateLServerAttributes (Updates the Attributes of a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\UpdateLServerAttributes** - Updates the Attributes of a Server

[Linux Manager]
/opt/FJSVcfmg/bin/UpdateLServerAttributes.sh - Updates the Attributes of a Server

Format

[Windows Manager]

UpdateLServerAttributes -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* [**-lserverName** *server_name*] [**-hostName** *the_host_name_of_the_server*]

[Linux Manager]

UpdateLServerAttributes.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* [**-lserverName** *server_name*] [**-hostName** *the_host_name_of_the_server*]

Description

This command updates the attributes of a server.

The attributes that can be updated are the server name and the host name. Either the server name or the host name must be specified.
When "host-name-method=2(server name)", if only the server name is specified the host name will be changed to the same name as the server name. When the host name is specified, it will be changed to the specified name.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-lserverName (optional)

Specify the server name.

-hostName (optional)

Specify the host name of the server.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> UpdateLServerAttributes -version 2.0 -locale en -userId user3 -password password -orgId tenantA
-lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -lserverName testserver2
<?xml version="1.0" encoding="UTF-8"?>
<UpdateLServerConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateLServerConfigurationResponse>
```

[Linux Manager]

```
# UpdateLServerAttributes.sh -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -lserverName testserver2
<?xml version="1.0" encoding="UTF-8"?>
<UpdateLServerConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
```

```
  <responseStatus>SUCCESS</responseStatus>
</UpdateLServerConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.3.25 UpdateLServerConfiguration (Changes the Performance of a Server)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\UpdateLServerConfiguration** - Changes the Performance of a Server

[Linux Manager]
/opt/FJSVcfmg/bin/UpdateLServerConfiguration.sh - Changes the Performance of a Server

Format

[Windows Manager]

UpdateLServerConfiguration -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **[-cpuPerf** *CPU_performance*] **[-numOfCpu** *number_of_CPUs*] **[-cpuReserve** *CPU_reserve_performance*] **[-cpuShare** *CPU_share*] **[-memorySize** *memory_size*] **[-memoryReserve** *memory_reserve_size*] **[-memoryShare** *memory_share*] **[-serverType** *server_type*] **[-priority** *startup_priority_when_using_batch_power_control*]

[Linux Manager]

UpdateLServerConfiguration.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name* **-lplatformId** *L-Platform_ID* **-lserverId** *server_ID* **[-cpuPerf** *CPU_performance*] **[-numOfCpu** *number_of_CPUs*] **[-cpuReserve** *CPU_reserve_performance*] **[-cpuShare** *CPU_share*] **[-memorySize** *memory_size*] **[-memoryReserve** *memory_reserve_size*] **[-memoryShare** *memory_share*] **[-serverType** *server_type*] **[-priority** *startup_priority_when_using_batch_power_control*]

Description

This command changes the performance of a virtual server.

This command cannot be executed for a physical server.
Always specify any one of the following:

- cpuPerf
- numOfCpu
- cpuReserve
- cpuShare
- memorySize
- memoryReserve
- memoryShare
- serverType

- priority

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which reconfiguration and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-cpuPerf (optional)

Specify CPU performance.

-numOfCpu (optional)

Specify the number of CPUs.

-cpuReserve (optional)

Specify CPU reserve performance.
When using Resource Orchestrator and server virtualization software, if the recognized physical CPU performance values are different, specify a value less than the smaller of the two.

-cpuShare (optional)

[When VM type is VMware]

Specify the CPU share.

[When VM type is Hyper-V]

Specify CPU weight.

-memorySize (optional)

Specify memory size.

-memoryReserve (optional)

[When VM type is VMware]

Specify memory reserve size.

[When VM type is Hyper-V]

Specify memory reserve size.

-memoryShare (optional)

[When VM type is VMware]

Specify memory share.

[When VM type is Hyper-V]

Specify memory weight.

-serverType (optional)

Specify the server type.

-priority (optional)

Specify the startup priority when using batch power control.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> UpdateLServerConfiguration -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -cpuPerf 1.4 -
cpuReserve 1.0 -memorySize 2.0 -memoryReserve 1.0 -priority 128
<?xml version="1.0" encoding="UTF-8"?>
<UpdateLServerConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateLServerConfigurationResponse>
```

[Linux Manager]

```
# UpdateLServerConfiguration.sh -version 2.0 -locale en -userId user3 -password password -orgId
tenantA -lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -cpuPerf 1.4 -
cpuReserve 1.0 -memorySize 2.0 -memoryReserve 1.0 -priority 128
<?xml version="1.0" encoding="UTF-8"?>
<UpdateLServerConfigurationResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</UpdateLServerConfigurationResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.4 Operations on Additional Disks

This section explains the L-Platform APIs commands relating to operations on additional disks.

14.4.1 AttachDisk (Attaches an Existing Disk)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\AttachDisk** - Attaches an Existing Disk

[Linux Manager]
/opt/FJSVcfmg/bin/AttachDisk.sh - Attaches an Existing Disk

Format

[Windows Manager]

```
AttachDisk -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskResourceId
the_resource_ID_of_the_existing_disk -diskName the_name_of_the_existing_disk
```

[Linux Manager]

```
AttachDisk.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskResourceId
the_resource_ID_of_the_existing_disk -diskName the_name_of_the_existing_disk
```

Description

This command attaches an existing extension disk to a server.
Use ListDisk to get a list of existing disks to attach.
This command can only be executed on physical servers and servers with RHEL-KVM or OVM for SPARC server virtualization software.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-diskResourceId

Specify the resource ID of the existing disk to be attached.

-diskName

Specify the display name of the existing disk to be attached.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> AttachDisk -version 2.0 -locale en -userId user3 -password password -orgId tenantD -lplatformId
tenantD-HY43YHSWA -lserverId tenantD-HY43YHSWA-S-0001 -diskResourceId diskresource01 -diskName
DISK01
<?xml version="1.0" encoding="UTF-8"?>
<AttachDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <diskId>tenantD-HY43YHSWA-D-0003</diskId>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</AttachDiskResponse>
```

[Linux Manager]

```
# AttachDisk.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantD -
lplatformId tenantD-HY43YHSWA -lserverId tenantD-HY43YHSWA-S-0001 -diskResourceId diskresource01 -
diskName DISK01
<?xml version="1.0" encoding="UTF-8"?>
<AttachDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <diskId>tenantD-HY43YHSWA-D-0003</diskId>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</AttachDiskResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.4.2 CreateDisk (Adds Additional Disks)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\CreateDisk** - Adds Additional Disks

[Linux Manager]
/opt/FJSVcfmg/bin/CreateDisk.sh - Adds Additional Disks

Format

[Windows Manager]

```
CreateDisk -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskSize
size_of_the_extension_disk  -diskName the_name_of_the_extension_disk [-storagePool
the_resource_name_of_the_storage_pool]
```

[Linux Manager]

```
CreateDisk.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskSize
size_of_the_extension_disk_to_be_attached -diskName the_name_of_the_extension_disk [-storagePool
the_resource_name_of_the_storage_pool]
```

Description

This command attaches a new extension disk to a server.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-diskSize

Specify the size of the expansion disk to be attached.

-diskName

Specify the name of the expansion disk to be attached.

-storagePool (optional)

Specify the resource name of the storage pool creating the expansion disk.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> CreateDisk -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -diskSize 20 -diskName DISK01 -storagePool /
StoragePool
<?xml version="1.0" encoding="UTF-8"?>
<CreateDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <diskId>tenantA-M3PGGWCFX-D-0001</diskId>
</CreateDiskResponse>
```

[Linux Manager]

```
# CreateDisk.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -diskSize 20 -diskName DISK01 -
storagePool /StoragePool
<?xml version="1.0" encoding="UTF-8"?>
<CreateDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
  <diskId>tenantA-M3PGGWCFX-D-0001</diskId>
</CreateDiskResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.4.3 DestroyDisk (Deletes Additional Disks)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\DestroyDisk** - Deletes Additional Disks

[Linux Manager]
/opt/FJSVcfmg/bin/DestroyDisk.sh - Deletes Additional Disks

Format

[Windows Manager]

```
DestroyDisk -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskId
the_ID_of_the_extension_disk
```

[Linux Manager]

```
DestroyDisk.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskId
the_ID_of_the_extension_disk
```

Description

This command removes an extension disk from a server.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

t cannot be used in the following cases:

- The target server is a Solaris Zones (Solaris11).
- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-diskId

Specify the ID of the extension disk to be removed.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> DestroyDisk -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -diskId tenantA-M3PGGWCFX-D-0001
<?xml version="1.0" encoding="UTF-8"?>
<DestroyDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyDiskResponse>
```

[Linux Manager]

```
# DestroyDisk.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -diskId tenantA-M3PGGWCFX-D-0001
<?xml version="1.0" encoding="UTF-8"?>
<DestroyDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DestroyDiskResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.4.4 DetachDisk (Detaches an Existing Disk)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\DetachDisk** - Detaches an Existing Disk

[Linux Manager]
/opt/FJSVcfmg/bin/DetachDisk.sh - Detaches an Existing Disk

Format

[Windows Manager]

```
DetachDisk -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskId
the_ID_of_the_extension_disk
```

[Linux Manager]

```
DetachDisk.sh -version version_ID -locale the_language_for_communicating -userId user_ID -password
password -orgId tenant_name -lplatformId L-Platform_ID -lserverId server_ID -diskId
the_ID_of_the_extension_disk
```

Description

This command detaches an extension disk that has been attached to a server.

This command is executed asynchronously. After the command is successfully executed, the status of the L-Platform changes to Reconfiguring (RECONFIG_ING) during the execution of the operation, and changes back to Operating Normally (NORMAL) when the operation is completed.
When the status of an L-Platform is Reconfiguring, the L-Platform cannot be operated. Use GetLPlatformStatus to check the status of the L-Platform, and execute subsequent operations after waiting for the status to change to Operating Normally.

This command cannot be executed in the following cases:

- The target server is a server for which modification configurations or deletion cannot be performed.
  For the servers for which configuration modification and deletion cannot be performed, refer to "8.3.18 L-Platform Reconfiguration" in the "User's Guide for Tenant Administrators CE".

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

-lplatformId

Specify the L-Platform ID.

-lserverId

Specify the server ID.

-diskId

Specify the ID of the extension disk to be detached.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> DetachDisk -version 2.0 -locale en -userId user3 -password password -orgId tenantA -lplatformId
tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -diskId tenantA-M3PGGWCFX-D-0001
<?xml version="1.0" encoding="UTF-8"?>
<DetachDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DetachDiskResponse>
```

[Linux Manager]

```
# DetachDisk.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA -
lplatformId tenantA-M3PGGWCFX -lserverId tenantA-M3PGGWCFX-S-0001 -diskId tenantA-M3PGGWCFX-D-0001
<?xml version="1.0" encoding="UTF-8"?>
<DetachDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</DetachDiskResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

14.4.5 ListDisk (Gets a List of Existing Disks)

Name

[Windows Manager]
*Installation_folder***RCXCFMG\bin\ListDisk** - Gets a List of Existing Disks

[Linux Manager]
/opt/FJSVcfmg/bin/ListDisk.sh - Gets a List of Existing Disks

Format

[Windows Manager]

ListDisk -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

[Linux Manager]

ListDisk.sh -version *version_ID* **-locale** *the_language_for_communicating* **-userId** *user_ID* **-password** *password* **-orgId** *tenant_name*

Description

This command gets a list of existing disks.

Options

-version

Specify the version ID of the L-Platform API.

-locale

Specify the language used to communicate with the L-Platform API.

-userId

Specify the user ID for executing the L-Platform API.

-password

Specify the password for the user ID for executing the L-Platform API.

-orgId

Specify the tenant name of the user for executing the L-Platform API.

Requirements

Permissions

User with OS administrator privilege

Location

Admin server

Example

[Windows Manager]

```
> ListDisk -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<ListDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com" >
  <disks>
    <disk>
      <comment>comment</comment>
      <diskResourceId>disk-1241</diskResourceId>
      <label>label</label>
      <locked>true</locked>
      <resourceName>small-disk</resourceName>
      <size>31.3</size>
      <status>normal</status>
      <storagePool>/StoragePool</storagePool>
    </disk>
  </disks>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ListDiskResponse>
```

[Linux Manager]

```
# ListDisk.sh -version 2.0 -locale en -userId user3 -password password -orgId tenantA
<?xml version="1.0" encoding="UTF-8"?>
<ListDiskResponse xmlns="http://cfmg.systemwalker.jp.fujitsu.com">
```

```
  <disks>
    <disk>
      <comment>comment</comment>
      <diskResourceId>disk-1241</diskResourceId>
      <label>label</label>
      <locked>true</locked>
      <resourceName>small-disk</resourceName>
      <size>31.3</size>
      <status>normal</status>
      <storagePool>/StoragePool</storagePool>
    </disk>
  </disks>
  <responseMessage>PAPI00000 Processing was completed.</responseMessage>
  <responseStatus>SUCCESS</responseStatus>
</ListDiskResponse>
```

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Part 2 File Reference

Chapter 15 XML Files

This chapter explains resource configuration information and user definition information (XML files).

15.1 Overview

This section explains the XMLs used by Resource Orchestrator.

The following types of XMLs are used by Resource Orchestrator:

- L-Server template
- L-Server
- Storage resources
- Network resources
- Network configuration information
- Resource folders
- Role
- Users
- User groups
- Tenants
- Server NIC definitions
- VMware exclusion port group definition file
- Network device model definition
- Parameter file (for scripts)
- Network device interface configuration file
- L-Platform template

XML Element Names and Content

In this section, the names and content of XML elements are described in the following format.

```
<element name>element content</element name>
<element name attribute 1="value 1" attribute 2="value 2">content</element name>
```

Element Name	Description	Remarks (Possible Values, Examples)
Element content (Element name)	Describes the content of the element.	Describes possible values or examples.
Element content (Attribute 1 or attribute 2 of the element name)	Describes the content of attribute 1 or attribute 2.	Describes possible values or examples.

Note

- Use the UTF-8 character code for XML files.

- As a rule, line breaks and blank spaces are recognized as data in XML. Make sure that there are no unnecessary line breaks or blank spaces when defining an XML file. Additionally, specify elements and attributes according to the Resource Orchestrator XML specifications. Elements and attributes 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.
- When you specify an element that does not include the element in the subordinate of the XML tag, specify an empty element instead of the end tag.

15.2 L-Server Template

This section explains L-Server template XML definitions.

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

For physical L-Servers, refer to "15.2.1 Physical L-Server Templates".
For virtual L-Servers, refer to "15.2.2 Virtual L-Server Templates".

If a template is imported without editing the L-Server template name, the content of the existing L-Server template is overwritten. If an L-Server template is imported after the name is edited from when it was exported, the L-Server template is 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 the LServerTemplates element.

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

Note

- When you specify an element that does not include the element in the subordinate of the XML tag, specify an empty element instead of the end tag.

Example

- Do not specify an end tag as shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplate name="L-Server#1 Template Name" label="Label">
  <ServerImageLink disk="Disk Deployment Settings during Image Specification(all)">
  </ServerImageLink>
  ...
</LServerTemplate>
```

- Specify an empty element tag instead of the end tag.

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplate name="L-Server#1 Template Name" label="Label">
  <ServerImageLink disk="Disk Deployment Settings during Image Specification(all)"/>
  ...
</LServerTemplate>
```

15.2.1 Physical L-Server Templates

The L-Server template for physical L-Servers is as follows:

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplates>
  <LServerTemplate name="L-Server#1 Template Name" id="L-Server Template ID" label="Label">
    <Comment>Comment</Comment>
    <FCConnectionPattern>FC connection pattern</FCConnectionPattern>
```

```
    <ServerType>Server Type</ServerType>
    <Model>Model Name</Model>
    <CPU>
      <CPUPerf>CPU Performance</CPUPerf>
      <NumOfCPU>Number of CPUs</NumOfCPU>
    </CPU>
    <Memory>
      <MemorySize>Memory Size</MemorySize>
    </Memory>
    <Disks>
      <Disk type="Disk Connection Type">
        <DiskIndex>Disk Index</DiskIndex>
        <DiskSize>Disk Size</DiskSize>
      </Disk>
    </Disks>
    <CNAs>
      <CNA num_of_functions="Number of Functions" />
    </CNAs>
    <NICs>
      <NumOfNIC>Number of NICs</NumOfNIC>
      <NIC>
        <NICIndex>NIC Index</NICIndex>
        <NetworkLinks>
          <NumOfNetworkLinks>Number of networks available for one NIC/NICGroup</
NumOfNetworkLinks>
        </NetworkLinks>
      </NIC>
    </NICs>
    <NICGroups>
      <NICGroup>
        <NICGroupIndex>NIC Redundancy Group Index</NICGroupIndex>
        <NetworkLinks>
          <NumOfNetworkLinks>Number of networks available for one NIC/NICGroup</
NumOfNetworkLinks>
        </NetworkLinks>
        <NICLinks>
          <NICLink>Numbers of NICs contained in the NIC redundancy group</NICLink>
        </NICLinks>
      </NICGroup>
    </NICGroups>
    <Policy>
      <Redundancy>Redundancy</Redundancy>
      <Repurpose>Server Automatic Release(true|false)</Repurpose>
      <SpareSelection method="Spare Server Selection Method" />
      <AliveMonitoring>AliveMonitoring Setting(true|false)</AliveMonitoring>
      <SpareServerForceOFF>Use Active spare server with forced tuning OFF(true|false)</
SpareServerForceOFF >
      <AllowForceOFF>Allow forced tuning OFF(true|false)</AllowForceOFF>
    </Policy>
  </LServerTemplate>
  <LServerTemplate name="L-Server#2 Template Name" id="L-Server Template ID" label="Label">
  ...
  </LServerTemplate>
</LServerTemplates>
```

Table 15.1 List of Items Specified in L-Server Template XML Definitions for Physical L-Servers

Element Name	Description	Remarks (Possible Values, Examples)
L-Server template name (L-ServerTemplate name)	Name of L-Server template	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").

Element Name	Description	Remarks (Possible Values, Examples)
L-Server template ID (L-ServerTemplate id)	ID for L-Server template	Optional. For internal management purposes.
Label (L-ServerTemplate label)	Label for L-Server template (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Comment (Comment)	Comment for L-Server template (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
FC connection pattern (FCConnectionPattern)	FC connection pattern file	Specify the file name of the FC connection pattern file that has been located in the following directory. (excluding those with the .rcxprop extension) For details on the FC connection pattern file, refer to "7.1 Creating Definition Files" in the "Setup Guide CE" [Windows Manager] *Installation_folder*\SVROR\Manager\etc\customize_data\fc_connection_pattern [Linux Manager] /etc/opt/FJSVrcvmr/customize_data/fc_connection_pattern For the FC connection pattern file name, enter a string that is no more than 64 characters long, where the first character is a number or letter and the remaining characters are alphanumeric characters, underscores ("_"), or hyphens ("-").
Server type (ServerType)	Type of server to allocate as an L-Server	Specify "Physical".
Model name (Model)	Model name of the server to allocate to L-Server	Specify the model name of the server to allocate to the L-Server. Specify the model name of the server after checking the basic information on the [Resource Details] tab of the server resource tree. The model name cannot be specified when the following is specified. - CPU performance - Number of CPUs - Memory size
CPU performance (CPUPerf)	CPU performance to allocate to L-Server	Specify a number with up to one decimal place, in units of gigahertz. For details on the scope which can be specified, refer to "16.2.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". CPU Performance cannot be specified when Model Name is specified.
Number of CPUs (NumOfCPU)	Number of CPUs to allocate to L-Server	Specify an integer equal to or greater than "1". For details on the scope which can be specified, refer to "16.2.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". Number of CPUs cannot be specified when Model Name is specified.
Memory size (MemorySize)	Size of memory to allocate to L-Server	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.2.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". Memory Size cannot be specified when Model Name is specified.

Element Name	Description	Remarks (Possible Values, Examples)

Disks
(Disks)
	The parent element of Disk elements	Specify the parent element of Disk elements.
		
		`<Disks>`
		`  <DiskIndex>0</DiskIndex>`
		`  <DiskSize>10.0</DiskSize>`
		`</Disks>`

Disk connection type (Disk type)	The connection method of the disk to allocate to the L-Server	- FC Specify the disk with a Fibre Channel connection to allocate. - iSCSI Specify the disk with an iSCSI connection to allocate. If omitted, "FC" is set.
Disk index (DiskIndex)	Number of the disk to allocate to the L-Server (Optional, but required when specifying disk size)	Specify an integer starting from "0". 0: Boot disk Other than 0: Data disk Specify "0" if "iSCSI" was specified for Disk Connection Type. For details of the specifiable range, refer to "15.3.1 Definition Information for Physical L-Servers (XML)". Creation of a physical L-Server with no disk specified is not possible. When not specifying a disk in the L-Server template, specify one or more disks in the XML file for the L-Server.
Disk size (DiskSize)	Size of disk to create (Optional, but required when specifying disk number)	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.2.3 [Disk] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Configuration of the converged network adapter (CNAs)	Expand the number of functions of the converged network adapter (CNA) using the UMC function. (When omitted, the UMC function is not configured)	Specify the CNA element to expand the number of functions of CNA using the UMC function. - num_of_functions="2", or "4" When enabling [Function number expansion (Onboard)], specify the value of [Number of functions per port]. **Note** When enabling [Function number expansion (Onboard)], add as many NICs as there are functions to the L-Platform template. For example, an environment with a physical server with only an onboard CNA mounted. If [Number of functions per port] is set as "2" there are four functions (two ports * 2 functions), so configuration of a total of four NICs is necessary.
NICs (NICs)	A collection of NIC definitions	Specify one or more NIC elements.
Number of NICs (NumOfNIC)	Number of NICs used for an L-Server (optional)	Specify an integer between 1 and 32.
NIC index (NICIndex)	Number to identify the NIC definition to	Specify an integer between 0 and 31 starting with "0". NIC number (NICIndex) + 1 corresponds to a network (NIC) number of the [General] tab in the [Create an L-Server] dialog.

Element Name	Description	Remarks (Possible Values, Examples)
	allocate to the L-Server (Optional, but required when specifying the NIC element)	For physical L-Servers, specify the value for the NIC number for a rack mount server or a tower server minus 1. The NIC number is defined in preparations explained in "9.3.5 Pre-configuring Managed Servers" in the "Design Guide CE". Example If "1" is defined for the NIC number placed on the upper left of the back face of a rack mount server, specify "0".
NetworkLinks (NetworkLinks)	A collection of a number of network definitions (optional)	Specify the NumOfNetworkLinks element only once. If the NetworkLinks element is omitted, a single network is set for a NIC and a NIC redundancy group.
Number of networks available for one NIC/ NICGroup (NumOfNetworkLinks)	Number of networks available for one NIC/ NICGroup (optional)	Specify an integer equal to or greater than "1". If left blank, "1" is set. The NumOfNetworkLinks element must be included within the NetworkLinks element. Only one NumOfNetworkLinks element can be included within the NetworkLinks element.
NICGroups (NICGroups)	A collection of NIC redundancy group definitions (optional)	Specify when NIC redundancy is necessary. Specify one or more NICGroup elements.
NIC redundancy group (NICGroup)	NIC redundancy group (Optional, but required when specifying the NICGroups element)	Specify a NIC redundancy group. Specify a NIC contained in the NIC group using the NICLink element.
NIC redundancy group index (NICGroupIndex)	NIC redundancy group index (Optional, but required when specifying the NICGroup element)	Specify a NIC redundancy group index. Specify for each NICGroup. Specify sequential numbers starting from "0".
NICLinks (NICLinks)	A collection of NIC definitions of a NIC redundancy group	Specify the NICLink element twice.
NIC numbers contained in the NIC redundancy group (NICLink)	NIC number contained in the NIC redundancy group (Optional, but required when specifying the NICGroup element)	Specify a NIC number contained in the NIC redundancy group. When there are multiple NICs, specify NICLink for each NIC number. Specify a set of redundancies. A NIC number cannot be shared among groups. For physical L-Servers, specify the value for the NIC number for a rack mount server or a tower server minus 1. The NIC number is defined in preparations explained in "9.3.5 Pre-configuring Managed Servers" in the "Design Guide CE". Example If "1" is defined for the NIC number placed on the upper left of the back face of a rack mount server, specify "0".

Element Name	Description	Remarks (Possible Values, Examples)
Redundancy (Redundancy)	Server redundancy to allocate to L-Servers (optional)	- None None - HA Specify when performing redundancy. If omitted and not specified when creating the L-Server, "None" is set. For details on the redundancy, refer to "16.2.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Repurpose (Repurpose)	Automatic release of servers during power off (optional)	Specify whether to automatically release the servers allocated to the L-Server, when they are powered off. - When using automatic release Specify "true". - When not using automatic release Specify "false". If omitted, no value is set. In this case, the value set in the definition file is used when creating the L-Server. For details on the definition file, refer to "17.8.1 Installation" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Spare server selection method (SpareSelection method)	Selection method for spare servers (optional)	- name_order Spare servers are selected from among servers that match the model name of the operating server, in order of physical server names. - keep_spec A server that provides the same or higher performance figures as the operating server, and the least difference in performance is selected. If omitted, a user specified server is set.
Alive Monitoring Settings (AliveMonitoring)	Alive Monitoring Settings (optional)	- When enabling alive monitoring Specify "true" - When disabling alive monitoring Specify "false" If omitted and not specified when creating the L-Server, "false" is set.
Use an active spare server with forced turning OFF (SpareServerForceOFF)	Forcibly power off a spare server that is in use, and use it (optional)	When physical servers in a spare server pool are not sufficient, configure whether to use a physical server that has "Allow forced turning off" configured, after forcibly powering off the target server. - When setting this parameter Specify "true". - When not setting this parameter Specify "false". If omitted and not specified when creating the L-Server, "false" is set.
Allow forced tuning OFF (AllowForceOFF)	Allow forced turning OFF (optional)	When physical servers in a spare server pool are not sufficient, configure whether to allow forced turning off of servers even if they are powered on. - When setting this parameter Specify "true". - When not setting this parameter

Element Name	Description	Remarks (Possible Values, Examples)
		Specify "false". If omitted and not specified when creating the L-Server, "false" is set.

Example

- L-Server Templates

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplate name="template2" label="for physical server">
  <Comment>2010/XX/XX created for work B</Comment>
  <ServerType>Physical</ServerType>
  <Model>PRIMERGY BX922 S2</Model>
  <Disks>
    <Disk>
      <DiskIndex>0</DiskIndex>
      <DiskSize>40.0</DiskSize>
    </Disk>
  </Disks>
  <Policy>
    <Redundancy>None</Redundancy>
  </Policy>
</LServerTemplate>
```

- When creating an L-Server template using detailed L-Server information

  Modify the following information.

  - Delete the Resources element
  - Modify the name attribute of the LServer element
  - Change the LServer element to the LServerTemplate element
  - Delete the CPU, CPUArch, CPUPerf, NumOfCPU, Memory, and MemorySize elements
  - Delete the name attribute of the DiskLink and Disk elements
  - Delete the NetworkLinks, NetworkLink, MacAddress, and IpAddress elements
  - Add the NICGroup, NICGroupIndex, NetworkLinks, NumOfNetworkLInks, NICLinks, NumOfNIC, and NICIndex elements when necessary

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplate name="P-Server-template" id="WIN-66N8JTJM2BD_2853" label="">
  <Comment></Comment>
  <ServerType>Physical</ServerType>
  <Model>PRIMERGY BX920 S1</Model>
  <BootType>Disk</BootType>
  <Disks>
      <Disk>
        <DiskIndex>0</DiskIndex>
        <DiskSize>20.0</DiskSize>
      </Disk>
  </Disks>
  <NICGroups>
  </NICGroups>
  <NICs>
    <NIC>
      <NICIndex>0</NICIndex>
    </NIC>
  </NICs>
```

```
  <HBAs>
    <HBA>
      <HBAIndex>0</HBAIndex>
      <WWN auto="false">20:00:00:17:42:50:00:54</WWN>
    </HBA>
  </HBAs>
  <ExternalIdentifier></ExternalIdentifier>
  <Current>
    <PhysicalServer name="chassis4-2" id="WIN-66N8JTJM2BD_83" />
  </Current>
  <ExternalProfile/>
  <Policy>
    <Redundancy>None</Redundancy>
    <Positioning>Fixed</Positioning>
    <Exclusion></Exclusion>
    <Priority>128</Priority>
    <Repurpose>false</Repurpose>
    <AliveMonitoring>false</AliveMonitoring>
  </Policy>
  <Status>
    <ResourceStatus>stop</ResourceStatus>
    <PowerStatus>off</PowerStatus>
    <AllocationStatus>attached</AllocationStatus>
    <MaintenanceMode>active</MaintenanceMode>
    <Resources>allocated</Resources>
    <ServerAllocationStatus>true</ServerAllocationStatus>
    <DiskAllocationStatus>false</DiskAllocationStatus>
    <AddressAllocationStatus>true</AddressAllocationStatus>
  </Status>
  <From>
    <PhysicalServer name="chassis4-2" id="WIN-66N8JTJM2BD_83" />
  </From>
  <Spare>
  </Spare>
</LServerTemplate>
```

15.2.2 Virtual L-Server Templates

The L-Server template for virtual L-Servers is as follows:

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplates>
  <LServerTemplate name="L-Server#1 Template Name" id="L-Server Template ID" label="Label">
    <Comment>Comment</Comment>
    <ServerImageLink disk="Disk Deployment Settings during Image Specifications(all)"
fit_disk_size="Disk Size Extension (true|false)"/>
    <ServerType>Server Type</ServerType>
    <VMType>VM Type</VMType>
    <CPU>
      <CPUArch>CPU Architecture</CPUArch>
      <CPUPerf>CPU Performance</CPUPerf>
      <NumOfCPU>Number of CPUs</NumOfCPU>
      <CPUReserve>CPU Reservation Performance</CPUReserve>
      <CPUShare>CPU Shares</CPUShare>
      <CPUWeight>CPU Allocation Priority</CPUWeight>
    </CPU>
    <Memory>
      <MemorySize>Memory Size</MemorySize>
      <MemoryReserve>Memory Reservation Capacity</MemoryReserve>
      <MemoryShare>Memory Shares</MemoryShare>
      <DynamicMemory>Dynamic Memory Settings</DynamicMemory>
```

```
      <StartupRAM>Initial Memory Size</StartupRAM>
      <MemoryBuffer>Memory Buffer</MemoryBuffer>
      <MemoryWeight>Memory Allocation Priority</MemoryWeight>
    </Memory>
    <Disks>
      <Disk>
        <DiskIndex>Disk Index</DiskIndex>
        <DiskSize>Disk Size</DiskSize>
      </Disk>
    </Disks>
    <NICs>
      <NumOfNIC>Number of NICs</NumOfNIC>
    </NICs>
    <Policy>
      <Redundancy>Redundancy</Redundancy>
      <Positioning>Positioning</Positioning>
      <Repurpose>Server Automatic Release(true|false)</Repurpose>
      <OverCommit>Enabling/Disabling Overcommit</OverCommit>
      <AliveMonitoring>AliveMonitoring Setting(true|false)</AliveMonitoring>
    </Policy>
    <OSSetting>
      <GUIRunOnce>GUIRunOnce command file name</GUIRunOnce>
      <ActiveDirectory join="Enable/Disable participation in the Active Directory domain"/>
    </OSSetting>
  </LServerTemplate>
  <LServerTemplate name="L-Server#2 Template Name" id="L-Server Template ID" label="Label">
  ...
  </LServerTemplate>
</LServerTemplates>
```

Table 15.2 List of Items Specified in L-Server Template XML Definitions for Virtual L-Servers

Element Name	Description	Remarks (Possible Values, Examples)
L-Server template name (LServerTemplate name)	Name of L-Server template	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
L-Server template ID (LServerTemplate id)	ID for L-Server template	Optional. For internal management purposes.
Label (LServerTemplate label)	Label for L-Server template (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Comment (Comment)	Comment for L-Server template (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
Disk deployment settings during image specification (disk)	Disk deployment settings held by images (optional)	"all" Create an L-Server with the same disk configuration as an image. When omitted, only system disks for images are deployed. Enabled when VM type is set to "VMware" or "Hyper-V".
Increasing disk capacity (fit_disk_size)	Configure the same size as the disk capacity of the image (optional)	- true (by default) Create a virtual L-Server with the same disk capacity as that of the image. - false Compare the disk size of the image and the disk size specified for the DiskSize element, and create an L-Server disk with the larger disk capacity.

Element Name	Description	Remarks (Possible Values, Examples)
		When the VM type is "VMware" or "Hyper-V", disk size expansion can be specified. When omitted, the disk capacity of the image is set. This specification is valid only when specifying images during L-Server creation. When creating an L-Server, if increasing the data disk space included in images, set "all" for [ServerImageLink].
Server type (ServerType)	Type of server to allocate as an L-Server	Specify "Virtual".
VM type (VMType)	Type of VM to allocate as an L-Server (optional)	- VMware - Hyper-V - RHEL-Xen - RHEL-KVM - Oracle VM - Solaris Containers - Citrix-Xen - OVM-x86 - OVM-SPARC If omitted, it must be specified when creating the L-Server.
CPU architecture (CPUArch)	CPU architecture of the server to allocate to the L-Server (optional)	[VMware] [Hyper-V] [KVM] [Xen] [OVM for x86 2.2] [Citrix Xen] [OVM for x86 3.x] Specify IA. [Solaris Zones] [OVM for SPARC] Specify SPARC. When omitted, it is automatically configured according to the VM type. If the VM type is not specified, "IA" is automatically configured.
CPU performance (CPUPerf)	CPU performance to allocate to L-Server	Specify a number with up to one decimal place, in units of gigahertz. When "OVM-SPARC" is specified as the VM type, this can be omitted. For details on the scope which can be specified, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Number of CPUs (NumOfCPU)	Number of CPUs to allocate to L-Server	Specify an integer equal to or greater than "1". For details on the scope which can be specified, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
CPU reservation performance (*1, *2) (CPUReserve)	The minimum number of CPU resources to be allocated to an L-Server (Optional)	Specify a number with up to one decimal place, in units of gigahertz. Specify a value in the range from "0" to the upper limit of the CPU performance. If left blank, "0" is set when creating the L-Server. When using Resource Orchestrator and server virtualization software, if the recognized physical CPU performance values are different, specify a value less than the smaller of the two.

Element Name	Description	Remarks (Possible Values, Examples)
CPU shares (*1) (CPUShare)	The relative proportion for allocation of CPU resources on an L-Server (optional)	Specify an integer equal to or greater than "1". (*3) If left blank, the value of "the number of CPUs multiplied by 1,000" is set when creating the L-Server.
CPU allocation priority (*2) (CPUWeight)	CPU allocation priority (optional)	Specify an integer between 1 and 10000. If left blank, "100" is set when creating the L-Server. The upper limit is not checked. [Citrix Xen] Specify an integer between 1 and 65535. If omitted, no value is set.
Memory size (MemorySize)	Size of memory to allocate to L-Server	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". [OVM for x86 3.x] Specify a number between 0.3 and 1024.
Memory reservation capacity (*1) (MemoryReserve)	The minimum amount of memory resources to be reserved for an L-Server (optional)	Specify a number with up to one decimal place, in units of gigabytes. Specify a value in the range from "0" to the upper limit of Memory Size. If left blank, the value specified for Memory Size is set when creating the L-Server. (*4)
Memory shares (*1) (MemoryShare)	The relative proportion for allocation of memory resources on an L-Server (optional)	Specify an integer equal to or greater than "0". (*3) If left blank, the number determined by multiplying the value specified for Memory Size by 1024 by 10 is set when creating the L-Server.
Dynamic memory settings (*2) (DynamicMemory)	Dynamic memory settings (optional)	- When enabling dynamic memory Specify "true". - When disabling dynamic memory Specify "false". If left blank, the value differs depending on the setting values for Initial Memory Size and Memory Buffer. - Initial Memory Size and Memory Buffer are already set "true" is set. - Initial Memory Size and Memory Buffer are not set No value is set. When the command is executed, "on" is displayed for expressing the enabled status and "off" for the disabled status. If left blank, no value is displayed. When this element is not configured while exporting an L-Server template, this element will not be output.
Initial memory size (*2) (StartupRAM)	Initial memory size (optional)	Specify the memory size in the range of 0.1 to the value specified for Memory Size. If left blank, the value specified for Memory Size is set when dynamic memory is enabled in L-Server creation. If dynamic memory is disabled when creating an L-Server, the specified value is ignored.

Element Name	Description	Remarks (Possible Values, Examples)
Memory buffer (*2) (MemoryBuffer)	Available memory to be reserved as a buffer (%) (optional)	Specify an integer between 5 and 2000. If left blank, "20" is set when the dynamic memory is enabled in L-Server creation. The upper limit is not checked. If dynamic memory is disabled when creating an L-Server, the specified value is ignored.
Memory allocation priority (*2) (MemoryWeight)	Memory allocation priority (optional)	Specify an integer between 0 and 10000. The upper limit is not checked. If left blank, "5000" is set when creating the L-Server.
Disk index (*1) (DiskIndex)	Number of the disk to allocate to the L-Server (Optional, but required when specifying disk size)	Specify an integer starting from "0". 0: Boot disk Other than 0: Data disk For data disks, specify the value consecutively starting from one. For details of the specifiable range, refer to "15.3.2 Definition Information for Virtual L-Servers (XML)". Creation of a virtual L-Server with no disk specified nor cloning image deployed is not possible. When not specifying a disk in the L-Server template, specify one or more disks in the XML file for the L-Server, or specify a cloning image.
Disk size (*5) (DiskSize)	Size of disk to create (Optional, but required when specifying disk number)	Specify a number with up to one decimal place, in units of gigabytes. If omitted, a disk size is assigned according to the size of the image specified when creating the L-Server. For details on the scope which can be specified, refer to "16.3.3 [Disk] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". When all is specified in "ServerImageLink", and an image is specified, priority is given to the disk capacity of the image, and a disk is created.
Number of NICs (NumOfNIC)	Number of NICs used for an L-Server (optional)	Specify an integer equal to or greater than "1".
Redundancy (Redundancy)	Server redundancy to allocate to L-Servers (optional)	- None No redundancy - HA Places in a server with HA set When "Solaris Containers" or "OVM-SPARC" is specified for the VM type, it is placed in a server which has a spare server If omitted and not specified when creating the L-Server, "None" is set. For details on the redundancy, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". When "RHEL-Xen" or "RHEL-KVM" has been specified for the VM type, only "None" can be specified.
Positioning (Positioning)	Physical location of the server to allocate to L-Servers (optional)	- Fixed Fixed physical position - AttachAtBoot Position changes upon startup When "RHEL-Xen" has been specified for the VM type, only "Fixed" can be specified.

Element Name	Description	Remarks (Possible Values, Examples)
		If omitted and not specified when creating the L-Server, Fixed is set. For details on the positioning, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". [Solaris Zones (Solaris11)] The positioning does not change even when "AttachAtBoot" is specified.
Repurpose (Repurpose)	Automatic release of servers during power off (optional)	Specify whether to automatically release the servers allocated to the L-Server, when they are powered off. When enabling automatic release, specify "true". When not enabling automatic release, specify "false". When "RHEL-Xen" has been specified for the VM type, only "false" can be specified. If omitted, no value is set. In this case, the value set in the definition file is used when creating the L-Server. For details on the definition file, refer to "17.8.1 Installation" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". For details of this attribute, refer to "8.11 Advisory Notes for Virtual L-Server Usage" in the "Setup Guide CE".
Enabling/disabling overcommit (OverCommit)	Setting for overcommit (optional)	Set enabling/disabling of overcommit. If left blank, "false" is set. When enabling overcommit, specify "true". When disabling overcommit, specify "false".
Alive Monitoring Settings (AliveMonitoring)	Alive Monitoring Settings (optional)	- When enabling alive monitoring Specify "true" - When disabling alive monitoring Specify "false" If omitted and not specified when creating the L-Server, "false" is set.
GUIRunOnce command file name (GUIRunOnce)	File name of the GUIRunOnce command definition file (optional)	- Specify the file name of the GUIRunOnce command definition file. - Specify only the file name without the extension (.rcxprop), not the full path. - This can be specified when the VM type is "VMware". - If omitted and not specified when creating the L-Server, the GUIRunOnce command is not configured.
Enabling/disabling participation in the Active Directory domain (ActiveDirectory join)	Enables or disables the participation in the Windows Active Directory domain (optional)	- To enable participation in the Active Directory domain: Specify "true" - To disable participation in the Active Directory domain: Specify "false" - This can be specified when the VM type is "VMware". - If omitted and not specified when creating the L-Server, the L-Server does not participate in the Active Directory.

*1: When the VM type of an L-Server is VMware, the specified value is reflected.
*2: When the VM type of an L-Server is Hyper-V, the specified value is reflected.
*3: For details on the values that can be specified, refer to the "vSphere Resource Management Guide" of VMware.
Refer to the relevant version of the document, referring to the following URL:

URL: http://www.vmware.com/support/pubs/

*4: When omitted, the memory reservation capacity will be the same value as the value for the memory size, and the memory overcommit function will be disabled. When using the memory overcommit function, specify the value.
*5: The disk elements can be omitted when automatically selecting the destination to store disks during L-Server creation. When creating an L-Server by specifying a template on the ROR console, configure the relevant disk elements for the template when specifying the destination to store disks.

Example

- When specifying VMware for the VM type, create an L-Server template (two NICs)

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplate name="template1" label="for virtual machine">
  <Comment>2010/XX/XX created for work A</Comment>
  <ServerType>Virtual</ServerType>
  <VMType>VMware</VMType>
  <CPU>
    <CPUArch>IA</CPUArch>
    <CPUPerf>1.0</CPUPerf>
    <NumOfCPU>2</NumOfCPU>
  </CPU>
  <Memory>
    <MemorySize>2.0</MemorySize>
  </Memory>
  <Disks>
    <Disk>
      <DiskIndex>0</DiskIndex>
      <DiskSize>100.0</DiskSize>
    </Disk>
    <Disk>
      <DiskIndex>1</DiskIndex>
      <DiskSize>200.0</DiskSize>
    </Disk>
  </Disks>
  <NICs>
    <NumOfNIC>2</NumOfNIC>
  </NICs>
  <Policy>
    <Redundancy>None</Redundancy>
    <Positioning>Fixed</Positioning>
  </Policy>
</LServerTemplate>
```

- When specifying VMware for the VM type and creating an L-Server template with the same disk configuration as that of an image (with two NICs)

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplate name="template1" label="for virtual machine">
  <Comment>2010/XX/XX created for work A</Comment>
  <ServerImageLink disk="all"/>
  <ServerType>Virtual</ServerType>
  <VMType>VMware</VMType>
  <CPU>
    <CPUArch>IA</CPUArch>
    <CPUPerf>1.0</CPUPerf>
    <NumOfCPU>2</NumOfCPU>
  </CPU>
  <Memory>
    <MemorySize>2.0</MemorySize>
  </Memory>
```

```
  <Disks>
    <Disk>
      <DiskIndex>0</DiskIndex>
      <DiskSize>10</DiskSize>
    </Disk>
  </Disks>
  <NICs>
    <NumOfNIC>2</NumOfNIC>
  </NICs>
  <Policy>
    <Redundancy>None</Redundancy>
    <Positioning>Fixed</Positioning>
  </Policy>
</LServerTemplate>
```

- When specifying RHEL-Xen for the VM type and creating a L-Server template to share the data disks (for one NIC)

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplate name="template1" label="for first server">
  <Comment>2010/XX/XX created for work A</Comment>
  <ServerType>Virtual</ServerType>
  <VMType>RHEL-Xen</VMType>
  <CPU>
    <CPUArch>IA</CPUArch>
    <CPUPerf>1.0</CPUPerf>
    <NumOfCPU>1</NumOfCPU>
  </CPU>
  <Memory>
    <MemorySize>1.0</MemorySize>
  </Memory>
  <Disks>
    <Disk>
      <DiskIndex>0</DiskIndex>
      <DiskSize>40.0</DiskSize>
    </Disk>
    <Disk>
      <DiskIndex>1</DiskIndex>
      <DiskSize>80.0</DiskSize>
    </Disk>
  </Disks>
  <NICs>
    <NumOfNIC>1</NumOfNIC>
  </NICs>
  <Policy>
    <Redundancy>None</Redundancy>
    <Positioning>Fixed</Positioning>
  </Policy>
</LServerTemplate>
```

- When creating an L-Server template using detailed L-Server information

  Modify the following information.

  - Delete the Resources element
  - Modify the name attribute of the LServer element
  - Change the LServer element to the LServerTemplate element
  - Delete the name attribute of the DiskLink and Disk elements
  - Delete the NIC, NetworkLink, NICIndex, MacAddress, and IpAddress elements
  - Add the NumOfNIC element

```
<?xml version="1.0" encoding="utf-8"?>
<LServerTemplate name="L-Server-template" id="rctest_1220"
label="">
  <Comment></Comment>
  <TemplateLink name="sample_small" id="rctest_23" />
  <ServerType>Virtual</ServerType>
  <VMType>VMware</VMType>
  <OSType>Red Hat Enterprise Linux 5 (32-bit)</OSType>
  <CPU>
    <CPUArch>IA</CPUArch>
    <CPUPerf>1.0</CPUPerf>
    <NumOfCPU>1</NumOfCPU>
  </CPU>
  <Memory>
    <MemorySize>1.0</MemorySize>
  </Memory>
  <Disks>
      <Disk>
        <DiskIndex>0</DiskIndex>
        <DiskSize>10.0</DiskSize>
      </Disk>
  </Disks>
  <NICs>
    <NumOfNIC>1</NumOfNIC>
  </NICs>
  <ExternalIdentifier>42114bec-d26d-0c3d-c9aa-080a0c40d020</
ExternalIdentifier>
  <Current>
    <VmHost name="gekkou-pri" id="rctest_62" />
    <VmGuest name="L-Server1-75" id="rctest_1224" />
  </Current>
  <ExternalProfile/>
  <ServerImageLink name="/ImagePool/pool" version="1"
id="rctest_132" />
  <Policy>
    <Redundancy>None</Redundancy>
    <Positioning>Fixed</Positioning>
    <Exclusion></Exclusion>
    <Priority>128</Priority>
    <Repurpose>false</Repurpose>
  </Policy>
  <Status>
    <ResourceStatus>stop</ResourceStatus>
    <PowerStatus>off</PowerStatus>
    <AllocationStatus>attached</AllocationStatus>
    <MaintenanceMode>active</MaintenanceMode>
    <Resources>allocated</Resources>
    <ServerAllocationStatus>true</ServerAllocationStatus>
    <DiskAllocationStatus>true</DiskAllocationStatus>
    <AddressAllocationStatus>true</AddressAllocationStatus>
  </Status>
</LServerTemplate>
```

15.3 L-Servers

This section explains the XML definitions of L-Servers.

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

For physical L-Servers, refer to "15.3.1 Definition Information for Physical L-Servers (XML)".
For virtual L-Servers, refer to "15.3.2 Definition Information for Virtual L-Servers (XML)".

Note

- When you specify an element that does not include the element in the subordinate of the XML tag, specify an empty element instead of the end tag.

Example

- Do not specify an end tag as shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="L-Server Name" label="Label">
  </LServer>
</Resources>
```

- Specify an empty element tag instead of the end tag.

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="L-Server Name" label="Label"/>
</Resources>
```

15.3.1 Definition Information for Physical L-Servers (XML)

This section explains the XML definitions of physical L-Servers.

To specify the level, change the Resources element to the Folder element.

Refer to "Example Creating an L-Server in a resource folder or a tenant".

The XML definition for a physical L-Server is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="L-Server Name" label="Label">
    <Comment>Comment</Comment>
    <TemplateLink name="L-Server Template Name"/>
    <ServerImageLink name="Image Name" version="Image Version"/>
    <FCConnectionPattern>FC connection pattern</FCConnectionPattern>
    <ServerType>Server Type</ServerType>
    <Model>Model Name</Model>
    <BootType>Boot Mode</BootType>
    <CPU>
      <CPUPerf>CPU Performance</CPUPerf>
      <NumOfCPU>Number of CPUs</NumOfCPU>
    </CPU>
    <Memory>
      <MemorySize>Memory Size</MemorySize>
    </Memory>
    <PXENetworkLink name="Network Name for PXE Boot"/>
    <Disks>
      <Disk name="Disk Name" type="Disk Connection Type">
        <DiskIndex>Disk Index</DiskIndex>
        <Exist>Existing LUN</Exist>
        <DiskLink name="Disk Name of Existing LUN"/>
      </Disk>
      <Disk>
        <DiskLink name="Disk Name of Existing LUN" />
```

```
        <DiskIndex>Disk Index</DiskIndex>
      </Disk>
      <Disk>
        <Exist>Existing LUN</Exist>
        <DiskLink name="Disk Name of Existing LUN" />
        <DiskIndex>Disk Index</DiskIndex>
      </Disk>
      <Disk name="Disk Name" type="Disk Connection Type">
        <DiskIndex>Disk Index</DiskIndex>
        <DiskSize>Disk Size</DiskSize>
        <From>
          <VirtualStorage name="Virtual Storage Resource Name"/>
          <Pool name="Storage Pool Name"/>
        </From>
      </Disk>
    </Disks>
    <CNAs>
      <CNA num_of_functions="Number of Functions " />
    </CNAs>
    <NICGroups>
      <NICGroup>
        <NICGroupIndex>NIC Redundancy Group Index</NICGroupIndex>
        <NetworkLinks>
           <NetworkLink name="Network_name" index="Network_index" vlan_mode="VLAN_mode">
            <IpAddress auto="Automatic IP Configuration" address="IP address"/>
          </NetworkLink>
        </NetworkLinks>
        <NICLinks>
          <NICLink>Numbers of NICs contained in NIC group</NICLink>
        </NICLinks>
      </NICGroup>
    </NICGroups>
    <NICs>
      <NIC>
        <NICIndex>NIC Index</NICIndex>
          <NetworkLinks>
            <NetworkLink name="Network_name" index="Network_index" vlan_mode="VLAN_mode">
              <IpAddress auto="Automatic IP Configuration" address="IP address"/>
            </NetworkLink>
          </NetworkLinks>
       <MacAddress auto="MAC Address Auto Select" Address Set Resource of MAC Address or Address
Pool/>
      </NIC>
    </NICs>
    <HBAs>
      <HBA>
        <HBAIndex>HBA Index</HBAIndex>
        <WWN auto="WWNAutoSelect" WWN Address Set Resource or Address Pool/>
      </HBA>
    </HBAs>
    <IOVirtualOptionPool name="Address Pool Name"/>
    <Policy>
      <Redundancy>Redundancy</Redundancy>
      <Priority>Priority</Priority>
      <Repurpose>Server Automatic Release(true|false)</Repurpose>
      <SpareSelection method="Spare Server Selection Method" />
      <FCSinglePath>SAN Path Status</FCSinglePath>
      <AliveMonitoring>AliveMonitoring Setting(true|false)</AliveMonitoring>
      <SpareServerForceOFF>Use Active spare server with forced tuning OFF(true|false)</
SpareServerForceOFF >
      <AllowForceOFF>Allow forced tuning OFF(true|false)</AllowForceOFF>
    </Policy>
    <Primary>Next Server to Start</Primary>
```

```
    <From>
      <PhysicalServer name="Physical Server Name"/>
    </From>
    <From>
      <Pool name="Server Pool Name"/> or
      <PhysicalServer name="Physical Server Name"/>
    </From>
    <Spare>
      <Pool name="Reserve Setting Server Pool Name"/>
    </Spare>
    <Allocation>Allocation of Resources</Allocation>
    <OSSetting>
      <ComputerName>Computer Name, Hostname</ComputerName>
    </OSSetting>
  </LServer>
</Resources>
```

Table 15.3 List of Items Specified in XML Definitions for Physical L-Servers

Element Name	Description	Remarks (Possible Values, Examples)
L-Server name (*1, *2, *3) (LServer name)	Name of the L-Server	Specify a character string beginning with an alphanumeric character and containing up to 64 alphanumeric characters, underscores ("_"), and hyphens ("-").
Label (*1, *2) (LServer label)	Label for the L-Server (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Comment (*1, *2) (Comment)	Comment for the L-Server (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
L-Server template name (*2) (TemplateLink name)	Name of the L-Server template to use for the L-Server (optional)	Specify the resource name of an existing L-Server template.
Image name (*2) (ServerImageLink name)	Name of the cloning image to deploy to the L-Server's boot disk (optional)	Specify the resource name of an existing cloning image. Specify a name containing a resource folder. For details, refer to "16.1 Creation Using an L-Server Template" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Image version (*2) (ServerImageLink version)	Version of the cloning image to deploy to the L-Server's boot disk (optional)	Specify an integer. If omitted, the latest version is used.
FC connection pattern (FCConnectionPattern)	FC connection pattern file	Specify the file name of the FC connection pattern file that has been located in the following directory. (excluding those with the .rcxprop extension) For details on the FC connection pattern file, refer to "7.1 Creating Definition Files" in the "Setup Guide CE" [Windows Manager] *Installation_folder*\SVROR\Manager\etc\customize_data\fc_connection_pattern [Linux Manager]

Element Name	Description	Remarks (Possible Values, Examples)
		/etc/opt/FJSVrcvmr/customize_data/fc_connection_pattern For the FC connection pattern file name, enter a string that is no more than 64 characters long, where the first character is a number or letter and the remaining characters are alphanumeric characters, underscores ("_"), or hyphens ("-").
Server type (*4) (ServerType)	Type of server to allocate as an L-Server	Specify "Physical".
Model name (*2, *4) (Model)	Model name of the server to allocate to L-Server	Specify the model name of the server to allocate to the L-Server. Specify the model name of the server after selecting the server resource on the server resource tree, and checking the model name on the [Resource Details] tab. The model name cannot be specified when the following is specified. - CPU performance - Number of CPUs - Memory size
Boot mode (*1, *2, *3, *5) (BootType)	L-Server boot method	Specify the L-Server boot method. - Disk Specify this mode when performing the boot from the disk connected to the L-Server. - PXE Specify this mode when performing the network boot using PXE (Preboot eXecution Environment). This can also be specified using the rcxadm lserver set command. For details, refer to "3.6 rcxadm lserver".
CPU performance (*1, *2, *3, *4) (CPUPerf)	CPU performance to allocate to L-Server	Specify a number between 0.1 and 10.0 with up to one decimal place, in units of gigahertz. For details on the scope which can be specified, refer to "16.2.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". CPU Performance cannot be specified when Model Name is specified.
Number of CPUs (*1, *2 , *3, *4) (NumOfCPU)	Number of CPUs to allocate to L-Server	Specify an integer equal to or greater than "1". For details on the scope which can be specified, refer to "16.2.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". There is no upper limit when performing creation or modification using the command. Number of CPUs cannot be specified when Model Name is specified.
Memory size (*1, *2, *3, *4) (MemorySize)	Size of memory to allocate to L-Server	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.2.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". Memory Size cannot be specified when Model Name is specified.
Network name for PXE boot (*1, *2, *3, *5) (PXENetworkLink name)	Name of network resource to perform PXE boot of the L-Server (Optional)	Specify the resource name of an existing network when performing a PXE boot. This can also be specified using the rcxadm lserver set command. For details, refer to "3.6 rcxadm lserver".
Disk name (*2) (Disk name)	The disk name to allocate to L-Servers	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").

Element Name	Description	Remarks (Possible Values, Examples)
	(optional)	If omitted, a name is automatically generated.
Disk connection type (*2, *4) (Disk type)	The connection method of the disk to allocate to the L-Server	- FC Specify the disk with a Fibre Channel connection to allocate. - iSCSI Specify the disk with an iSCSI connection to allocate. Setting is possible only when disks have the number "0". If omitted, "FC" is set.
Disk index (*2, *4) (DiskIndex)	Number of the disk to allocate to the L-Server	Specify an integer starting from "0". 0: Boot disk Other than 0: Data disk Specify a number between 0 and 59. Specify "0" if "iSCSI" was specified for Disk Connection Type.
Existing LUN (*2) (Exist)	Specify that the LUN to allocate to the L-Server was created in advance by using storage management software, or was automatically created by Resource Orchestrator (Optional)	- true Specify when the LUN was created in advance by using storage management software, or was automatically created by Resource Orchestrator. - false Specify when the LUN was created automatically by Resource Orchestrator. When connecting a LUN that was created in advance by using storage management software, or was automatically created by Resource Orchestrator, this setting cannot be omitted.
Disk name of existing LUN (*2) (DiskLink name)	Disk name of the LUN which was created in advance by using storage management software, or was automatically created by Resource Orchestrator to allocate to the L-Server (Optional)	Specify the disk name to allocate.
Disk size (*2, *4) (DiskSize)	Size of disk to create	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.2.3 [Disk] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Virtual storage resource name (*2) (VirtualStorage name)	Virtual storage from which the disk to allocate to the L-Server is created	Specify the resource name of an existing virtual storage.

Element Name	Description	Remarks (Possible Values, Examples)
	If specified at the same time as storage pool, priority is given to this attribute. (optional)	
Storage pool name (*2) (Pool name)	Resource pool for extracting the virtual storage to create the disk to allocate to the L-Server (optional)	Specify the resource name of an existing storage pool. If there are storage pools with the same name on different levels, the level must also be specified. *Resource_folder*/*Resource_pool*
Configuration of the converged network adapter (CNAs) (*2)	Expand the number of functions of the converged network adapter (CNA) using the UMC function. (When omitted, the UMC function is not configured)	Specify the CNA element to expand the number of functions of CNA using the UMC function. - num_of_functions="2", or "4" When enabling [Function number expansion (Onboard)], specify the value of [Number of functions per port]. - <CNA /> When disabling [Function number expansion (Onboard)], do not specify anything for the element.
NICGroups (NICGroups)	A collection of NIC redundancy group definitions (optional)	Specify when NIC redundancy is necessary. Specify one or more NICGroup elements.
NIC redundancy group (*2, *4) (NICGroup)	NIC redundancy group	Specify a NIC redundancy group. NIC IP addresses with the index specified in NICLink, and the Network name, are ignored.
NIC redundancy group index (*2) (NICGroupIndex)	NIC redundancy index	Specify a NIC redundancy index. Specify for each NICGroup. Specify sequential numbers starting from "0".
Network name (*2) (NetworkLink name)	Name of the network that the L-Server connects to	Specify the name of an existing network resource. When the network resource is an admin LAN resource or one for iSCSI, specify "untagged" for vlan_mode.
Network index (*2, *4) (NetworkLink index)	Network index	Specify a network index. The index starts from "0".
IP address (*2) (IpAddress)	IP address to allocate to L-Servers (Optional)	The IP can be specified using the following methods: <IpAddress auto="false" address="*xxx.xxx.xxx.xxx*"/> Specify an IP address. <IpAddress auto="true"/> An IP address is automatically assigned from the address range set for the network resource.

Element Name	Description	Remarks (Possible Values, Examples)
		Even if the IpAddress element is omitted, an IP address is automatically assigned from the address range set for the network resource.
Numbers of NICs contained in NIC group (*2, *4) (NICLink)	NIC number contained in the NIC group	Specify NIC numbers contained in the NIC group. If there are multiple NIC numbers, specify the NICLink for each NIC number. Specify a set of redundancies. The NIC number cannot be longer than the length of the NICGroup element. For physical L-Servers, specify the value for the NIC number for a rack mount server or a tower server minus 1. The NIC number is defined in preparations explained in "9.3.5 Pre-configuring Managed Servers" in the "Design Guide CE". Example If "1" is defined for the NIC number placed on the upper left of the back face of a rack mount server, specify "0".
NIC (NIC)	NIC definition	When not performing NIC redundancy, specify the NetworkLink element and the NetworkLinks element. When not connecting a NIC to a network, the NetworkLink element and the NetworkLinks element are not necessary. The child elements are as follows: - IpAddress element - NetworkLink element - NetworkLinks element - MacAddress element - NICIndex element
NIC index (*2, *4) (NICIndex)	Number to identify the NIC definition to allocate to the L-Server	Specify an integer between 0 and 31 starting with "0". Check that sequential numbers starting from "0" are used for each NIC element. NIC number (NICIndex) + 1 corresponds to a network (NIC) number of the [General] tab in the [Create an L-Server] dialog. For physical L-Servers, specify the value for the NIC number for a rack mount server or a tower server minus 1. The NIC number is defined in preparations explained in "9.3.5 Pre-configuring Managed Servers" in the "Design Guide CE". Example If "1" is defined for the NIC number placed on the upper left of the back face of a rack mount server, specify "0".
VLAN mode (*2) (NetworkLink vlan_mode)	VLAN mode (optional)	Specify a VLAN mode. The VLAN mode can be specified using the following methods: - Untagged VLAN communication vlan_mode="untagged" - Tagged VLAN communication vlan_mode="tagged" When vlan_mode is omitted, tagged VLAN communication is used.

Element Name	Description	Remarks (Possible Values, Examples)
MAC address (*2) (MacAddress)	MAC address to allocate to the L-Server (Optional, when specifying the address pool)	The MAC address can be specified using the following methods: - MAC address direct specification <MacAddress auto="false">*MAC address format*</MacAddress> For the MAC address format, specify the MAC address in either hyphen ("-") or colon (":") delimited form. ("*xx-xx-xx-xx-xx-xx*" or "*xx:xx:xx:xx:xx:xx*") - Auto allocation <MacAddress auto="true" from="*MacAddressSetResource*"/> or <MacAddress auto="true" pool="*Address Pool Name*"/> An address in the MAC address range set in the MACAddressSetResource or MAC address range registered in the specified address pool will automatically be allocated.
HBA Index (*2) (HBAIndex)	Number to identify the HBA definition to allocate to the L-Server	Specify an integer starting from "0". Specify a number between 0 and 1.
WWN (*2) (WWN)	WWN to allocate to the L-Server (Optional, when specifying the address pool)	The WWN can be specified using the following methods: - WWN direct specification <WWN auto="false">WWN format</WWN> For the WWN format, specify the WWN in colon (":") delimited form. ("*xx:xx:xx:xx:xx:xx*") - Auto allocation <WWN auto="true" from="*WWNAddressSetResource*"/> <WWN auto="true" pool="*Address Pool Name*"/> An address in the WWN scope set in the WWN address set resources or WWN scope registered in the specified address pool will automatically be assigned.
Address pool name (*2) (IOVirtualOptionPool name)	Address pool to allocate to the L-Server If specified at the same time as MAC Address and WWN, priority is given to this attribute. (Optional, when specifying MAC Address and WWN)	Specify the resource name of the address pool to store address set resources (WWNs and MAC addresses) to allocate to L-Servers. WWNs and MAC addresses of address set resources are the target of configuration. The address pool can be specified using the following methods: <IOVirtualOptionPool name="*Address Pool Name*"/> If there are address pools with the same name on different levels, the level must also be specified. *Resource_folder_name*/*Resource_pool_name*
Redundancy (*1, *2, *7) (Redundancy)	Server redundancy to allocate to L-Servers (optional)	- None None - HA Specify when performing redundancy. If omitted, "None" is set. For details on the redundancy, refer to "16.2.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

Element Name	Description	Remarks (Possible Values, Examples)
Priority (*1, *2) (Priority)	Priority when allocating resources or creating an L-Server (optional)	When the L-Server is the target of batch power operations, or when performing batch creation of multiple L-Servers using XMLs of resource folders, specify the priority in the range of 1 to 256. Smaller values indicate higher priority. If omitted, "128" is set. When "0" is specified, the server is excluded from batch power operations.
Automatic server release (*1, *2, *4, *5) (Repurpose)	Automatic release of servers during power off (optional)	Specify whether to automatically release the servers allocated to the L-Server, when they are powered off. - When using automatic release Specify "true". - When not using automatic release Specify "false". If the values of this attribute and "*Server Automatic Release*" of the L-Server template are omitted, the value that is set in the definition file is used. For details on the definition file, refer to "17.8.1 Installation" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". Ensure that "true" is specified for L-Servers to change the usage of.
Spare server selection method (*1, *2, *4) (SpareSelection method)	Selection method for spare servers (optional)	- name_order Spare servers are selected from among servers that match the model name of the operating server, in order of physical server names. - keep_spec A server that provides the same or higher performance figures as the operating server, and the least difference in performance is selected. If omitted, "keep_spec" is set.
SAN path status (*1, *2, *3, *4, *5) (FCSinglePath)	SAN path status after physical L-Server creation	Configure the SAN path status after physical L-Server creation. - true Specify when setting single-path. - false Specify when setting multi-path. If left blank, "false" is set. This can also be specified using the rcxadm lserver set command. For details, refer to "3.6 rcxadm lserver".
Alive monitoring settings (*1, *2, *4, *7) (AliveMonitoring)	Alive Monitoring Settings (optional)	- When enabling alive monitoring Specify "true" - When disabling alive monitoring Specify "false" If omitted and not specified when creating the L-Server, "false" is set.
Use an active spare server with forced turning OFF (*1, *2, *4, *5, *7) (SpareServerForceOFF)	Forcibly power off a spare server that is in use, and use it (optional)	When physical servers in a spare server pool are not sufficient, configure whether to use a physical server that has "Allow forced turning off" configured, after forcibly powering off the target server. - When setting this parameter Specify "true" - When not setting this parameter

Element Name	Description	Remarks (Possible Values, Examples)
		Specify "false" If omitted and not specified when creating the L-Server, "false" is set.
Allow forced turning OFF (*1, *2, *4, *5, *7) (AllowForceOFF)	Allow forced turning OFF (optional)	When physical servers in a spare server pool are not sufficient, configure whether to allow forced turning off of servers even if they are powered on. - When setting this parameter Specify "true" - When not setting this parameter Specify "false" If omitted and not specified when creating the L-Server, "false" is set.
Physical server name (*1, *2, *5) (PhysicalServer name)	Physical server to allocate to the L-Server If specified at the same time as server pool, priority is given to the specifications of the physical server.	Specify the physical server to allocate to the L-Server.
Server pool name (*1, *2, *5) (Pool name)	Resource pool that comprises the physical servers allocated to L-Servers	Specify the resource names of existing server pools. If there are server pools with the same name on different levels, the level must also be specified. *Resource_folder*/*Resource_pool*
Reserve setting server pool name (*1, *2) (Pool name)	Server pool for reserve settings (optional)	Valid when redundancy has been configured. If there are server pools with the same name on different levels, the level must also be specified. *Resource_folder/Resource_pool*
Allocation of resources (Allocation)	Status of resources allocated to the L-Server (optional)	- true Specify to allocate resources. - false Only specify when creating a configuration definition. If this attribute is omitted, the value set in the definition file is used. For details on the definition file, refer to "17.8.1 Installation" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Computer name, hostname (*2, *6) (ComputerName)	Computer name and hostname	[Physical Servers] For specifiable values, refer to "7.7 [OS] Tab Configuration" in the "Setup Guide CE".

*1: Values can be changed by modifying an L-Server, only when its status is "allocated" (resources have been allocated) or "preserved" (servers have been released). Even if an L-Server template name or the content of an L-Server template specified for the L-Server template name is modified, the configuration of L-Servers already created using the template will not be modified.
*2: Values can be changed by modifying an L-Server, only when its status is "defined" (only the configuration definition has been created). When modifying an L-Server for which only the configuration definition has been created, unmodified information must be described also.
*3: In addition to *1, the value can be changed during power off.
*4: Specify if no L-Server template is used or if the values specified in the L-Server template will not be used.

*5: This cannot be changed when the L-Server is being linked to a configured physical server.
*6: Personalizing information to be specified after the image is deployed.
*7: The values for an L-Server deployed from an L-Platform can be changed by changing the configuration. In this case, use an XML file that only contains the elements for alive monitoring settings and redundancy.

Example

- Creating an L-Server that does not deploy a cloning image using an L-Server template

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="first_server">
    <TemplateLink name="small"/>
    <ServerType>Physical</ServerType>
    <Model>PRIMERGY BX920 S2</Model>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
          <NetworkLinks>
           <NetworkLink name="AdminLan" vlan_mode="untagged"
index="0"/>
          </NetworkLinks>
      </NIC>
    </NICs>
    <IOVirtualOptionPool auto="true" name="AddressPool"/>
  </LServer>
</Resources>
```

- Creating an L-Server that deploys a cloning image using an L-Server template

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="second_server">
    <TemplateLink name="small"/>
    <ServerType>Physical</ServerType>
    <Model>PRIMERGY BX920 S2</Model>
    <ServerImageLink name="/ImagePool/master_image"/>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
          <NetworkLinks>
           <NetworkLink name="AdminLan" vlan_mode="untagged"
index="0"/>
          </NetworkLinks>
      </NIC>
    </NICs>
    <IOVirtualOptionPool auto="true" name="AddressPool"/>
    <OSSetting>
      <ComputerName>host1</ComputerName>
    </OSSetting>
  </LServer>
</Resources>
```

- Creating an L-Server that deploys a Linux cloning image without using an L-Server template

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="L-Server">
    <ServerImageLink name="/ImagePool/RHEL5"/>
    <ServerType>Physical</ServerType>
    <Model>PRIMERGY BX920 S2</Model>
```

```
    <BootType>Disk</BootType>
    <Disks>
      <Disk>
        <DiskIndex>0</DiskIndex>
        <DiskSize>40.0</DiskSize>
      </Disk>
      <Disk>
        <DiskIndex>1</DiskIndex>
        <DiskSize>30.0</DiskSize>
      </Disk>
    </Disks>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
          <NetworkLinks>
           <NetworkLink name="AdminLan" vlan_mode="untagged"
index="0"/>
          </NetworkLinks>
      </NIC>
    </NICs>
    <IOVirtualOptionPool auto="true" name="AddressPool"/>
    <HBAs>
      <HBA>
        <HBAIndex>0</HBAIndex>
      </HBA>
    </HBAs>
    <IOVirtualOptionPool auto="true" />
    <Policy>
      <Redundancy>None</Redundancy>
      <Priority>128</Priority>
    </Policy>
    <Repurpose>true</Repurpose>
    <Allocation>true</Allocation>
    <OSSetting>
      <ComputerName>host1</ComputerName>
    </OSSetting>
  </LServer>
</Resources>
```

- Creating an L-Server in a resource folder or a tenant

```
<?xml version="1.0" encoding="utf-8"?>
<Folder name="Resource Folder Name or Tenant Name">
  <LServer name="L-Server Name" label="Label">
    ...
  </LServer>
</Folder>
```

Table 15.4 List of Items Specified in XML Definitions when Creating an L-Server in a Resource Folder or a Tenant

Element Name	Description	Remarks (Possible Values, Examples)
Resource folder name or Tenant name (*1) (Folder name)	Name of the resource folder or the tenant to place the L-Server in (optional)	To specify the level, use the following format: *Resource_folder_name*/*Resource_folder_name* *Tenant_name*/*Resource_folder_name* *Resource_folder_name*/*Tenant_name*

*1: Specify if creating an L-Server in a resource folder.

- Creating another L-Server using detailed L-Server information

  Modify the following information.

- Modify the name attribute of the LServer element
- Delete the name attribute of the DiskLink and Disk elements (If an existing LUN is allocated, modify the name attribute)

  If none of these elements exist, add them.
- Modify the MacAddress, IpAddress, and WWN elements (If specifying an address pool for address assignment, or resources)

  If none of these elements exist, add them as necessary.
- Modify the PhysicalServer element in the From or Spare element (If the elements are specified)

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
<LServer name="P-Server2" id="WIN-66N8JTJM2BD_2853" label="">
  <Comment></Comment>
  <ServerType>Physical</ServerType>
  <Model>PRIMERGY BX920 S1</Model>
  <CPU>
    <CPUArch>ia32</CPUArch>
    <CPUPerf>2.0</CPUPerf>
    <NumOfCPU>0</NumOfCPU>
  </CPU>
  <Memory>
    <MemorySize>0.0</MemorySize>
  </Memory>
  <BootType>Disk</BootType>
  <Disks>
      <Disk name="P-Server2-0-disk0">
        <DiskIndex>0</DiskIndex>
        <DiskSize>20.0</DiskSize>
      </Disk>
  </Disks>
  <NICGroups>
  </NICGroups>
  <NICs>
    <NIC>
      <NICIndex>0</NICIndex>
      <MacAddress auto="true" pool="/AddressPool" />
      <NetworkLinks>
          <NetworkLink name="admin_lan" index="0"
vlan_mode="untagged">
            <IpAddress auto="true"/>
          </NetworkLink>
      </NetworkLinks>
    </NIC>
  </NICs>
  <HBAs>
    <HBA>
      <HBAIndex>0</HBAIndex>
      <WWN auto="true" pool="/AddressPool" />
    </HBA>
  </HBAs>
  <ExternalIdentifier></ExternalIdentifier>
  <Current>
    <PhysicalServer name="chassis4-2"
id="WIN-66N8JTJM2BD_83" />
  </Current>
  <ExternalProfile/>
  <Policy>
    <Redundancy>None</Redundancy>
    <Positioning>Fixed</Positioning>
    <Exclusion></Exclusion>
```

```
    <Priority>128</Priority>
    <Repurpose>false</Repurpose>
  </Policy>
  <Status>
    <ResourceStatus>stop</ResourceStatus>
    <PowerStatus>off</PowerStatus>
    <AllocationStatus>attached</AllocationStatus>
    <MaintenanceMode>active</MaintenanceMode>
    <Resources>allocated</Resources>
    <ServerAllocationStatus>true</ServerAllocationStatus>
    <DiskAllocationStatus>false</DiskAllocationStatus>
    <AddressAllocationStatus>true</AddressAllocationStatus>
  </Status>
  <From>
    <PhysicalServer name="chassis4-2"
id="WIN-66N8JTJM2BD_83" />
  </From>
  <Spare>
  </Spare>
</LServer>
</Resources>
```

15.3.2 Definition Information for Virtual L-Servers (XML)

This section explains the XML definitions of virtual L-Servers.

To specify the level, change the Resources element to the Folder element.
Refer to "Example Creating an L-Server in a resource folder or a tenant".

The XML definition for a virtual L-Server is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="L-Server Name" label="Label">
    <Comment>Comment</Comment>
    <TemplateLink name="L-Server Template Name"/>
    <ServerImageLink name="Image Name" version="Image Version" disk="Disk Deployment Settings
during Image Specifications(all)" fit_disk_size="Disk Size Extension (true|false)"/>
    <ServerType>Server Type</ServerType>
    <VMType>VM Type</VMType>
    <OSType>OS Type</OSType>
    <CPU>
      <CPUArch>CPU Architecture</CPUArch>
      <CPUPerf>CPU Performance</CPUPerf>
      <NumOfCPU>Number of CPUs</NumOfCPU>
      <CPUReserve>CPU Reservation Performance</CPUReserve>
      <CPUShare>CPU Shares</CPUShare>
      <CPUWeight>CPU Allocation Priority</CPUWeight>
    </CPU>
    <Memory>
      <MemorySize>Memory Size</MemorySize>
      <MemoryReserve>Memory Reservation Capacity</MemoryReserve>
      <MemoryShare>Memory Shares</MemoryShare>
      <DynamicMemory>Dynamic Memory Settings</DynamicMemory>
      <StartupRAM>Initial Memory Size</StartupRAM>
      <MemoryBuffer>Memory Buffer</MemoryBuffer>
      <MemoryWeight>Memory Allocation Priority</MemoryWeight>
    </Memory>
    <Disks>
      <Disk name="Disk Name">
        <DiskIndex>Disk Index</DiskIndex>
        <DiskLink name="Name of the disk created in advance"> or
```

```
        <DiskCopy name="Source disk name to copy">
        <DiskSize>Disk Size</DiskSize>
          <Exist>Existing Disk</Exist>
        <From auto="Automatic selection of storage for use">
          <VirtualStorage name="Virtual Storage Resource Name"/>
          <Pool name="Storage Pool Name"/>
        </From>
      </Disk>
    </Disks>
    <NICs>
      <NIC>
        <NICIndex>NIC Index</NICIndex>
        <NetworkLinks>
          <NetworkLink name="Network_name" index="Network_index">
            <IpAddress auto="Automatic IP Configuration" address="IP address"/>
          </NetworkLink>
        </NetworkLinks>
        <MacAddress auto="MAC Address Auto Select" from="Address Set Resource (MAC Address)"
pool="Address Pool"/>
      </NIC>
    </NICs>
    <Policy>
      <Redundancy>Redundancy</Redundancy>
      <Positioning>Positioning</Positioning>
      <Exclusion>Exclusion</Exclusion>
      <Priority>Priority</Priority>
      <Repurpose>Server Automatic Release(true|false)</Repurpose>
      <OverCommit>Enabling/Disabling Overcommit</OverCommit>
      <AliveMonitoring>AliveMonitoring Setting(true|false)</AliveMonitoring>
    </Policy>
    <From keep="Retention of a Used Server" auto="Automatic Selection of a Used Server">
      <VmHost name="VM Host Resource Name"/>
      <Pool name="VM Pool Name"/>
    </From>
    <Allocation>Allocation of Resources</Allocation>
    <OSSetting>
      <ComputerName>Computer Name, Hostname</ComputerName>
      <FullName>Full Name</FullName>
      <ProductKey>Product Key</ProductKey>
      <AdminPassword>Administrator Password</AdminPassword>
      <RootRolePassword>Root Role Password</RootRolePassword>
      <CAL>License Mode</CAL>
      <CALMaxConnection>Maximum Number of Connections</CALMaxConnection>
      <OrganizationName>Organization Name</OrganizationName>
      <DomainName>Domain Name</DomainName>
      <DNSSearchPaths>
        <DNSSearchPath>DNS Search Path</DNSSearchPath>
        <DNSSearchPath>DNS Search Path</DNSSearchPath>
      </DNSSearchPaths>
      <DNSServers>
        <DNSServer nic="NIC Index" ip="DNS IP Address" />
        <DNSServer nic="NIC Index" ip="DNS IP Address" />
      </DNSServers>
      <TimeZone>Time Zone</TimeZone>
      <HardwareClock>Hardware Clock Configuration</HardwareClock>
      <SystemLocale>System Locale</SystemLocale>
      <GUIRunOnce>GUIRunOnce command file name</GUIRunOnce>
      <ActiveDirectory join="Enable/Disable participation in the Active Directory domain"/>
      <VDI use="Enable/Disable Use of VDI" server="VDI management server name" pool="VDI pool
name" user="VDI user name"/>
    </OSSetting>
  </LServer>
</Resources>
```

Table 15.5 List of Items Specified in XML Definitions for Virtual L-Servers

Element Name	Description	Remarks (Possible Values, Examples)
L-Server name (*1, *2) (LServer name)	Name of the L-Server	Enter a name for the L-Server. For details on the characters and the number of characters which can be specified, refer to "16.3.1 [General] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". [VMware] The value can be changed even when the L-Server is powered on. [Solaris Zones (Solaris11)] The name of the virtual machine linked to the L-Server is not changed.
Label (*1, *2) (LServer label)	Label for the L-Server (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Comment (*1, *2) (Comment)	Comment for the L-Server (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
L-Server template name (*2, *3) (TemplateLink name)	Name of the L-Server template to use for the L-Server (optional)	Specify the resource name of an existing L-Server template. - In the case of changes to an L-Server related to a configured virtual machine Only the template name is changed. The composition of the L-Server is not changed. When you initialize a preset value, specify as follows. <TemplateLink/>
Image name (*2, *3) (ServerImageLink name)	Name of the cloning image to deploy to the L-Server's boot disk (optional)	Specify the resource name of an existing cloning image. Specify using a name containing a resource folder. For details, refer to "16.1 Creation Using an L-Server Template" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". - In the case of changes to an L-Server related to a configured virtual machine Only the cloning image name is changed. The installed OS is not changed. When you initialize a preset value, specify as follows. <ServerImageLink/> [Solaris Zones] Ensure address set resources are specified.
Image version (*2, *3) (ServerImageLink version)	Version of the cloning image to deploy to the L-Server's boot disk (optional)	Specify an integer. If omitted, the latest version is used. - In the case of changes to an L-Server related to a configured virtual machine Only the cloning image version is changed. The installed OS is not changed. Refer to "Image name" for the initialization of preset values.
Disk deployment settings during image specification (ServerImageLink disk)	Disk deployment settings held by images (optional)	Specify "all". Create an L-Server with the same disk configuration as an image. When omitted, only system disks are deployed for images. Enabled when VM type is set to "VMware" or "Hyper-V".

Element Name	Description	Remarks (Possible Values, Examples)
Increasing disk capacity (fit_disk_size)	Configure the same size as the disk capacity of the image (optional)	- true (by default) Create a virtual L-Server with the same disk capacity as that of the image. - false Compare the disk size of the image and the disk size specified for the DiskSize element, and create an L-Server disk with the larger disk capacity. When specifying an L-Server template, and DiskSize is not specified in this XML file, compare the disk size of the image and the disk size specified for the DiskSize element in the template, and create an L-Server disk with the larger disk capacity. When the VM type is "VMware" or "Hyper-V", disk size expansion can be specified. When omitted, the disk capacity of the image is set. This specification is valid only when an image has been specified. When creating an L-Server, if increasing the data disk space included in images, set "all" for [ServerImageLink].
Server type (*4) (ServerType)	Type of server to allocate as an L-Server	Specify "Virtual".
VM type (*2, *4) (VMType)	Type of VM to allocate as an L-Server	- VMware - Hyper-V - RHEL-Xen - RHEL-KVM - Oracle VM - Solaris Containers - Citrix-Xen - OVM-x86 - OVM-SPARC If omitted, it must be specified when creating the L-Server.
OS type (*1, *2) (OSType)	Type of OS for the L-Server This setting can be omitted if an image is specified.	[VMware] For the values that can be set, refer to the information displayed on the GUI, or the values described in the "NAME" column of the VMware web site (*5). For environments where multiple versions of vSphere exist, specify the value described on the VMware Web site (*5) for the "NAME" column. [Hyper-V] For the possible values that can be set, refer to the information displayed on the GUI, or the Name of the operating system object that can be obtained from SCVMM. This information can be obtained using Get-OperatingSystem(System Center Virtual Machine Manager 2008 R2) or Get-SCOperatingSystem(System Center 2012 Virtual Machine Manager) Cmdlet. The value can be changed even when the L-Server is powered on. [KVM] Configure one of following items. - Linux

Element Name	Description	Remarks (Possible Values, Examples)
		- Windows - Linux(SELinux) - Other The value can be changed even when the L-Server is powered on. [Xen] Specify Linux. [Solaris Zones] [OVM for SPARC] Specify Solaris. [OVM for x86 2.2] [Solaris Zones] [OVM for SPARC] [Citrix Xen] [OVM for x86 3.x] The OS type cannot be changed irrespective of the specification of an image, and the power status of an L-Server.
CPU architecture (*4) (CPUArch)	CPU architecture of the server to allocate to the L-Server (Optional)	[VMware] [Hyper-V] [KVM] [Xen] [OVM for x86 2.2] [Citrix Xen] [OVM for x86 3.x] Specify IA. [Solaris Zones] [OVM for SPARC] Specify SPARC. When omitted, it is automatically configured according to the VM type. However, when an L-Server template is specified, the value in the L-Server template is used.
CPU performance (*1, *2, *4, *6) (CPUPerf)	CPU performance to allocate to L-Server	Specify a number with up to one decimal place, in units of gigahertz. For details on the scope which can be specified, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". [VMware] [Hyper-V] [KVM] The value can be changed even when the L-Server is powered on. [Xen] Specify a value "0.1" or larger. [Solaris Zones] The value can be changed even when the L-Server is powered on. For Solaris Zones (Solaris 10), the changed value will be enabled on the actual virtual machine after it is restarted. [Citrix Xen] The value cannot be changed even when the L-Server is powered on. [OVM for SPARC] This is not enabled, even if a value is specified. It becomes the physical CPU performance of the VM host in which the virtual machine was created.
Number of CPUs (*1, *2 , *4, *6) (NumOfCPU)	Number of CPUs to allocate to L-Server	Specify an integer equal to or greater than "1". For details on the scope which can be specified, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". [VMware] When the CPU hot plug option of VM guests is enabled, the value can be added when the L-Server is powered on. [Xen] Specify a value "1" or larger.

Element Name	Description	Remarks (Possible Values, Examples)
		[Solaris Zones] The value can be changed even when the L-Server is powered on. For Solaris Zones (Solaris 10), the changed value will be enabled on the actual virtual machine after it is restarted. [Citrix Xen] [OVM for x86 3.x] The value cannot be changed even when the L-Server is powered on.
CPU reservation performance (*1, *2, *7, *8, *9, *10) (CPUReserve)	The minimum number of CPU resources to be allocated to an L-Server (Optional)	Specify a number with up to one decimal place, in units of gigahertz. Specify a value in the range from "0" to the upper limit of the CPU performance. If left blank, the values will differ when creating or modifying the L-Server. - When creating "0" is set. - When modifying The current value of the L-Server is retained. Enabled when VM type is set to "VMware" or "Hyper-V". The value can be changed even when the L-Server is powered on. When using Resource Orchestrator and server virtualization software, if the recognized physical CPU performance values are different, specify a value less than the smaller of the two.
CPU shares (*1, *2, *7, *8, *9) (CPUShare)	The relative proportion for allocation of CPU resources on an L-Server (Optional)	Specify an integer equal to or greater than "1". (*11) If left blank, the values will differ when creating or modifying the L-Server. - When creating A number determined by multiplying the value specified for Number of CPUs by 1,000 is set. - When modifying The current value of the L-Server is retained. Enabled when VM type is set to "VMware". The value can be changed even when the L-Server is powered on.
CPU allocation priority (*1, *2, *10) (CPUWeight)	CPU allocation priority (optional)	Specify the priority for CPU allocation. [Hyper-V] Specify an integer between 1 and 10000. If left blank, the values will differ when creating or modifying the L-Server. - When creating "100" is set. - When modifying The current value of the L-Server is retained. The value can be changed even when the L-Server is powered on. [Citrix Xen] Specify an integer between 1 and 65535. If omitted, no values are set for L-Servers.

Element Name	Description	Remarks (Possible Values, Examples)
		If left blank, the values will differ when creating or modifying the L-Server. - When creating The default values for virtualization software are configured. - When modifying The current value of the L-Server is retained. The value cannot be changed even when the L-Server is powered on.
Memory size (*1, *2, *4, *6) (MemorySize)	Size of memory to allocate to L-Server	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". [VMware] When the memory hot add option of VM guests is enabled, the value can be added when the L-Server is powered on. [KVM] The value can be changed even when the L-Server is powered on. [Xen] Specify a value "0.1" or larger. [Solaris Zones] The value can be changed even when the L-Server is powered on. For Solaris Zones (Solaris 10), the changed value will be enabled on the actual virtual machine after it is restarted. [Citrix Xen] The value cannot be changed even when the L-Server is powered on. [OVM for x86 3.x] Specify a number between 0.3 and 1024. The value cannot be changed even when the L-Server is powered on.
Memory reservation capacity (*1, *2, *7, *8, *9) (MemoryReserve)	The minimum amount of memory resources to be reserved for an L-Server (optional)	Specify a number with up to one decimal place, in units of gigabytes. Specify a value in the range from "0" to the upper limit of Memory Size. If left blank, the values will differ when creating or modifying the L-Server. - When creating The value specified for memory size is set. (*12) - When modifying The current value of the L-Server is retained. Enabled when VM type is set to "VMware" or "Citrix-Xen". [VMware] The value can be changed even when the L-Server is powered on. [Citrix Xen] The value cannot be changed even when the L-Server is powered on.
Memory shares (*1, *2, *7, *8, *9) (MemoryShare)	The relative proportion for allocation of memory resources on an L-Server (optional)	Specify an integer equal to or greater than "0". (*11) If left blank, the values will differ when creating or modifying the L-Server. - When creating

Element Name	Description	Remarks (Possible Values, Examples)
		A number determined by multiplying the value specified for Memory Size by 1024 by 10 is set. - When modifying The current value of the L-Server is retained. Enabled when VM type is set to "VMware". The value can be changed even when the L-Server is powered on.
Dynamic memory settings (*1, *2, *10) (DynamicMemory)	Dynamic memory settings (optional)	Set enabling/disabling of dynamic memory. - When enabling dynamic memory Specify "true". - When disabling dynamic memory Specify "false". If left blank, the values will differ when creating or modifying the L-Server. - When creating - If Initial Memory Size or Memory Buffer is already set "true" is set. - If Initial Memory Size or Memory Buffer is not set "false" is set. Even when the initial memory size and memory buffer are not specified in the L-Server XML file, if they are defined in the L-Server template or VM unique information definition file those values will be reflected on the L-Server. Therefore, the values of dynamic memory are configured depending on the values. - When modifying The current value of the L-Server is retained. If dynamic memory is disabled when creating or modifying an L-Server, the specified values for the initial memory size and memory buffer are ignored (including any existing setting values). Enabled when VM type is set to "Hyper-V". For the GUI and command (in text format) operations, "on" is displayed to indicate the enabled status and "off" for the disabled status.
Initial memory size (*1, *2, *10) (StartupRAM)	Initial memory size	Specify an initial memory capacity to be allocated at startup. Specify the memory capacity in the range of 0.1 to the value specified for Memory size. When specifying this element, either specify "true" to enable dynamic memory or leave the dynamic memory settings blank (this includes the L-Server template and the VM unique information definition file). If dynamic memory is disabled, the specified value is ignored. If left blank, the values will differ when creating or modifying the L-Server. - When creating Memory size is set. - When modifying The current value of the L-Server is retained.

Element Name	Description	Remarks (Possible Values, Examples)
		Enabled when VM type is set to "Hyper-V".
Memory buffer (*1, *2, *10) (MemoryBuffer)	Available memory to be reserved as a buffer (%) (optional)	Specify an initial memory capacity to be allocated to the virtual machine. Specify an integer between 5 and 2000. When specifying this element, either specify "true" to enable dynamic memory or leave the dynamic memory settings blank (this includes the L-Server template and the VM unique information definition file). If dynamic memory is disabled, the specified value is ignored. If left blank, the values will differ when creating or modifying the L-Server. - When creating "20" is set. - When modifying The current value of the L-Server is retained. Enabled when VM type is set to "Hyper-V". The value can be changed even when the L-Server is powered on.
Memory allocation priority (*1, *2, *10) (MemoryWeight)	Memory allocation priority (optional)	Specify the priority for memory allocation. Specify an integer between 0 and 10000. If left blank, the values will differ when creating or modifying the L-Server. - When creating "5000" is set. - When modifying The current value of the L-Server is retained. Enabled when VM type is set to "Hyper-V". The value can be changed even when the L-Server is powered on.
Disk name (*2, *13, *14) (Disk name)	The disk name to allocate to L-Servers (optional)	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). If omitted, a name is automatically generated. When specifying a disk that was created in advance or a disk that was automatically created and saved, do not specify the same name as those of the disks. In the following cases, the value is ignored. - When the specified disk name is different from the name of a disk which was either created in advance or automatically created and saved - When the VM type is "RHEL-KVM", "Solaris Containers", or "OVM-SPARC" and the following are specified for the disk: - Existing Disk - Disk Size
Disk index (*2, *3, *13, *14) (DiskIndex)	Number of the disk to allocate to the L-Server	Specify an integer starting from "0". 0: Boot disk Other than 0: Data disk

Element Name	Description	Remarks (Possible Values, Examples)
		[VMware] Specify a number between 0 and 55. [Hyper-V] Specify a number between 0 and 59. [Xen] Specify a number between 0 and 251. [KVM] Specify a number between 0 and 16. [OVM for x86 2.2] When the L-Server is an HVM (Hardware Virtualized Machine), specify a number between 0 and 7. When the L-Server is a PVM (Para-Virtualized Machine), specify a number between 0 and 59. [OVM for SPARC] Specify a number between 0 and 63. [Solaris Zones (Solaris 10)] 0 [Solaris Zones (Solaris11)] Specify a number between 0 and 63. [Citrix Xen] Specify a number between 0 and 13. [OVM for x86 3.x] When the L-Server is an HVM (Hardware Virtualized Machine), specify a number between 0 and 2. When the L-Server is a PVM (Para-Virtualized Machine), specify a number between 0 and 102. When the L-Server is a PVHVM (Para-Virtualized Hardware Virtual Machine), specify a number between 0 - 105.
Name of the disk created in advance (*2) (DiskLink name)	The name of a disk created in advance for allocation to the L-Server (optional)	Specify a disk that already exists. When the VM type is "RHEL-Xen", "RHEL-KVM", "Hyper-V", "Solaris Containers" or "OVM-SPARC", the disk name can be specified. - For "RHEL-Xen" This element cannot be specified, for disks with the number "0". The name of the source disk to be copied cannot be specified at the same time. For an L-Server, a single disk created in advance cannot be specified multiple times. When specifying the name at the same time as the disk size, the disk size for the disk name created in advance is reflected on the new disk. - For "RHEL-KVM", "Solaris Containers" and "OVM-SPARC" For an L-Server, a single disk created in advance cannot be specified multiple times. Disk size cannot be specified at the same time. [Solaris Zones (Solaris11)] This parameter cannot be specified. - For "Hyper-V"

Element Name	Description	Remarks (Possible Values, Examples)
		This element cannot be specified, for disks with the number "0". For an L-Server, a single disk cannot be specified multiple times. Disks being used by other L-Servers cannot be specified. When specifying the name at the same time as the disk size, the disk size for the disk name automatically created and saved is reflected on the new disk.
Existing disk (*2) (Exist)	Specifies that the disk to allocate to the L-Server was a virtual disk created in advance using storage management software (optional)	- true Specify when selecting a disk automatically from virtual disks created using storage management software. The selected disk has the same size as specified using the Disk Size element. If the VM type is "RHEL-KVM", "Solaris Containers" or "OVM-SPARC", this value must be specified when allocating a disk to an L-Server with disk size specified. [Solaris Zones (Solaris11)] This parameter cannot be specified.
Source disk name to copy (*4) (DiskCopy name)	Data disk name of the source to copy the content from (optional)	Specify the disk name of the source data disk to copy the content from. When the VM type is "RHEL-Xen", the disk name can be specified. This element cannot be specified, for disks with the number "0". The name of a disk created in advance cannot be specified at the same time. When specifying the name at the same time as the disk size, the disk size for the disk name of the source to be copied is reflected to the new disk.
Disk size (*2, *4) (DiskSize)	Size of disk to create	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.3.3 [Disk] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". The disk size can be omitted when specifying the name of a disk created in advance at the same time. The disk name information created in advance is given priority when a disk name created in advance is specified at the same time. For L-Servers, the disk size can be omitted when specifying a disk name created in advance or the disk name of the source to be copied at the same time. The information of the disk name created in advance or the name of the source disk to be copied is given priority when the information is specified at the same time. [Xen] Specify a number between 0.1 and 999.9.
Automatic selection of storage to use (*2) (From auto)	Automatically selects the storage destination used for an L-Server (optional)	- true Specify to automatically select the resource destination. - false Specify to not automatically select resources. If omitted, the resource is automatically selected if "*Virtual storage resource name*" or "*Storage pool name*" is not specified.
Virtual storage resource name (*2, *3) (VirtualStorage name)	Virtual storage from which the disk to allocate to the L-Server is created If specified at the same time as storage pool, priority is given to this attribute.	Specify the resource name of an existing virtual storage. - In the case of changes to an L-Server related to a configured virtual machine

Element Name	Description	Remarks (Possible Values, Examples)
	(optional)	The virtual storage name is changed. The storage currently used is not changed. When you initialize a preset value, specify as follows. <From auto="true"/> [Hyper-V] When specifying this element, specify the same virtual storage for all disks.
Storage pool name (*2, *3) (Pool name)	Resource pool for extracting the virtual storage to create the disk to allocate to the L-Server (optional)	Specify the resource name of an existing storage pool. If there are storage pools with the same name on different levels, the level must also be specified. *Resource_folder*/*Resource_pool* - In the case of changes to an L-Server related to a configured virtual machine The storage pool name is changed. The storage currently used is not changed. When you initialize a preset value, specify as follows. <From auto="true"/> [Hyper-V] When specifying this element, specify the same storage pool for all disks.
NIC index (*2) (NICIndex)	Number to identify the NIC definition to allocate to the L-Server	Specify an integer starting from "0". NIC number (NICIndex) + 1 corresponds to a network (NIC) number of the [General] tab in the [Create an L-Server] dialog. [VMware] Specify a number between 0 and 9. [Hyper-V] Specify a number between 0 and 7. [KVM] Specify a number between 0 and 7. [Xen] Specify a number between 0 and 14. [KVM] Specify a number between 0 and 7. [OVM for x86 2.2] Specify a number between 0 and 7. [Solaris Zones] Specify a number between 0 and 7. [Citrix Xen] Specify a number between 0 and 6. [OVM for x86 3.x] Specify a number between 0 and 7. [OVM for SPARC] Specify a number between 0 and 7.
Network name (*2, *15) (NetworkLink name)	Name of the network that the L-Server connects to	Specify the name of an existing network resource. - When VM type is "VMware"

Element Name	Description	Remarks (Possible Values, Examples)
		- When modifying an L-Server linked with a configured virtual machine, or an L-Server created using this product Modification of a Network name is performed for the NIC corresponding to the specified MAC address. Therefore, ensure a MAC Address is specified. - When VM type is "Hyper-V" - When modifying an L-Server linked with a configured virtual machine This definition is only valid when there are no network resources connected to the relevant NIC. Setup of a Network name is performed for the NIC corresponding to the specified MAC Address. Therefore, ensure a MAC Address is specified.
Network index (NetworkLink index)	Network index	Specify "0" for the network index. When creating L-Servers, this attribute can be omitted. When modifying L-Server specifications, this attribute must be specified.
MAC address (MacAddress)	The MAC address to allocate to the L-Server NIC	The MAC address can be specified using the following methods: <MacAddress auto="true" from="*Address Set Resource*(*MAC Address*)"/> or <MacAddress auto="true" pool="*Address Pool*"/> or <MacAddress auto="true"/> An address in the MAC address range set in the MACAddressSetResource, or the MAC address range registered in the specified address pool, or the MAC address range registered in accessible address pools will automatically be allocated. When address set resource and address pool are specified at the same time, the address set resource has priority. - When VM type is "VMware" - When modifying an L-Server linked with a configured virtual machine, or an L-Server created using this product When modifying an IP address and a Network name, ensure the MAC address is specified using the following format. <MacAddress>XX:XX:XX:XX:XX:XX</MacAddress> In addition, changing of MAC addresses cannot be performed. - When VM type is "Hyper-V" - In the case of changes to an L-Server related to a configured virtual machine When setting an IP address and a Network name, ensure it is specified using the following format. <MacAddress>XX:XX:XX:XX:XX:XX</MacAddress> In addition, changing of MAC addresses cannot be performed. - When the VM type is "RHEL-Xen" Ensure address set resources are specified. - When the VM type is "RHEL-KVM" or "Citrix-Xen"

Element Name	Description	Remarks (Possible Values, Examples)
		The address set resources can be omitted. When omitted, the Mac address is automatically allocated from the MAC address range registered in accessible address pools. When modifying an L-Server that only has configuration definition created, NIC cannot be changed. Therefore, do not specify the MacAddress element.
IP address (*2, *15) (IpAddress)	IP address to allocate to L-Servers (Optional)	The IP can be specified using the following methods: <IpAddress auto="false" address="*xxx.xxx.xxx.xxx*"/> Specify an IP address. <IpAddress auto="true"/> An IP address is automatically assigned from the address range set for the network resource. Even if the IpAddress element is omitted, an IP address is automatically assigned from the address range set for the network resource. - When VM type is "VMware" - When modifying an L-Server linked with a configured virtual machine, or an L-Server created using this product Modification of an IP address is performed for the NIC corresponding to the specified MAC address. Therefore, ensure a MAC Address is specified. - When VM type is "Hyper-V" - In the case of changes to an L-Server related to a configured virtual machine This definition is only valid when the relevant NIC is not connected to a network resource. Setup of an IP address is performed for the NIC corresponding to the specified MAC Address. Therefore, ensure a MAC Address is specified.
Redundancy (*1, *2, *4, *16) (Redundancy)	Server redundancy to allocate to L-Servers (optional)	- None No redundancy - HA Places in a server with HA set When "Solaris Containers" or "OVM-SPARC" is specified for the VM type, it is placed in a server which has a spare server If omitted, "None" is set. For details on the redundancy, refer to "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". When "RHEL-Xen" or "RHEL-KVM" has been specified for the VM type, only "None" can be specified.
Positioning (*1, *2, *4) (Positioning)	Physical location of the server to allocate to L-Servers (optional)	- Fixed Fixed physical position - AttachAtBoot Position changes upon startup If omitted, "Fixed" is set. When "RHEL-Xen" has been specified for the VM type, only "Fixed" can be specified.

Element Name	Description	Remarks (Possible Values, Examples)
		[Solaris Zones (Solaris11)] The positioning does not change even when "AttachAtBoot" is specified.
Exclusion (*1, *2) (Exclusion)	Exclusive operation with another virtual machine on a physical server (optional)	Specify the *L-Server_name* or the *Resource_folder_name*. To specify L-Server names or resource folder names that are arranged in a hierarchy, the level must also be specified. /*Folder1*/*Folder2* /*Folder1*/*L-Server3* Specify resources included in the access scope. - When changing When you initialize a preset value, specify as follows. <Exclusion/>
Priority (*1, *2) (Priority)	Priority when allocating resources or creating an L-Server (optional)	When the L-Server is the target of batch power operations, or when performing batch creation of multiple L-Servers using XMLs of resource folders, specify the priority in the range of 1 to 256. Smaller values indicate higher priority. If omitted, "128" is set. When "0" is specified, the server is excluded from batch power operations. If a VM type other than "RHEL-Xen" is specified, L-Servers are created depending on the priority that has been specified.
Server automatic release (*1, *2) (Repurpose)	Automatic release of servers during power off (optional)	Specify whether to automatically release the servers allocated to the L-Server, when they are powered off. - When using automatic release Specify "true". - When not using automatic release Specify "false". If the values of this attribute and "*Server Automatic Release*" of the L-Server template are omitted, the value that is set in the definition file is used. For details on the definition file, refer to "17.8.1 Installation" in the "User's Guide for Infrastructure Administrators (Resource Management) CE". For details of this attribute, refer to "8.11 Advisory Notes for Virtual L-Server Usage" in the "Setup Guide CE".
*Enabling/disabling overcommit (*1, *2)* (OverCommit)	Setting for overcommit (optional)	Set enabling/disabling of overcommit. If left blank, "false" is set. - When enabling overcommit Specify "true". - When disabling overcommit Specify "false".
Alive monitoring settings (*1, *2, *4, *16) (AliveMonitoring)	Alive Monitoring Settings (optional)	- When enabling alive monitoring Specify "true" - When disabling alive monitoring

Element Name	Description	Remarks (Possible Values, Examples)
		Specify "false" If omitted and not specified when creating the L-Server, "false" is set.
Retention of a used server (*2) (From keep)	Retains the server destination used for an L-Server (optional)	- true Specify when retaining the resource destination. - false Specify when not retaining the resource destination. If not specified, "true" is set.
Automatic selection of a used server(*2) (From auto)	Automatically selects the server destination used for an L-Server (optional)	- true Specify to automatically select the resource destination. - false Specify to not automatically select resources. If omitted, when "VM host" or "VM pool name" is specified, the "VM host" or the "VM pool name" is given priority. When "VM host" or "VM pool name" is not specified, the resource is automatically selected.
VM host resource name (*1, *2) (VmHost name)	VM host to create the VM to allocate to the L-Server If specified at the same time as resource pool, priority is given to this attribute. (optional)	Specify the resource name of a registered VM host. If not retaining a server to use, this is valid only when allocating for the first time. - When changing When you initialize a preset value, specify as follows. <From auto="true"/>
VM pool name (*1, *2) (Pool name)	Resource pool to extract the VM host to create the VM to allocate to the L-Server from (Optional)	Specify the resource name of a registered VM pool. If there are VM pools with the same name on different levels, the level must also be specified. *Resource_folder*/*Resource_pool* If not retaining a server to use, this is valid only when allocating for the first time. - When changing When you initialize a preset value, specify as follows. <From auto="true"/>
Allocation of resources (Allocation)	Status of resources allocated to the L-Server (optional)	- true Specify to allocate resources. - false Only specify when creating a configuration definition. If this attribute is omitted, the value set in the definition file is used. For details on the definition file, refer to "17.8.1 Installation" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Computer name, hostname (*2, *17) (ComputerName)	Computer name and hostname	[VMware] For specifiable values, refer to "8.2.9 [OS] Tab Configuration" in the "Setup Guide CE".

Element Name	Description	Remarks (Possible Values, Examples)
		[Hyper-V] For specifiable values, refer to "8.3.9 [OS] Tab Configuration" in the "Setup Guide CE". [Xen] Only host name can be specified. [Solaris Zones] For specifiable values, refer to "8.7.8 [OS] Tab Configuration" in the "Setup Guide CE". [OVM for SPARC] For specifiable values, refer to "8.8.7 [OS] Tab Configuration" in the "Setup Guide CE".
Full name (*2, *17) (FullName)	Full name used for Windows	[VMware] For specifiable values, refer to "8.2.9 [OS] Tab Configuration" in the "Setup Guide CE". [Hyper-V] For specifiable values, refer to "8.3.9 [OS] Tab Configuration" in the "Setup Guide CE". [Solaris Zones] For specifiable values, refer to "8.7.8 [OS] Tab Configuration" in the "Setup Guide CE". [OVM for SPARC] For specifiable values, refer to "8.8.7 [OS] Tab Configuration" in the "Setup Guide CE".
Product key (*2, *17) (ProductKey)	Windows product key	
Administrator password (*2, *17) (AdminPassword)	Administrator password used for the OS	
Root role password (*2, *17) (RootRolePassword)	Root role password used for the OS	
License mode (*2, *17) (CAL)	Client access license set for Windows	
Maximum number of connections (*2, *17) (CALMaxConnection)	Number of client connections set for Windows	
Organization name (*2, *17) (OrganizationName)	Organization name used for Windows	
Domain name (*2, *17) (DomainName)	Domain name used for the OS	
DNS search path (*2, *17) (DNSSearchPath)	DNS search path used for Linux	To specify multiple values, use multiple elements. <DNSSearchPaths> <DNSSearchPath>DNS Search Path1</DNSSearchPath> <DNSSearchPath>DNS Search Path2</DNSSearchPath> </DNSSearchPaths> [VMware] For specifiable values, refer to "8.2.9 [OS] Tab Configuration" in the "Setup Guide CE". [Hyper-V] For specifiable values, refer to "8.3.9 [OS] Tab Configuration" in the "Setup Guide CE".
NIC index (*2, *17) (DNSServer nic)	NIC index used to set the DNS	Specify the NIC index used to set the DNS IP address. - When the OS is Windows This index is required.

Element Name	Description	Remarks (Possible Values, Examples)
		- When the OS is Linux Do not specify any nic attributes. Specify a number between 0 and 9.
DNS IP address (*2, *17) (DNSServer ip)	DNS IP address	- When the OS is Windows Specify the DNS IP address to set for each NIC. - When the OS is Linux Specify the DNS IP address to set for the system.
Time zone (*2, *17) (TimeZone)	Time zone for the OS	- For the time zones that can be specified using Windows, refer to the Microsoft web site. (*18) Convert the value from the "Index" column to a decimal, or specify a value from the "Time" column. - Examples of the time zones that can be specified when using Linux or Solaris are listed below. To specify other time zones, refer to the information displayed using commands provided by the OS such as timeconfig. - Asia/Tokyo - US/Pacific - US/Central - US/Eastern - Europe/Berlin - Europe/Amsterdam - Europe/London - Asia/Seoul - Asia/Hong_Kong - Australia/Canberra
Hardware clock configuration (*2, *17) (HardwareClock)	Clock configuration used for Linux	[VMware] For specifiable values, refer to "8.2.9 [OS] Tab Configuration" in the "Setup Guide CE". [Hyper-V] For specifiable values, refer to "8.3.9 [OS] Tab Configuration" in the "Setup Guide CE".
System locale (*2, *17) (SystemLocale)	System locale used for the OS	Examples of the system locales that can be specified when using Solaris are listed below. - C: C (default value for SC profiles) - zh_CN.UTF-8: Chinese (Simplified) - zh_TW.UTF-8: Chinese (Traditional) - en_US.UTF-8: English - fr_FR.UTF-8: French - de_DE.UTF-8: German - it_IT.UTF-8: Italian - ja_JP.UTF-8: Japanese

Element Name	Description	Remarks (Possible Values, Examples)
		- ko_KR.UTF-8: Korean - pt_BR.UTF-8: Portuguese/Brazilian Portuguese - es_ES.UTF-8: Spanish
GUIRunOnce command file name (*2, *4, *9, *17) (GUIRunOnce)	File name of the GUIRunOnce command definition file (optional)	Specify the file name of the GUIRunOnce command definition file. Specify only the file name without the extension (.rcxprop), not the full path. If omitted, the GUIRunOnce command is not set.
Enabling/disabling participation in the Active Directory domain (*2, *4, *9, *17) (ActiveDirectory join)	Enables or disables the participation in the Windows Active Directory domain (optional)	- To enable participation in the Active Directory domain: Specify "true" - To disable participation in the Active Directory domain: Specify "false" If omitted, domain participation is not performed. However, if use of VDI is enabled, participation in the domain is performed.
Enabling/disabling use of VDI (*1, *9, *17) (VDI use)	Enables or disables use of the VDI (optional)	- When enabling use of VDI Specify "true" - When disabling use of VDI Specify "false" If omitted, use of VDI is disabled. To enable use of VDI, the setting for participation in the Active Directory domain must be enabled.
VDI management server name (*3, *9, *17) (VDI server)	VDI management server name (optional)	Specify the name of the VDI management server to be set for the L-Server. This attribute can be specified during reconfiguration. It is ignored during creation. Specify the name of the VDI management server that has been registered with Resource Orchestrator.
VDI Pool Name (*1, *9, *17) (VDI pool)	VDI pool name (optional)	Specify the name of the VDI pool to be set for the L-Server. Enter a character string using up to 64 characters, including alphanumeric characters (upper or lower case), underscores ("_"), or hyphens ("-").
VDI user Name (*1, *9, *17) (VDI user)	VDI user name (optional)	Specify the VDI user name to be set for the L-Server in the following format. Domain_name\User_name For the user name, specify a character string using up to 256 characters.

*1: Values that can be changed by modifying an L-Server. Even if an L-Server template name or the content of an L-Server template is modified, the configuration of L-Servers already created using the template will not be modified. Only change the OS type if no OS is installed.
*2: Values can be changed by modifying an L-Server, only when its status is "defined" (only the configuration definition has been created). When modifying an L-Server for which only the configuration definition has been created, unmodified information must be described also.
*3: In L-Servers related to the virtual machine, the value can be changed.
*4: Specify if no L-Server template is used or if the values specified in the L-Server template will not be used.
*5: For details on the possible values, refer to the VMware web site below.

VMware web site

URL:
http://www.vmware.com/support/developer/vc-sdk/visdk400pubs/ReferenceGuide/vim.vm.GuestOsDescriptor.GuestOsIdentifier.html

*6: If this is changed while the power is on, there may be cases where behavior is problematic or where the changes are not recognized.
*7: The value can be modified using the rcxadm lserver modify command. For details on the rcxadm lserver modify command, refer to "3.6 rcxadm lserver".
*8: For VMware, the value can be changed.
*9: When the VM type of an L-Server is VMware, the specified value is reflected.
*10: When the VM type of an L-Server is Hyper-V, the specified value is reflected.
*11: For the values that can be specified, refer to the "vSphere Resource Management Guide" of VMware.

Refer to the relevant version of the document, referring to the following URL:

URL: http://www.vmware.com/support/pubs/

*12: When omitted, the memory reservation capacity will be the same value as the value for the memory size, and the memory overcommit function will be disabled. When using the memory overcommit function, specify the value.
*13: When specifying "all" for disk deployment settings during image specification, it is recommended to omit the specifications for disks with numbers other than "0". When specifying disks with numbers other than "0", specify the appropriate disk numbers.
*14: When specifying "all" for disk deployment settings during image specifications, all disks are created in the same storage destination as the boot disks. When specifying the destination for storage of disks, define only the disk with the number "0".
*15: The value can only be modified when it meets the following requirements.

- The VM type of the L-Server is VMware

  The L-Server is linked with a configured virtual machine, or the L-Server was created using this product

- The VM type of the L-Server is Hyper-V

  The L-Server is linked with a configured virtual machine, and there are no network resources connected to the NIC of the L-Server

*16: The values for an L-Server deployed from an L-Platform can be changed by changing the configuration. In this case, use an XML file that only contains the elements for alive monitoring settings and redundancy.
*17: Information to be specified individually after the image is deployed. Only specify if there is no OS property definition file or if you want to change the existing values. For OVM for x86 2.2 and OVM for x86 3.x, the values cannot be specified individually. If set, the value is ignored.
*18: Refer to the Microsoft web site below.

Microsoft web site

URL: http://support.microsoft.com/kb/973627/en-us/

Example

- Creating an L-Server that does not deploy a cloning image using an L-Server template

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="first_server">
    <TemplateLink name="small"/>
    <ServerType>Virtual</ServerType>
    <OSType>Red Hat Enterprise Linux 5 (32-bit)</OSType>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
          <NetworkLinks>
            <NetworkLink name="net01"/>
          </NetworkLinks>
      </NIC>
```

```
    </NICs>
  </LServer>
</Resources>
```

- Creating an L-Server that deploys a cloning image using an L-Server template (pre-configured OS property definition file)

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="second_server">
    <TemplateLink name="small"/>
    <ServerType>Virtual</ServerType>
    <ServerImageLink name="/ImagePool/master_image"/>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
          <NetworkLinks>
            <NetworkLink name="net01"/>
          </NetworkLinks>
      </NIC>
    </NICs>
    <OSSetting>
      <ComputerName>host2</ComputerName>
    </OSSetting>
  </LServer>
</Resources>
```

- Creating an L-Server with the same disk configuration as the cloning image using an L-Server template (pre-configured OS property definition file)

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="L-Server_with_datadisk">
    <TemplateLink name="small_with_datadisk"/>
    <ServerType>Virtual</ServerType>
    <ServerImageLink name="/ImagePool/
master_image_with_datadisk" disk="all"/>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
          <NetworkLinks>
            <NetworkLink name="net01"/>
          </NetworkLinks>
      </NIC>
    </NICs>
    <OSSetting>
      <ComputerName>host2</ComputerName>
    </OSSetting>
  </LServer>
</Resources>
```

- Creating an L-Server that deploys a Linux cloning image without using an L-Server template (pre-configured OS property definition file)

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="L-Server">
    <ServerImageLink name="/ImagePool/RHEL5"/>
    <ServerType>Virtual</ServerType>
    <CPU>
      <CPUPerf>1.0</CPUPerf>
      <NumOfCPU>1</NumOfCPU>
    </CPU>
```

```
    <Memory>
      <MemorySize>2</MemorySize>
    </Memory>
    <Disks>
      <Disk>
        <DiskIndex>0</DiskIndex>
        <DiskSize>20.0</DiskSize>
      </Disk>
      <Disk>
        <DiskIndex>1</DiskIndex>
        <DiskSize>30.0</DiskSize>
      </Disk>
    </Disks>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
        <NetworkLinks>
          <NetworkLink name="net01"/>
        </NetworkLinks>
      </NIC>
    </NICs>
    <Policy>
      <Redundancy>None</Redundancy>
      <Positioning>Fixed</Positioning>
    </Policy>
    <OSSetting>
      <ComputerName>host1</ComputerName>
      <DomainName>xx.zz.yy</DomainName>
      <DNSSearchPaths>
        <DNSSearchPath>10.20.30.40</DNSSearchPath>
      </DNSSearchPaths>
    </OSSetting>
  </LServer>
</Resources>
```

- Creating an L-Server with the same disk configuration as the cloning image without using an L-Server template (specifying the storage destination and pre-configured OS property definition file)

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="L-Server">
    <ServerImageLink name="/ImagePool/
master_image_with_datadisk" disk="all"/>
    <ServerType>Virtual</ServerType>
    <CPU>
      <CPUPerf>1.0</CPUPerf>
      <NumOfCPU>1</NumOfCPU>
    </CPU>
    <Memory>
      <MemorySize>2</MemorySize>
    </Memory>
    <Disks>
      <Disk>
        <DiskIndex>0</DiskIndex>
        <From>
          <VirtualStorage name="/StoragePool/SAN001"/>
        </From>
      </Disk>
    </Disks>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
        <NetworkLinks>
```

```
          <NetworkLink name="net01"/>
        </NetworkLinks>
      </NIC>
    </NICs>
    <Policy>
      <Redundancy>None</Redundancy>
      <Positioning>Fixed</Positioning>
    </Policy>
    <OSSetting>
      <ComputerName>host1</ComputerName>
      <DomainName>xx.zz.yy</DomainName>
      <DNSSearchPaths>
        <DNSSearchPath>10.20.30.40</DNSSearchPath>
      </DNSSearchPaths>
    </OSSetting>
  </LServer>
</Resources>
```

- Creating an L-Server in a resource folder or a tenant

```
<?xml version="1.0" encoding="utf-8"?>
<Folder name="Resource Folder Name or Tenant Name">
  <LServer name="L-Server Name" label="Label">
    ...
  </LServer>
</Folder>
```

Table 15.6 List of Items Specified in XML Definitions when Creating an L-Server in a Resource Folder or a Tenant

Element Name	Description	Remarks (Possible Values, Examples)
Resource folder name or Tenant name (*1) (Folder name)	Name of the resource folder or the tenant to place the L-Server in (optional)	To specify the level, use the following format: *Resource_folder_name*/*Resource_folder_name* *Tenant_name*/*Resource_folder_name* *Resource_folder_name*/*Tenant_name*

*1: Specify if creating an L-Server in a resource folder or a tenant.

- Creating an L-Server (with one NIC) on a specific host without deploying cloning images using an L-Server template (for RHEL-Xen)

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
  <LServer name="first_server">
    <TemplateLink name="template1"/>
    <ServerType>Virtual</ServerType>
    <OSType>Linux</OSType>
    <NICs>
      <NIC>
        <NICIndex>0</NICIndex>
        <NetworkLinks>
          <NetworkLink name="net01"/>
        </NetworkLinks>
        <MacAddress auto="true" from="mac_address_set"/>
      </NIC>
    </NICs>
    <From>
      <VmHost name="vmhost1"/>
    </From>
```

```
  </LServer>
</Resources>
```

- Creating another L-Server using detailed L-Server information

  Modify the following information.

  - Modify the name attribute of the LServer element
  - Delete the DiskLink and MacAddress elements, and the name attribute of the Disk elements
  - Delete the IpAddress element and replace the NetworkLink element with an empty element tag
  - Add the OSSetting element

    When the name attribute of the NetworkLink element is left blank, add an appropriate network resource name.

  The following example is used to create an L-Server that has the same configuration as one already created, using the detailed information of the L-Server created with a Linux cloning image that has been deployed.

  When deploying a Windows cloning image, changes should be made referring to the XML definition shown above.

```
<?xml version="1.0" encoding="utf-8"?>
<Resources>
<LServer name="L-Server2" id="rctest_1220" label="">
  <Comment></Comment>
  <TemplateLink name="sample_small" id="rctest_23" />
  <ServerType>Virtual</ServerType>
  <VMType>VMware</VMType>
  <OSType>Red Hat Enterprise Linux 5 (32-bit)</OSType>
  <CPU>
    <CPUArch>IA</CPUArch>
    <CPUPerf>1.0</CPUPerf>
    <NumOfCPU>1</NumOfCPU>
  </CPU>
  <Memory>
    <MemorySize>1.0</MemorySize>
  </Memory>
  <Disks>
      <Disk>
        <DiskIndex>0</DiskIndex>
        <DiskSize>10.0</DiskSize>
      </Disk>
  </Disks>
  <NICs>
    <NIC>
      <NICIndex>0</NICIndex>
      <MacAddress>00:50:56:8c:0b:2e</MacAddress>
      <NetworkLinks>
        <NetworkLink name="vnet30" index="0" vlan_mode="tagged"
id="rctest_1123" >
          <IpAddress auto="true" address=""/>
        </NetworkLink>
      </NetworkLinks>
    </NIC>
  </NICs>
<ExternalIdentifier>42114bec-d26d-0c3d-c9aa-080a0c40d020</
ExternalIdentifier>
  <Current>
        <VmHost name="gekkou-pri" id="rctest_62" />
        <VmGuest name="L-Server1-75" id="rctest_1224" />
  </Current>
  <ExternalProfile/>
  <ServerImageLink name="/ImagePool/pool" version="1" id="rctest_132" />
  <Policy>
```

```
    <Redundancy>None</Redundancy>
    <Positioning>Fixed</Positioning>
    <Exclusion></Exclusion>
    <Priority>128</Priority>
    <Repurpose>false</Repurpose>
  </Policy>
  <Status>
    <ResourceStatus>stop</ResourceStatus>
    <PowerStatus>off</PowerStatus>
    <AllocationStatus>attached</AllocationStatus>
    <MaintenanceMode>active</MaintenanceMode>
    <Resources>allocated</Resources>
    <ServerAllocationStatus>true</ServerAllocationStatus>
    <DiskAllocationStatus>true</DiskAllocationStatus>
    <AddressAllocationStatus>true</AddressAllocationStatus>
  </Status>
  <OSSetting>
    <DNSSearchPaths>
      <DNSSearchPath>10.20.30.40</DNSSearchPath>
    </DNSSearchPaths>
  </OSSetting>
</LServer>
</Resources>
```

15.4 Storage Resources

This section explains the XML definitions of storage resources.

15.4.1 Disk Resources [KVM]

The XML definition of the disk resource configuration information for virtual L-Servers is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Storage>
  <Pool name="Storage Pool Name"/>
  <VmHosts>
    <VmHost ip="VM Host IP Address">
      <Disks>
        <Disk name="Disk Name" path="RAW Device or Partition Path" size="Disk Size"/>
      </Disks>
    </VmHost>
    <VmHost ip="VM Host IP Address">
      <Disks>
        <Disk name="Disk Name" path="RAW Device or Partition Path" size="Disk Size"/>
      </Disks>
    </VmHost>
  </VmHosts>
</Storage>
```

Table 15.7 List of Items Specified in Disk Resource Configuration Information XML Definitions for Virtual L-Servers

Element Name	Description	Remarks (Possible Values, Examples)
Storage pool name (Pool name)	Storage pool name for disk registration	Specify the resource name of an existing storage pool. If there are storage pools with the same name on different levels, the level must also be specified. *Resource_folder/Resource_pool*

Element Name	Description	Remarks (Possible Values, Examples)
		When modifying the disk resource registration information for VM guest, the Pool element cannot be used.
VM host IP address (VmHost IP)	IP address of a VM host that recognizes the raw device or partition	Specify the IP address.
Disk name (Disk name)	Disk name to register in the storage pool	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). When specifying a raw device or partition shared between multiple VM hosts, the same name must be used.
Raw device or partition path (Disk path)	Raw device or partition path	Specify the path to a raw device or partition that is connected to a VM guest. The path for the raw device or partition differs depending on the VM host. For details, refer to the instruction manual of the VM host. Example /dev/disk/by-id/scsi-3600000e00d0000000001321300010000 When specifying a raw device or partition shared between multiple VM hosts, specify as many VmHost elements as there are VM hosts.
Disk size (Disk size)	Disk size to register in the storage pool	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.3.3 [Disk] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Storage>
  <Pool name="StoragePool"/>
  <VmHosts>
    <VmHost ip="192.168.0.100">
      <Disks>
        <Disk name="test4-0-disk0" path="/dev/disk/by-id/aaaa" size="10.1"/>
      </Disks>
    </VmHost>
    <VmHost ip="192.168.0.101">
      <Disks>
        <Disk name="test4-0-disk0" path="/dev/disk/by-id/bbbb" size="10.1"/>
      </Disks>
    </VmHost>
  </VmHosts>
</Storage>
```

15.4.2 iSCSI Boot Information

The XML definition of the iSCSI boot information is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Storage>
```

```
  <Pool name="Storage Pool Name"/>
  <Ports>
   <Port index="Storage Port Index Number" ip="IP Address[:iSCSI Communication Port Number]"
iqn="IQN Name"/>
   <Port index="Storage Port Index Number" ip="IP Address[:iSCSI Communication Port Number]"
iqn="IQN Name"/>
  </Ports>
  <Disks>
   <Disk name="Disk Name">
    <DiskSize>Disk Size</DiskSize>
    <Server>
     <Nics>
      <Nic ip="Server IP Address" iqn="Server IQN Name" portindex="Storage port Index number
connected from server"/>
      <Nic ip="Server IP Address" iqn="Server IQN Name" portindex="Storage port Index number
connected from server"/>
     </Nics>
     <Chap user="User Name Authentication" password="Authentication Password"/>
     <MutualChap password="Mutual Authentication Password"/>
    </Server>
   </Disk>
   <Disk name="Disk Name">
    ...
   </Disk>
  </Disks>
 </Storage>
```

Table 15.8 List of Items Specified in XML Definitions for iSCSI Boot Information

Element Name	Description	Remarks (Possible Values, Examples)
Storage pool name (Pool name)	Storage pool name for disk registration	Specify the resource name of an existing storage pool. If there are storage pools with the same name on different levels, the level must also be specified. *Resource_folder_name*/*Resource_pool_name*
Storage port index number (*1) (Port index)	Index number to specify the storage port	Specify an integer starting from "0". Specify a number between 0 and 999. Smaller index numbers are managed on the primary side of iSCSI boot.
Storage port IP address (Port ip)	Storage port IP address	Specify the items in the following format. *IP_address*[:*iSCSI Communication_Port_Number*] Specify an integer between 1,024 and 65,535 for *iSCSI Communication_Port_Number*. If left blank, "3,260" is set.
Storage port IQN name (Port iqn)	Storage port IQN name	Specify a character string beginning and ending with an alphanumeric character and containing up to 223 alphanumeric characters, colons (":"), hyphens ("-"), and periods (".").
Disk Name (Disk name)	Disk name to register in the storage pool	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
Disk size (*2) (DiskSize)	Disk size to register in the storage pool	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.2.3 [Disk] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".
Server IP address (Nic ip)	IP address of the server to use iSCSI boot	Specify the IP address.

Element Name	Description	Remarks (Possible Values, Examples)
Server IQN name (Nic iqn)	IQN name of the server to use iSCSI boot	Specify a character string beginning and ending with an alphanumeric character and containing up to 223 alphanumeric characters, colons (":"), hyphens ("-"), and periods ("."). For multipath configurations, the same IQN name must be specified for the same server.
Storage port index number connected from the server (*1, *3) (Nic portindex)	Storage port index number which is connected to a NIC of a server to use iSCSI boot	Specify an integer starting from "0". Specify a number between 0 and 999.
User name authentication (Chap user)	User name for CHAP authentication (optional)	Specify a user name consisting of alphanumeric characters or symbols containing from 1 to 127 characters (ASCII characters (0x20 to 0x7e)). If left blank, the authentication password cannot be specified.
Authentication password (Chap password)	Authentication password for CHAP (optional)	Specify a user name consisting of alphanumeric characters or symbols containing from 12 to 16 characters (ASCII characters (0x20 to 0x7e)). If a user name for authentication is specified, this setting cannot be omitted.
Mutual authentication password (MutualChap password)	Password for mutual authentication (optional)	Specify a user name consisting of alphanumeric characters or symbols containing from 12 to 16 characters (ASCII characters (0x20 to 0x7e)). If a user name for authentication is omitted, this setting cannot be specified.

*1: If the Index number of a storage port is the same as the one connected to a server, a physical connection is required.
*2: Register the actual LUN size in the iSCSI boot information. If it differs, the actual size of the LUN will be enabled from the server.
*3: The NIC Index specified in the iSCSI boot network definition file must be connected in the ascending order of the specified numbers.

Example

The definition when portindex=0 with NIC1, and portindex=2 with NIC2 are connected is shown below.

- Specifying a storage definition file for iSCSI boot

  <Nic ... portindex="0"/>

  <Nic ... portindex="2"/>

- Specifying a network definition file for iSCSI boot

  chassis_model.BX900.boot_nic = NIC1,NIC2

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Storage>
  <Pool name="StoragePool" />
  <Ports>
    <Port index="0" ip="192.168.0.1" iqn="iqn.2010-03.com.fujitsu:iscsi:storage-0" />
    <Port index="1" ip="192.168.0.2" iqn="iqn.2010-03.com.fujitsu:iscsi:storage-1" />
  </Ports>
  <Disks>
    <Disk name="disk-01">
```

```
      <DiskSize>10</DiskSize>
      <Server>
        <Nics>
          <Nic portindex="0" ip="192.168.0.10" iqn="iqn.2010-03.com.fujitsu:iscsi:server-01" />
          <Nic portindex="1" ip="192.168.0.11" iqn="iqn.2010-03.com.fujitsu:iscsi:server-01" />
        </Nics>
        <Chap user="root" password="passwordpassword" />
      </Server>
    </Disk>
    <Disk name="disk-02">
      <DiskSize>10</DiskSize>
      <Server>
        <Nics>
          <Nic portindex="0" ip="192.168.0.20" iqn="iqn.2010-03.com.fujitsu:iscsi:server-02" />
          <Nic portindex="1" ip="192.168.0.21" iqn="iqn.2010-03.com.fujitsu:iscsi:server-02" />
        </Nics>
      </Server>
    </Disk>
  </Disks>
</Storage>
```

15.4.3 Disk Resources [Solaris Zones]

The XML definition of the disk resource configuration information for virtual L-Servers is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Storage>
  <Pool name="Storage Pool Name"/>
  <VmHosts>
    <VmHost ip="Global Zone IP Address">
      <Disks>
        <Disk name="Disk Name" path="Mount Point of RAW Device or Partition" size="Disk Size"/>
      </Disks>
    </VmHost>
    <VmHost ip="Global Zone IP Address">
      <Disks>
        <Disk name="Disk Name" path="Mount Point of RAW Device or Partition" size="Disk Size"/>
      </Disks>
    </VmHost>
  </VmHosts>
</Storage>
```

Table 15.9 List of Items Specified in Disk Resource Configuration Information XML Definitions for Virtual L-Servers

Element Name	Description	Remarks (Possible Values, Examples)
Storage pool name (Pool name)	Storage pool name for disk registration	Specify the resource name of an existing storage pool. If there are storage pools with the same name on different levels, the level must also be specified. *Resource_folder/Resource_pool* When modifying the disk resource registration information for the non-global zone, the Pool element cannot be used.
Global zone IP address (VmHost IP)	IP address of a global zone that recognizes the raw device or partition	Specify the IP address.

Element Name	Description	Remarks (Possible Values, Examples)
Disk name (Disk name)	Disk name to register in the storage pool	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). When specifying a raw device or partition shared between multiple global zones, the same name must be used.
Mount *point of a raw device or partition* (Disk path)	Mount point of a raw device or partition	Specify a mount point of a raw device or partition connected to a non-global zone, which is described in the /etc/vfstab file in the global zone. Example /ror/zones/zone1 When specifying a raw device or partition shared between multiple global zones, specify as many VmHost elements as there are VM hosts.
Disk size (Disk size)	Disk size to register in the storage pool	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.3.3 [Disk] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Storage>
  <Pool name="StoragePool"/>
  <VmHosts>
    <VmHost ip="192.168.0.100">
      <Disks>
        <Disk name="test4-0-disk0" path="/ror/zones/zone1" size="10.1"/>
      </Disks>
    </VmHost>
    <VmHost ip="192.168.0.101">
      <Disks>
        <Disk name="test4-0-disk0" path="/ror/zones/zone2" size="10.1"/>
      </Disks>
    </VmHost>
  </VmHosts>
</Storage>
```

15.4.4 Disk Resources [OVM for SPARC]

The XML definition of the disk resource configuration information for virtual L-Servers is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Storage>
  <Pool name="Storage Pool Name"/>
  <VmHosts>
    <VmHost ip="VM Host IP Address">
      <Disks>
        <Disk name="Disk Name" path="Virtual Disk Service Information" size="Disk Size"/>
      </Disks>
    </VmHost>
```

```
    <VmHost ip="VM Host IP Address">
      <Disks>
        <Disk name="Disk Name" path="Virtual Disk Service Information" size="Disk Size"/>
      </Disks>
    </VmHost>
  </VmHosts>
</Storage>
```

Table 15.10 List of Items Specified in Disk Resource Configuration Information XML Definitions for Virtual L-Servers

Element Name	Description	Remarks (Possible Values, Examples)
Storage pool name (Pool name)	Storage pool name for disk registration	Specify the resource name of an existing storage pool. If there are storage pools with the same name on different levels, the level must also be specified. *Resource_folder*/*Resource_pool* When modifying the disk resource registration information for VM guest, the Pool element cannot be used.
VM host IP address (VmHost IP)	IP address of a VM host that recognizes the raw device or partition	Specify the IP address.
Disk name (Disk name)	Disk name to register in the storage pool	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). When specifying a raw device or partition shared between multiple VM hosts, the same name must be used.
Virtual disk service information (Disk path)	Virtual disk service information	Specify the value in which the virtual disk service name of the service domain in the VM host is combined with the volume name corresponding to the raw device or the partition connected with the VM guest. For details on the virtual disk service name and the volume name, refer to the OVM for SPARC manual. Example When the volume name and the virtual disk service name are shown as below, the value specified for here is vol0@primary-vds0. volume name: vol0 virtual disk service name: primary-vds0 When specifying a raw device or partition shared between multiple VM hosts, specify as many VmHost elements as there are VM hosts.
Disk size (Disk size)	Disk size to register in the storage pool	Specify a number with up to one decimal place, in units of gigabytes. For details on the scope which can be specified, refer to "16.3.3 [Disk] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Storage>
```

```
  <Pool name="StoragePool"/>
  <VmHosts>
    <VmHost ip="192.168.0.100">
      <Disks>
        <Disk name="test-0-disk0" path="vol1@primary-vds0" size="10.1"/>
      </Disks>
    </VmHost>
    <VmHost ip="192.168.0.101">
      <Disks>
        <Disk name="test-0-disk0" path="vol1@primary-vds0" size="10.1"/>
      </Disks>
    </VmHost>
  </VmHosts>
</Storage>
```

15.5 Address Set Resources

This section explains the modification of address set resources.

15.5.1 Modification

When modifying GIP address set resources, only elements that have been defined can be modified.

The following elements can be modified:

- Name of the address set resource
- Label
- Comment
- Address to exclude

If defining multiple elements, they will be modified at the same time.

Define all new information of the settings after modification for addresses to exclude.

The XXX.XXX.XXX.XXX format (period (".") -decimal notation) is used for all IP addresses.

Example

- Modifying network resource names

```
<AddressSet name="Modified name of the address set resource" />
```

- Modifying labels

```
<Addrset label="Modified label" />
```

- Modifying comments

```
<AddressSet>
<Comment>Modified Comments</Comment>
</AddressSet>
```

- Adding an exclusion range of IP addresses (when deleting the IP address range of 192.168.1.1 - 192.168.1.10 from the exclusion ranges of 192.168.1.100 - 192.168.1.200 and 192.168.1.1 - 192.168.1.10)

```
<AddressSet>
  <Exclude>
```

```
    192.168.1.1,..., 192.168.1.10, 192.168.1.100, 192.168.1.101,...,
192.168.1.200
  </Exclude>
</AddressSet>
```

- Changing an exclusion range of IP addresses (when deleting the IP address range of 192.168.1.1 - 192.168.1.10 from the existing exclusion ranges of 192.168.1.100 - 192.168.1.200 and 192.168.1.1 - 192.168.1.10)

```
<AddressSet>
  <Exclude>
    192.168.1.100, 192.168.1.101,..., 192.168.1.200
  </Exclude>
</AddressSet>
```

  Specify all IP address ranges to be excluded after modification for the Exclude element.

- Initializing the value of exclusion range of IP addresses

```
<AddressSet>
<Exclude />
</AddressSet>
```

  Do not specify any value in <Exclude>.

- When specifying all items that can be modified

```
<AddressSet name="Modified name of the address set resource"
label="Modified label">
<Comment>Modified Comments</Comment>
  <Exclude>
    192.168.1.1,..., 192.168.1.10, 192.168.1.100, 192.168.1.101,...,
192.168.1.200
  </Exclude>
</AddressSet>
```

Table 15.11 List of Items Specified in XML Definitions for Address Set Resources

Element Name	Description	Remarks (Possible Values, Examples)
Name of the address set resource (AddressSet name)	Name of the address set resource	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). For the name of the address set resource, specify a name which is different from the network resource name (address set name) and other address set resource names.
Label (AddressSet label)	Label of the address set resource	Specify a character string of up to 32 alphanumeric characters or symbols.
Comment (Comment)	Comment on the address set resource information	Specify a character string of up to 256 alphanumeric characters or symbols.
Address to exclude (Exclude)	Excluded-addresses of the address set resource	Specify one or more unused addresses separated by commas (",").

Note

When only specifying the address resource name or label, do not specify the end tag for the <AddressSet> element.

Example

Do not specify an end tag as shown below.

```
<AddressSet name="Modified name of the address set resource">
</AddressSet>
```

15.6 Network Resources

This section explains the creation and modification of network resources.

15.6.1 Creation

The XML definition for network resources is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Pool name="Resource Pool Name">
<Network name="Network resource name" label="label" auto="Automatic configuration">
  <Type>"Network Resource Type"</Type>
  <Comment>Comment</Comment>
  <Vlanid>VLAN ID</Vlanid>
  <PhysicalLANSegment>Physical LAN Segment Name</PhysicalLANSegment>
  <ExternalPorts vlanautosetting="Automatic VLAN configuration for external connection port">
    <NetworkSwitchPort number="LAN switch blade external port number" switch="LAN switch blade
name"/>
    <NetworkSwitchPort name="External port name of the fabric type network device resource"
switch="Name of the fabric type network device resource"/>
    <NetworkSwitchPort lag="Link Aggregation Group Name" switch="LAN Switch Blade Name, or name
of the fabric type network device resource"/>
  </ExternalPorts>
  <AddressSet name="Address set name" subnet="subnet address" mask="subnet mask">
    <Exclude>
      <AddressRange start="IP address range to exclude (Start IP address #1)" end="IP address
range to exclude (End IP address #1)" />
      <AddressRange start="IP Address Range to Exclude (Start IP Address #2)" end="IP Address
Range to Exclude (End IP Address #2)" />
    </Exclude>
    <DefaultGateway address="Default Gateway"/>
  </AddressSet>
  <SwitchConfiguration auto="Auto-Configuration">
    <Ruleset name="Ruleset Name"/>
  </SwitchConfiguration>
</Network>
</Pool>
```

The XXX.XXX.XXX.XXX format (period (".") -decimal notation) is used for the IP address, subnet address, and subnet mask.
The AddressSet element is optional. If it is omitted, a network resource that cannot be assigned an address is created.

Table 15.12 List of Items Specified in XML Definitions for Network Resources

Element Name	Description	Remarks (Possible Values, Examples)
Resource pool name (Pool name)	Name of the resource pool to store the network resource	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
Network resource name (Network name)	Name of the network resource	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify a name that is different from the resource name of the address set resource.
Label (Network label)	Network resource label (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Automatic configuration (Network auto)	Automatic configuration for network resources	Specify whether automatic configuration for virtual networks, virtual switches, or port groups, which are associated with the network resource, is to be performed. - true If there are no virtual networks, virtual switches, or port groups associated with the network resource, the network is configured automatically. - false Automatic configuration of networks is not performed. The virtual networks, virtual switches, or port groups created beforehand are used for the network resource. If left blank, "true" is set.
Network resource type (Type)	Network resource type	Specify the type of the network resource. - For an admin LAN Specify "admin". Subnet information for admin LANs can be set using the AddressSet element. - For iSCSI boot Specify "iSCSI". - For a public LAN Specify "<Type/>" (an empty element), or omit the Type element. If omitted, a public LAN is specified.
Admin LAN Subnet Name (ManagementLanSubnet name)	Admin LAN subnet name (optional)	This can be specified when the network resource type is an admin LAN. When a network resource is created using a registered admin LAN subnet, specify the admin LAN subnet name instead of the AddressSet element. Either use a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters and hyphens ("-"), or leave the field blank. If left blank, the admin LAN subnet directly connected from the manager is specified.
Comment (Comment)	Network resource comment (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.

Element Name	Description	Remarks (Possible Values, Examples)
VLAN ID (Vlanid)	VLAN ID	Specify an integer between 1 and 4094.
Physical LAN segment name (PhysicalLANSegment)	Physical LAN segment name (optional)	Specify a physical LAN segment name. When using the NIC configuration specified in the server NIC definition, specify the physical LAN segment name specified in that server NIC definition.
External Connection Port Number (ExternalPorts)	A collection of LAN switch blade external connection port numbers (optional)	Specify one or more NetworkSwitchPort elements.
Automatic VLAN configuration for external connection ports (ExternalPorts vlanautosetting)	Specify whether to automatically perform VLAN setting for external connection ports. (optional)	Specify whether to automatically configure the VLAN of the external connection ports of the LAN switch blades or "Fabric" type network device resources. - true Automatically configures the VLAN of the external connection ports of the LAN switch blades or "Fabric" type network device resources. - false VLAN setting for external connection ports of a LAN switch blade is not automatically performed. If left blank, "false" is set.
Physical port number of LAN switch blade external connection port (NetworkSwitchPort number)	Physical port number of LAN switch blade external connection port for external communications A member port from a link aggregation cannot be specified as an external port for the LAN switch blade.	Specify a positive integer.
The port name of the external connection port of the Ethernet Fabric switch (NetworkSwitchPort name)	Physical port number of the external connection port of the Ethernet fabric switch used for external communication	Specify the port name.
Link aggregation port name of the external port of the LAN switch blade (NetworkSwitchPort lag)	Link aggregation group name of the external port of the LAN switch blade or the Ethernet Fabric switch used for external communication When specifying the link aggregation group name of the external port of the LAN switch blade, there must be at least one member port.	Specify the link aggregation group name that was set up beforehand (e.g., linkaggregation1). Specify the link aggregation group name that is displayed in the [Resource Details] of the LAN switch blade or the Ethernet Fabric switch on the ROR console.
The name of the LAN switch blade, or name of the fabric type network device resource (NetworkSwitchPort switch)	The name of the LAN switch blade or "Fabric" type network device resource with external connection ports	-

Element Name	Description	Remarks (Possible Values, Examples)
Address set name (AddressSet name)	Name of the address set	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), periods ("."), and hyphens ("-"). Specify an address set name which differs from the resource name of the address set resource used for WWN/MAC address management.
Subnet address (AddressSet subnet)	Subnet	Specify a subnet value.
Subnet mask (AddressSet mask)	Subnet mask	Specify a subnet mask value. The maximum value for a subnet mask is 255.255.255.255 (32-bit mask) and the minimum value is 255.255.0.0 (16-bit mask). However, 255.255.255.254 cannot be specified.
IP address to exclude (Exclude)	A collection of exclusion ranges of IP addresses (optional)	Specify one or more AddressRange elements.
IP address exclusion range (Start IP address, End IP address) (AddressRange)	IP address range (start and end) to exclude from the administration of Resource Orchestrator Start and end IP addresses are included in the exclusion range. Multiple ranges can be specified.	Specify start and end IP addresses. As the network address and broadcast address are automatically excluded, do not specify them in the IP address range (start and end) to exclude.
IP address exclusion range (Start IP address) (AddressRange start)	Starting point of exclusion range of IP addresses	Specify the IP address in IPv4 format.
IP address exclusion range (End IP address) (AddressRange end)	Endpoint of exclusion range of IP addresses	Specify the IP address in IPv4 format.
Default gateway (DefaultGateway address)	Default gateway	Specify the IP address.
Auto-configuration (SwitchConfiguration auto)	Enabling or disabling auto-Configuration for network devices	Specify whether to enable auto-Configuration. - true Auto-configuration is enabled. - false Auto-configuration is disabled.
Ruleset name (Ruleset name)	Name of the ruleset (This can be omitted, when "false" is set for Auto-Configuration)	Specify a character string up to 32 characters.

The created network resource varies depending on the values specified for *External connection port number* (ExternalPorts) and *Automatic VLAN configuration for external connection port* (ExternalPorts vlanautosetting).

Table 15.13 Network Resource Creation with the Values of ExternalPorts and vlanautosetting

No.	ExternalPorts Element	vlanautosetting Attribute Value	Number of External Connection Ports	Created Network Resources
1	None	Not specified	-	Internal networks
2	Specified	false or not specified	0	Internal networks
3	Specified	false or not specified	One or more	External networks
4	Specified	true	0	Internal networks (*)
5	Specified	true	One or more	External networks (*)

* Note: For network resource modification, when an external connection port is added, a tagged VLAN is automatically set to the external connection port.

Note

- When specifying a subnet address and not specifying IP addresses for exclusion or a default gateway address, do not specify the end tag for the <AddressSet> element.

Example

- Do not specify an end tag as shown below.

```
<Pool name="NetworkPool">
  <Network name="sample">
     <Vlanid>10</Vlanid>
     <AddressSet name="sample" subnet="192.168.1.0"
mask="255.255.255.0">
     </AddressSet>
  </Network>
</Pool>
```

- Specify an empty element tag instead of the end tag.

```
<Pool name="NetworkPool">
  <Network name="sample">
     <Vlanid>10</Vlanid>
     <AddressSet name="sample" subnet="192.168.1.0"
mask="255.255.255.0"/>
  </Network>
</Pool>
```

- When specifying the <ExternalPorts> element, and not specifying the external port number or name of a LAN switch blade, do not specify the end tag of the <ExternalPorts> element. Specify an empty element tag instead of the end tag.

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Pool name="NetworkPool">
<Network name="man_net" label="man_net_label">
    <Comment>comment</Comment>
  <Vlanid>4000</Vlanid>
  <PhysicalLANSegment>segmentA</PhysicalLANSegment>
  <ExternalPorts vlanautosetting="true">
    <NetworkSwitchPort number="11" switch="bx620-lan1"/>
    <NetworkSwitchPort number="12" switch="bx620-lan2"/>
```

```
    <NetworkSwitchPort lag="linkaggregation1" switch="bx900-lan1"/>
    <NetworkSwitchPort lag="linkaggregation2" switch="bx900-lan2"/>
  </ExternalPorts>
  <AddressSet name="192.168.99.0" subnet="192.168.99.0" mask="255.255.255.0">
    <Exclude>
      <AddressRange start="192.168.99.10" end="192.168.99.20" />
      <AddressRange start="192.168.99.30" end="192.168.99.40" />
    </Exclude>
    <DefaultGateway address="192.168.99.254"/>
  </AddressSet>
  <SwitchConfiguration auto="true">
    <Ruleset name="Ruleset1"/>
  </SwitchConfiguration>
</Network>
</Pool>
```

15.6.2 Modification

When modifying network resources, only elements that have been defined can be modified.

The following elements can be modified:

- Network Resource Name
- Label
- Comment
- Physical LAN Segment
- Address Set Name
- Subnet Information
- Exclusion Range of IP Addresses
- Default Gateway
- External Connection Port Settings

If defining multiple elements, they will be modified at the same time.

Define all new information of the settings after modification for external connection port settings.

Define all new information of the settings after modification for IP addresses to exclude.

When modifying network resources that automatically perform VLAN setting for external connection ports, if an external connection port is added, VLAN setting is automatically performed.

Note

- Network resource types cannot be changed (specification of the Type element).
- An address set name can only be modified to a name which is the same as the resource name of the network resource.
- Resource pools cannot be changed (specification of the Pool element). To change to another resource pool, use the rcxadm pool move command.
- VLAN IDs cannot be changed (specification of the Vlanid element).
- Automatic VLAN configuration for external connection ports cannot be modified (the vlanautosetting attribute of the ExternalPorts element cannot be specified).
- Admin LAN subnet names cannot be changed (specification of the ManagementLanSubnet element).
- No errors occur in command execution.

- When an external connection port is deleted, the following virtual resources may remain on the server within the chassis in which the LAN switch blade specified for the external connection port is mounted.

  - For VMware

    Port groups, virtual switches

  - For Hyper-V

    Virtual networks

  In this case, check the remaining virtual resources. If they are unnecessary, delete them using VM management software.

  The NetworkViewer of Resource Orchestrator or VM management software can be used to check for the remaining virtual resources.

The XML definition for modification of each element is shown below.

Example

- Modifying network resource names

```
<Network name="Modified network resource name" />
```

- Modifying labels

```
<Network label="Modified label" />
```

- Modifying comments

```
<Network>
  <Comment>Modified Comments</Comment>
</Network>
```

- Addition of physical LAN segments

```
<Network>
  <PhysicalLANSegment>Physical LAN segment name which is added</
PhysicalLANSegment>
</Network>
```

- Deletion of physical LAN segments

```
<Network>
  <PhysicalLANSegment />
</Network>
```

- Modifying address set names

```
<Network name="Network resource name"/>
  <AddressSet name="Modified name of the address set" />
</Network>
```

- Modifying network resource and address set names

```
<Network name="Modified network resource name" />
  <AddressSet name="Modified name of the address set" />
</Network>
```

- Modifying subnet information (when subnet information is not registered in network resources)

```
<Network>
  <AddressSet subnet="Modified subnet address" mask="Modified subnet
mask" />
</Network>
```

- Initializing subnet information (when the network resource type is public LAN, and the subnet information is registered)

```
<Network>
  <AddressSet />
</Network>
```

Do not specify any value in <AddressSet>.

- Adding exclusion range of IP addresses (when adding the IP address range of 192.168.1.1 to 192.168.1.10 to the existing exclusion range of 192.168.1.100 to 192.168.1.200)

```
<Network>
  <AddressSet>
    <Exclude>
      <AddressRange start="192.168.1.100" end="192.168.1.200" />
      <AddressRange start="192.168.1.1" end="192.168.1.10" />
    </Exclude>
  </AddressSet>
</Network>
```

- Changing exclusion range of IP addresses (when deleting the IP address range of 192.168.1.1 to 192.168.1.10 from the exclusion ranges of 192.168.1.100 to 192.168.1.200 and 192.168.1.1 to 192.168.1.10)

```
<Network>
  <AddressSet>
    <Exclude>
      <AddressRange start="192.168.1.100" end="192.168.1.200" />
    </Exclude>
  </AddressSet>
</Network>
```

Specify all IP address ranges to be excluded after modification for the Exclude element.

- Initializing the value of exclusion range of IP addresses

```
<Network>
  <AddressSet>
    <Exclude />
  </AddressSet>
</Network>
```

Do not specify any value in <Exclude>.

- Modifying the default gateway

```
<Network>
  <AddressSet>
    <DefaultGateway address="Modified default gateway" />
  </AddressSet>
</Network>
```

- Initializing the default gateway (This can only be specified when the network resource type is public LAN)

```
<Network>
  <AddressSet>
```

```
    <DefaultGateway />
  </AddressSet>
</Network>
```

Do not specify a value in <DefaultGateway>.

- Adding external connection ports (when adding external connection port information for an attached chassis (PRIMERGY BX900/BX400))

Information before Modification		Information after Modification	
LAN Switch Blade Name	External Connection Port Number/Link Aggregation Group Name	LAN Switch Blade Name	External Connection Port Number/Link Aggregation Group Name
		bx600-lan1	40
		bx600-lan2	40
bx600-lan1	40	bx900-lan1	41
bx600-lan2	40	bx900-lan2	41
		bx400-lan1	linkaggregation1
		bx400-lan2	linkaggregation2

  - Before the Modification

```
<Network>
  <ExternalPorts>
    <NetworkSwitchPort number="40" switch="bx600-lan1"/>
    <NetworkSwitchPort number="40" switch="bx600-lan2"/>
  </ExternalPorts>
</Network>
```

  - After the Modification

```
<Network>
  <ExternalPorts>
    <NetworkSwitchPort number="40" switch="bx600-lan1"/>
    <NetworkSwitchPort number="40" switch="bx600-lan2"/>
    <NetworkSwitchPort number="41" switch="bx900-lan1"/>
    <NetworkSwitchPort number="41" switch="bx900-lan2"/>
    <NetworkSwitchPort lag="linkaggregation1" switch="bx400-lan1"/>
    <NetworkSwitchPort lag="linkaggregation2" switch="bx400-lan2"/>
  </ExternalPorts>
</Network>
```

- Deleting external connection ports

Information before Modification		Information after Modification	
LAN Switch Blade Name	External Connection Port Number/Link Aggregation Group Name	LAN Switch Blade Name	External Connection Port Number/Link Aggregation Group Name
bx600-lan1	40		
bx600-lan2	40		
bx900-lan1	41	bx900-lan1	41
bx900-lan2	41	bx900-lan2	41
bx400-lan1	linkaggregation1		
bx400-lan2	linkaggregation2		

  - Before the Modification

```
<Network>
  <ExternalPorts>
    <NetworkSwitchPort number="40" switch="bx600-lan1"/>
    <NetworkSwitchPort number="40" switch="bx600-lan2"/>
    <NetworkSwitchPort number="41" switch="bx900-lan1"/>
    <NetworkSwitchPort number="41" switch="bx900-lan2"/>
    <NetworkSwitchPort lag="linkaggregation1" switch="bx400-lan1"/>
    <NetworkSwitchPort lag="linkaggregation2" switch="bx400-lan2"/>
  </ExternalPorts>
</Network>
```

- After the Modification

```
<Network>
  <ExternalPorts>
    <NetworkSwitchPort number="41" switch="bx900-lan1"/>
    <NetworkSwitchPort number="41" switch="bx900-lan2"/>
  </ExternalPorts>
</Network>
```

- Modifying external connection ports

Information before Modification		Information after Modification	
LAN Switch Blade Name	External Connection Port Number/Link Aggregation Group Name	LAN Switch Blade Name	External Connection Port Number/Link Aggregation Group Name
bx900-lan1	41	bx900-lan1	40
bx900-lan2	41	bx900-lan2	40
bx400-lan1	linkaggregation1	bx400-lan1	linkaggregation11
bx400-lan2	linkaggregation2	bx400-lan2	linkaggregation12

- Before the Modification

```
<Network>
  <ExternalPorts>
    <NetworkSwitchPort number="41" switch="bx900-lan1"/>
    <NetworkSwitchPort number="41" switch="bx900-lan2"/>
    <NetworkSwitchPort lag="linkaggregation1" switch="bx400-lan1"/>
    <NetworkSwitchPort lag="linkaggregation2" switch="bx400-lan2"/>
  </ExternalPorts>
</Network>
```

- After the Modification

```
<Network>
  <ExternalPorts>
    <NetworkSwitchPort number="40" switch="bx900-lan1"/>
    <NetworkSwitchPort number="40" switch="bx900-lan2"/>
    <NetworkSwitchPort lag="linkaggregation11" switch="bx400-lan1"/>
    <NetworkSwitchPort lag="linkaggregation12" switch="bx400-lan2"/>
  </ExternalPorts>
</Network>
```

15.7 Network Configuration Information

This section explains the creation and modification of network configuration information.

The commands for network device operations are shown below.

Operation		Command
Creation	Individual creation	rcxadm netdevice create rcxnetworkservice register (*)
	Batch creation	rcxadm netconfig import rcxnetworkservice register (*)
Modification	Individual modification	rcxadm netdevice modify
	Batch modification	rcxadm netconfig import

* Note: This command is used to register NS Appliances as network devices.

For details on the rcxnetworkservice command, refer to "A.1 rcxnetworkservice" in the "NS Option Instruction".

15.7.1 Creation

The XML definition for network configuration information is shown below.

- XML definitions for creation of individual network devices

```
<?xml version="1.0" encoding="utf-8"?>
<Netdevice ip="Admin IP Address" subnetmask="Admin LAN Subnet Mask" vlanid="Admin LAN VLAN
ID" name="Device Name" portprofile="Use of the AMPP Function">
  <Location>Location</Location>
  <Types>
    <Type>Type</Type>
  </Types>
  <FabricType>Fabric type</FabricType>
  <ApplianceType>Appliance Type</ApplianceType>
  <Maintenance>Maintenance Mode</Maintenance>
  <AutoConfiguration>Auto-Configuration for Network Device</AutoConfiguration>
  <MaxDeployment>Number of deployable_L-Platforms (total)</MaxDeployment>
  <ManagementHost>Management host IP address</ManagementHost>
  <Vfabs>
    <Mode>VFAB Registration Mode</Mode>
    <Vfab vfabid="VFAB ID" name="VFAB Name" mode="Operation Mode" vfabauto="Auto-
Configuration of VFABs">
      <Tenants>
        <Tenant>Tenant Name</Tenant>
      </Tenants>
      <Dot1adPorts>
        <Dot1adPort name="Sending and Receiving Port of the IEEE802.1ad Frame"></Dot1adPort>
      </Dot1adPorts>
      <CirPorts>
        <CirPort name="CIR port name or CIR Link Aggregation Port Identifier Information"></
CirPort>
      </CirPorts>
      <EpPorts>
        <EpPort name="EP port name or EP Link Aggregation Port Identifier Information"></
EpPort>
      </EpPorts>
    </Vfab>
  </Vfabs>
  <DeviceInfo>
    <SysObjectId>sysObjectID</SysObjectId>
    <Vendor>Vendor Name</Vendor>
    <ProductName>Device Name</ProductName>
    <ModelName>Model Name</ModelName>
    <Firmware>Firmware</Firmware>
    <PresettingInfo>Pre-configuration Information</PresettingInfo>
  </DeviceInfo>
  <Redundancy group_id="Group ID"></Redundancy>
```

```
  <MgmtInfos>
    <Snmps>
      <ReadCommunity>Community Name</ReadCommunity>
    </Snmps>
    <LoginInfos>
      <LoginInfo="Protocol" auth_type="Management Method for Authentication Information"
authority="Administrator Authority" check="Account Confirmation">
        <IpAddress>Destination IP Address</IpAddress>
        <Port>Destination Port Number</Port>
        <Tenant>Tenant Name</Tenant>
        <User>Account</User>
        <Password>Password</Password>
        <PrivilegedPassword>Administrator Password</PrivilegedPassword>
        <PasswordEncryption>Password Encryption</PasswordEncryption>
      </LoginInfo>
    </LoginInfos>
    <Monitoring>
      <Methods>
        <Method>Monitoring method</Method>
      </Methods>
      <Interval>Monitoring Interval</Interval>
      <RetryCount>Retry Count</RetryCount>
      <Timeout>Timeout</Timeout>
    </Monitoring>
    <MgmtURL>Web Management Window URL</MgmtURL>
  </MgmtInfos>
  <Ports>
    <Port name="Port Name">
      <Description>Port Overview</Description>
      <PhysicalState>Communication Status</PhysicalState>
      <Link ip="Management IP address for Link Destination Device" port="Port Name of Link
Destination" kind="Type of Link Destination Device" />
      <Link ip="Management IP address for Link Destination Device" nic_index="Port Name of
Link Destination (for display)" kind="server" />
      <StagId>S-TAG ID</StagId>
    </Port>
  </Ports>
</Netdevice>
```

- XML definitions for batch creation of multiple network devices

```
<?xml version="1.0" encoding="utf-8"?>
<NetConfig>
<Netdevices>
  <Mode>Registration Mode</Mode>
  <Netdevice ip="Admin IP Address" subnetmask="Admin LAN Subnet Mask" vlanid="Admin LAN VLAN
ID" name="Device Name" portprofile="Use of the AMPP Function">
    <Location>Location</Location>
    <Types>
      <Type>Type</Type>
    </Types>
    <FabricType>Fabric type</FabricType>
    <ApplianceType>Appliance Type</ApplianceType>
    <Maintenance>Maintenance Mode</Maintenance>
    <AutoConfiguration>Auto-Configuration for Network Device</AutoConfiguration>
    <MaxDeployment>Number of deployable_L-Platforms (total)</MaxDeployment>
    <ManagementHost>Management host IP address</ManagementHost>
    <Vfabs>
      <Mode>VFAB Registration Mode</Mode>
      <Vfab vfabid="VFAB ID" name="VFAB Name" mode="Operation Mode" vfabauto="Auto-
Configuration of VFABs">
        <Tenants>
          <Tenant>Tenant Name</Tenant>
```

```
        </Tenants>
        <Dot1adPorts>
         <Dot1adPort name="Sending and Receiving Port of the IEEE802.1ad Frame"></Dot1adPort>
        </Dot1adPorts>
        <CirPorts>
         <CirPort name="CIR port name or CIR Link Aggregation Port Identifier Information"></
CirPort>
        </CirPorts>
        <EpPorts>
          <EpPort name="EP port name or EP Link Aggregation Port Identifier Information"></
EpPort>
        </EpPorts>
      </Vfab>
    </Vfabs>
    <DeviceInfo>
      <SysObjectId>sysObjectID</SysObjectId>
      <Vendor>Vendor Name</Vendor>
      <ProductName>Device Name</ProductName>
      <ModelName>Model Name</ModelName>
      <Firmware>Firmware</Firmware>
      <PresettingInfo>Pre-configuration Information</PresettingInfo>
    </DeviceInfo>
    <Redundancy group_id="Group ID"></Redundancy>
    <MgmtInfos>
      <Snmps>
        <ReadCommunity>Community Name</ReadCommunity>
      </Snmps>
      <LoginInfos>
        <LoginInfo="Protocol" auth_type="Management Method for Authentication Information"
authority="Administrator Authority" check="Account Confirmation">
          <IpAddress>Destination IP Address</IpAddress>
          <Port>Destination Port Number</Port>
          <Tenant>Tenant Name</Tenant>
          <User>Account</User>
          <Password>Password</Password>
          <PrivilegedPassword>Administrator Password</PrivilegedPassword>
          <PasswordEncryption>Password Encryption</PasswordEncryption>
        </LoginInfo>
      </LoginInfos>
      <Monitoring>
        <Methods>
          <Method>Monitoring method</Method>
        </Methods>
        <Interval>Monitoring Interval</Interval>
        <RetryCount>Retry Count</RetryCount>
        <Timeout>Timeout</Timeout>
      </Monitoring>
      <MgmtURL>Web Management Window URL</MgmtURL>
    </MgmtInfos>
    <Ports>
      <Port name="Port Name">
        <Description>Port Overview</Description>
        <PhysicalState>Communication Status</PhysicalState>
        <Link ip="Management IP address for Link Destination Device" port="Port Name of Link
Destination" kind="Type of Link Destination Device" />
        <Link ip="Management IP address for Link Destination Device" nic_index="Port Name of
Link Destination (for display)" kind="server" />
        <StagId>S-TAG ID</StagId>
      </Port>
    </Ports>
  </Netdevice>
</Netdevices>
<Links>
```

```
  <Mode>Link Information Registration Mode</Mode>
  <Link>
    <Devices>
      <Device ip="Admin IP Address of Device 1" name="Resource Name of Device 1" kind="Type
of Device 1">
        <Port>Connection Port Name of Device 1</Port>
        <NicIndex>Connection Port Name of Device 1</NicIndex>
      </Device>
      <Device ip="Admin IP Address of Device 2" name="Resource Name of Device 2" kind="Type
of Device 2">
        <Port>Connection Port Name of Device 2</Port>
        <NicIndex>Connection Port Name of Device 2</NicIndex>
      </Device>
    </Devices>
  </Link>
</Links>
<FileServers>
  <Mode>External Server Registration Mode</Mode>
  <FileServer ip="IP Address">
    <User>External Server Account</User>
    <Password>External Server Password</Password>
    <PasswordEncryption>Password Encryption of External Server</PasswordEncryption>
  </FileServer>
</FileServers>
</NetConfig>
```

Table 15.14 List of Items Specified in XML Definitions for Network Configuration Information

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
Network configuration information (NetConfig)	A collection of network configuration information	-	Not possible	Not possible	Required	Required	Yes
Network device information (Netdevices)	A collection of network device information	Specify one or more Netdevice elements. When registering two or more network devices for resources simultaneously, this element cannot be omitted.	Not possible	Not possible	Optional	Optional	Yes (*1)
Registration mode (Mode)	Registration mode	Specify the registration mode of the network device. Specify one of following items. - add New registration Network device information is not overwritten when the specified management IP address has already been used to register another resource. - modify	Not possible	Not possible	Optional	Required	No

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		Modification Network device information is overwritten when the specified management IP address has already been used to register another resource. If left blank, "add" is specified.					
Admin IP address (Netdevice ip)	Admin IP address for the network device	Specify an IPv4 address.	Required	Optional	Required	Required	Yes
Admin LAN subnet mask (Netdevice subnetmask)	Admin LAN subnet mask	Specify the subnet mask for the admin LAN in the IPv4 format. Be sure to specify this when registering an NS Appliance.	Optional	Optional	Optional	Optional	Yes (*2)
VLAN ID for admin LAN (Netdevice vlanid)	VLAN ID for admin LAN	Specify an integer between 1 and 4094. When registering NS Appliances, only specify this when using a VLAN that is different from the admin LAN for physical L-Servers where NS Appliances are deployed.	Optional	Optional	Optional	Optional	Yes (*2)
Device name (Netdevice name)	Name of the network device	Specify a character string containing up to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods ("."). If left blank, the host name or IP address obtained from the network device is specified. Be sure to specify this when registering an NS Appliance. However, when registering NS Appliances, underscores ("_") cannot be used in device names. For Ethernet Fabric, if left blank, the destination host name of the representative virtual IP address of the fabric is specified. If characters other than alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".") are used in the host name obtained from the network device, they will be replaced with underscores ("_"). However, when the obtained value is 33 characters or longer, only the first 32 characters will be specified.	Optional	Optional	Optional	Optional	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
Use of the AMPP function (Netdevice portprofile)	Use of the AMPP function	Specify whether to use the AMPP function during automatic configuration for an Ethernet Fabric switch (Converged Fabric). Specify either one of the following: - enable Specify when using the AMPP function - disable Specify when not using the AMPP function If left blank, "enable" is specified. Only specify when *Type* (Type) is "Fabric" and the *Fabric type* is "C-Fabric".	Optional	Optional	Optional	Optional	Yes
Location (Location)	Location	Specify a character string containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). If left blank, the location obtained from the network device is specified. For Ethernet Fabric, if left blank, the destination location of the representative virtual IP address of the fabric is specified. If characters other than alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".") are used in the location obtained from the network device, they will be replaced with underscores ("_"). However, when the obtained value is 33 characters or longer, only the first 32 characters will be specified.	Optional	Optional	Optional	Optional	Yes (*2)
Type information (Types)	A collection of type information	Specify one or more Type elements.	Optional	Optional	Optional	Optional	Yes (*1)
Type (Type)	Network device type	Specify the type of the network device. Specify one of following items. - L2-Switch - Firewall - SLB - Fabric - ManagementHost	Optional	Optional	Optional	Optional	Yes (*2)

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		Network devices with "Firewall" or "SLB" specified are set as the registration targets for network pools. When omitted, the type obtained from the Network Device Model Definitions is specified. When registering an NS Appliance, specify "Firewall" or "Firewall" and "SLB". When registering network devices with multiple types, specify multiple entries of this element. However, when "Fabric" or "ManagementHost" is specified, multiple entries of this element cannot be specified.					
Appliance type (ApplianceType)	Appliance type	Specify the type of the appliance. Specify one of following items. - physical Physical appliance - virtual Virtual appliance If left blank, "physical" is specified. When registering NS Appliances or IPCOM VA, specify "virtual".	Optional	Not possible	Optional	Not possible	Yes (*2)
Fabric type (FabricType)	Fabric type	Specify the fabric type. Specify one of the following options: - C-Fabric - VCS Specify when "Fabric" is specified for the *Type* (type). When omitted, "C-Fabric" is specified.	Optional	-	Optional	-	Yes
Maintenance mode (Maintenance)	Maintenance mode settings	Specify the status of maintenance mode. Specify one of following items. - true Maintenance mode - false Normal	Optional	-	Optional	-	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		If left blank, "false" is specified.					
Auto-configuration for the network device (AutoConfiguration)	Auto-configuration for network devices	Specify whether the network device can be selected as a target of auto-configuration. Specify either one of the following: - true Target of auto-configuration - false Not the target of auto-configuration For IPCOM VX, specify "false". If left blank, "true" is specified. When the operational status of the network device is "error", changing the value to "false" is not possible.	Optional	Optional	Optional	Optional	No
The number of the L-Platforms which can be deployed (total) (MaxDeployment)	The number of the L-Platforms which can be deployed (total)	Specify the (total) number of L-Platforms that can be deployed. Specify one of following values. - 1 - 5 - 9 If left blank, "5" is set. This can only be specified when "Simple" is specified for Pre-configuration details (PresettingInfo).	Optional	-	Optional	-	Yes
Management host IP address (ManagementHost)	Management host IP address	When registering virtual appliances, specify an IPv4 address of the management host (the physical L-Server or physical server on which IPCOM VX or NS appliance is operating). Specify the value only when registering a virtual appliance.	Optional	-	Optional	-	Yes
VFAB information (Vfabs)	A collection of VFAB information	Specify one or more Vfab elements. Enabled when *Type* (Type) is "Fabric" and *Fabric type* is "C-Fabric".	Optional	Optional	Optional	Optional	Yes (*21)
VFAB Registration Mode (Mode)	VFAB Registration Mode	Specify a VFAB registration mode. Specify one of following items. - replace	-	-	Optional	Optional	No

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		Replaces VFABs. VFABs with no VFAB ID specified will be deleted. This mode can only be specified only when the number of target VFABs (the sum of the registered VFABs for deletion and the VFABs specified in the configuration definition) is 100 or less. - add This mode can only be specified for the VFABs with VFAB IDs that you want to add. For VFABs with already registered VFAB IDs, the operation will not be performed, even if this mode is specified. Up to 100 Vfab elements can be specified at a time. - modify This mode can be only specified for the VFABs with already registered VFAB IDs. Specify this mode when you want to modify the VFAB information. For VFABs with new VFAB IDs, the operation will not be performed, even if this mode is specified. Up to 100 Vfab elements can be specified at a time. - delete This mode can be only specified for the VFABs with already registered VFAB IDs. For VFABs with new VFAB IDs, the operation will not be performed, even if this mode is specified. For the default VFAB, specification of this mode is regarded as invalid. Up to 100 Vfab elements can be specified at a time. When omitted, "replace" is specified. This is only valid when modifying a network device.					

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
VFAB (Vfab)	A single piece of VFAB information	None	Optional	Optional	Optional	Optional	Yes
VFAB ID attributes (vfabid)	VFAB ID	Specify the VFAB ID configured for the Ethernet Fabric (Converged Fabric). Specify an integer between 1 - 3000, or "default". When specifying "default", the default VFAB is considered to have been specified. Specify this element not to overlap in a single Vfabs element. The value of this element must be the same as the configuration value of the device.	Optional (*9)	Optional (*9)	Optional (*9)	Optional (*9)	Yes
name attributes (name)	VFAB name	Specify a character string containing up to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods ("."). When using the default VFAB, only "defaultVFAB" can be specified. When omitted, "defaultVFAB" is specified for the default VFAB. For other cases, automatically generated values are specified. Specify this element not to overlap in a single Vfabs element. When the VFAB registration mode is "add" or "modify", ensure this element does not overlap, including registered VFAB name information.	Optional	Optional	Optional	Optional	Yes
mode attribute (mode)	VFAB operation mode	Specify a VFAB operation mode. Specify either one of the following: - host Host mode - network Network mode For VFAB to be connected with IPCOM VX, specify "network". When omitted, "network" is specified for the default VFAB. For other cases, "host" is specified. The value of this element must be the	Optional	Optional	Optional	Optional	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		same as the configuration value of the device. For details on operation of each mode, refer to the manuals of the Ethernet Fabric switch device (Converged Fabric).					
vfabauto attributes (vfabauto)	Auto-configuration of VFABs	Specify auto-configuration for VFABs specified in the vfabid attribute in the Vfab element. Specify either one of the following: - true Auto-configuration - false No auto-configuration If left blank, "false" is specified. For VFAB obtained using SNMP, "false" is specified. The value of this attribute cannot be changed.	Optional	Not possible	Optional	Not possible	Yes
Tenant information (Tenants)	A collection of information of tenants using VFAB	Specify one or more Tenant elements. Specify this element for any VFAB other than the default VFAB.	Optional	Optional	Optional	Optional	Yes (When not using the default VFAB)
Tenant name (Tenant)	Name of a tenant using VFAB	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify the name of a tenant displayed in the orchestration tree. Specify this element not to overlap in a single Vfabs element. Tenants which are not specified in this element will use the default VFAB.	Optional	Optional	Optional	Optional	Yes
Ports for sending and receiving of the IEEE802.1ad frame (Dot1adPorts)	Collection of ports for sending and receiving of the IEEE802.1ad frame used in VFABs	Specify one or more Dot1adPort elements. This element is valid when maintenance mode setting is "normal", and the vfabauto attribute is "true".	Optional	Optional	Optional	Optional	Yes
Information of ports for sending and	Information of ports for sending and	There is no information to specify.	Optional	Optional	Optional	Optional	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
receiving of the IEEE802.1ad frame (Dot1adPort)	receiving of the IEEE802.1ad frame used by a single VFAB	This element is valid when maintenance mode setting is "normal", and the vfabauto attribute is "true".					
name attributes (name)	The names of ports for sending and receiving of the IEEE802.1ad frame used by VFABs	Specify the port name (ifName) configured in Converged Fabric using a string of up to 64 characters. Alphanumeric characters and symbols (ASCII characters (0x20 to 0x7e) can be specified. However, the port name (ifName) of the member port of the link aggregation port cannot be specified.	Optional (*14)	Optional (*14)	Optional (*14)	Optional (*14)	Yes
CIR ports (CirPorts)	Collection of CIR ports used for VFABs	Specify one or more CirPort elements. Specify this element in the following cases: - When the maintenance mode of the target device is "normal", and - The vfabauto attribute is "true", and - The mode attribute under the Vfab element is "host" In other cases, this specification is not valid.	Optional (*15)	Optional (*15)	Optional (*15)	Optional (*15)	Yes
CIR port information (CirPort)	Information of CIR ports used for a single VFAB	There is no information to specify. Specify this element in the following cases: - When the maintenance mode of the target device is "normal", and - The vfabauto attribute is "true", and - The mode attribute under the Vfab element is "host" In other cases, this specification is not valid.	Optional (*15)	Optional (*15)	Optional (*15)	Optional (*15)	Yes
name attributes (name)	CIR port names used for VFABs or link aggregation port identifier information	Specify a character string containing up to 64 alphanumeric characters and symbols (ASCII characters 0x20 to 0x7e). - To specify physical ports Specify the port name (ifName) configured in Converged Fabric.	Optional (*15, *16)	Optional (*15, *16)	Optional (*15, *16)	Optional (*15, *16)	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		However, the port name (ifName) of the member port of the link aggregation port cannot be specified. - When specifying the link aggregation port Link aggregation port identifier information Specify "linkaggregation*Domain ID_Link Aggregation Group Number*". (*17)					
EP Ports (EpPorts)	Collection of EP ports used for VFABs	One or more EpPort elements are specified.	-	-	-	-	Yes
EP Port information (EpPort)	Information of EP ports used for a single VFAB	There is no information to specify.	-	-	-	-	Yes
name attributes (name)	EP port names used for VFABs or link aggregation port identifier information	Specify a character string containing up to 64 alphanumeric characters and symbols (ASCII characters (0x20 to 0x7e)). - To specify physical ports The port name (ifName) configured in Converged Fabric is specified. However, the port name (ifName) of the member port of the link aggregation port is not specified. - When specifying the link aggregation port Link aggregation port identifier information "linkaggregation*Domain ID_Link Aggregation Group Number*" is specified. (*17)	-	-	-	-	Yes
Device information (DeviceInfo)	Device information	Specify the information of the model of the network device.	Optional	-	Optional	-	Yes
SysObjectId (SysObjectId)	SysObjectId	When monitoring using SNMP, SysObjectID collected automatically is specified as an OID in number and period format.	-	-	-	-	Yes
Vendor Name (Vendor)	Vendor name	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric	Optional	-	Optional	-	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		characters, underscores ("_"), and hyphens ("-"). Specify the same arbitrary name as used for the Vendor name of the folder (*7) where the rulesets for L-Platform templates and network resources (network device-specific) are registered. When omitted, the vendor name obtained from the Network Device Model Definitions is specified. For VCS, when omitted, "Brocade" is specified. When registering NS Appliances, specify "Fujitsu".					
Device name (ProductName)	Device name (product name)	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify the same arbitrary name as used for the unit_name or model_name of the folder (*7) where the rulesets for L-Platform templates and network resources (network device-specific) are registered. When omitted, the unit name obtained from the Network Device Model Definitions is specified. For Converged_Fabric, "Converged_Fabric" is displayed. For VCS, when omitted, "VDX" is specified.	Optional	-	Optional	-	Yes
Model Name (ModelName)	Model name	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify the same arbitrary name as used for the unit_name or model_name of the folder (*7) where the rulesets for L-Platform templates and network resources (network device-specific) are registered. When omitted, the model name obtained from the Network Device Model Definitions is specified.	Optional	-	Optional	-	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		For Converged_Fabric, "Converged_Fabric" is displayed. For VCS, when omitted, a hyphen, "-" is specified. When registering NS Appliances, specify "NSAppliance".					
Firmware (Firmware)	Firmware or IOS version	A character string is specified. Specification is unnecessary as it is automatically collected from the network device.	-	-	-	-	Yes
Pre-configuration details (PresettingInfo)	Pre-configuration details	Specify details of pre-configuration of network devices. Specify "Simple", when creating an L-Platform including firewalls using the simple configuration mode, and performing pre-configuration of available network devices. When the network device is an NS appliance, "Simple" can be specified.	Optional	-	Optional	-	Yes
Group ID (Redundancy group_id)	Group ID	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). For the network devices belonging to the same group ID, use the same vendor name and device name.	Optional	Optional	Optional	Optional	Yes (*2)
Management information (MgmtInfos)	A collection of management information	Specify one or more Snmps elements, LoginInfo elements, or other similar elements.	Required	Optional	Required	Optional	Yes
SNMP information (Snmps)	A collection of SNMP information	Specify the ReadCommunity element once.	Optional	Optional	Optional	Optional	Yes
Community name (ReadCommunity)	Community name (This cannot be omitted when specifying SNMP information)	Specify a character string containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Be sure to specify this when registering an NS Appliance.	Optional (*10)	Optional	Optional (*10)	Optional	Yes
Login information (LoginInfos)	A collection of login information	Specify one or more LoginInfo elements.	Optional (*8)	Optional	Optional	Optional	Yes (*1)
Protocol (LoginInfo protocol)	Protocol	Specify the protocol used when logging in using login information. Specify one of following items. - remote_login	Optional (*8)	Optional	Optional	Optional	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		Specify when using Telnet or SSH login information. If login via Telnet is possible, use Telnet. If login via Telnet is not possible, use SSH. - ftp Specify when using FTP login information. - telnet Specify when using Telnet login information. - ssh Specify when using SSH login information. - netconf Specify when "NETCONF" has been specified for the Monitoring method (Method). When omitted, "remote_login" is specified. Specify "ssh", when *Type* (Type) is "Fabric" and the *Fabric type* is "C-Fabric".					
Management method for authentication information (LoginInfo auth_type)	Management method for authentication information	Specify the management method for the authentication information. When the information is managed within a network device, specify "local password". If omitted, it will be automatically specified.	Optional	Optional	Optional	Optional	Yes (*3)
Administrator authority (LoginInfo authority)	Presence or absence of administrator authority	Specify the type of authority for the account. Specify one of following: - user Specify when it is possible to connect to the target network device using an account with user privileges (the account specified for "Account (User)") and then switch to administrator privileges to modify definitions. - admin	Optional (*8)	Optional	Optional	Optional	Yes (*3)

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		Specify only when it is possible to change the definition for the device to register using an account with administrator privileges (the account specified for "Account (User)"). When omitted, "user" is specified. When "Fabric" is specified for the *type* (Type), specify "user". When "NSAppliance" is specified for the *model_name* (ModelName), specify "user".					
Account confirmation (LoginInfo check)	Presence or lack of account information checks	Specify whether to check the account information when the registration or modification is performed. Specify one of following items. - true Checking is performed. (*4) - false Checking is not performed. If left blank, "false" is specified.	Optional	Optional	Optional	Optional	No
Destination IP address (IpAddress)	Destination IP address	Specify the IP address in IPv4 format. Specify when performing checks of the auto-configuration settings for the network device and account information (when "true" is specified for the account check (LoginInfo check)) from an IP address other than the admin IP address (Netdevice ip). Specify the same IP address when there are multiple specifications of the same login information for the *tenant name* (Tenant). When a different IP address is specified, or partially omitted, the auto-configuration settings for the network device and the account information of the connection IP address (IpAddress) in the login information with "user" specified in the administrator privileges (LoginInfo authority) are checked. If left blank, the admin IP address (Netdevice ip) is specified.	Optional	Optional	Optional	Optional	Yes (*3)

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
Destination port number (Port)	Port number of the protocol to connect the destination	Specify an integer between 1 and 65535. Specify the port number of the network device to perform checking of auto-configuration settings and account information (when "true" is specified for the account check (Login Info check)). Specify the same port number when there are multiple specifications of the same login information for the *tenant name* (Tenant). When a different port number is specified, or partially omitted, the auto-configuration settings for the network device and the account information of the port number in the login information with "user" specified in the administrator privileges (LoginInfo authority) are checked. If left blank, one of the following is specified based on the value specified for the protocol (LoginInfo protocol). - 23 or 22 For "remote_login" The default value (23 or 22) for the protocol (Telnet or SSH) that was successful when checking the account information is specified. However, when not performing a check of the account information (when "false" is specified for the account check (LoginInfo check)), the default value for Telnet (23) is specified. - 21 For "ftp" - 23 For "telnet" - 22 For "ssh" - 830 For "netconf"	Optional	Optional	Optional	Optional	Yes (*3)

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
Tenant name (Tenant)	Tenant name	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify the name of a tenant displayed in the orchestration tree that the resource belongs to. Only specify when "Firewall" or "SLB" is specified for the *type* (Type). Can be omitted when registering in the global pool. Omit this item when the account (User) is used for management of network device files or when "Fabric" is specified for the *type* (Type).	Optional	Optional	Optional	Optional	Yes (*3)
Account (User)	User account for connection	When "user" is specified for Administrator authority (LoginInfo authority), specify an account with user privileges. When "admin" is specified for Administrator authority (LoginInfo authority), specify an account with administrator privileges. For the account, specify a character string containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").	Optional (*11)	Optional (*11)	Optional (*11)	Optional (*11)	Yes (*3)
Password (Password)	Password for connection	Specify a character string of up to 64 alphanumeric characters and symbols (!$%()*+,-./:;=@[]^_`{\|}~ and spaces). When registering NS Appliances, specify a password using from 6 to 64 characters, comprised of alphanumeric characters and symbols (!$%()+,-:[]^_~).	Required	Optional (*11)	Required	Optional (*11)	Yes (*3)
Administrator password (PrivilegedPassword)	Administrator password	Specify a character string of up to 64 alphanumeric characters and symbols (!$%()*+,-./:;=@[]^_`{\|}~ and spaces). When registering NS Appliances, specify a password using from 6 to 64 characters, comprised of alphanumeric characters and symbols (!$%()+,-:[]^_~). When "admin" is specified for Administrator authority (LoginInfo	Optional (*8)	Optional	Optional	Optional	Yes (*3)

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		authority), the administrator password is regarded as invalid.					
Password encryption (PasswordEncryption)	Presence or absence of password encryption	Specify whether the password of the network device is encrypted. Specify either one of the following: - true Encrypted - false Not encrypted If left blank, "false" is specified. Specify "false" for initial registration as the password is entered in plain text at that time. When exporting the information, the password will be encrypted and "true" is set for this element to ensure security. Specify "true" only when registering an external server using an encrypted password.	Optional	Optional	Optional	Optional	Yes (*3)
Monitoring information (Monitoring)	Monitoring information	Specify the element of monitoring information.	Optional	Optional	Optional	Optional	Yes
Monitoring method information (Methods)	Collection of monitoring method information	Specify the monitoring method by specifying one or more Method elements. When this element is omitted, one of the following will be specified. - NETCONF When using VCS - SNMP For something other than VCS	Optional	Optional	Optional	Optional	Yes
Monitoring method (Method)	Monitoring method	Specify the monitoring method for the network device. Specify one of following items. - ping When using ping monitoring - SNMP When using SNMP monitoring However, specification is not	Optional	Optional	Optional	Optional	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		possible when *Fabric type* is "VCS". - NETCONF This can only be specified when *Fabric type* is "VCS". Furthermore, it is necessary to specify "netconf" for *Protocol* (LoginInfo protocol). When omitted, "no monitoring" is specified for monitoring of the network device. When specifying multiple monitoring methods, specify multiple entries of this element.					
Monitoring interval (Interval) (*5)	Monitoring interval (seconds) (This cannot be omitted when modifying the monitoring method)	Specify an integer between 1 and 86400. If left blank, "300" is set. Specify "60" when "Simple" is specified for *Pre-configuration details* (PresettingInfo) and "Firewall" and "SLB" are specified for *Type* (Type).	Optional	Optional	Optional	Optional	Yes
Retry count (RetryCount) (*5)	Retry count (This cannot be omitted when modifying the monitoring method)	Specify an integer between 1 and 10. If left blank, "3" is set.	Optional	Optional	Optional	Optional	Yes
Timeout (Timeout) (*5)	Timeout (seconds) (This cannot be omitted when modifying the monitoring method)	Specify an integer between 1 and 300. If left blank, "30" is set.	Optional	Optional	Optional	Optional	Yes
Web Management Window URL (MgmtURL)	Web management window URL	Specify the URL for the Web management window. This can be specified when the Web management functions of the corresponding network devices are provided. If left blank, "http://*Admin IP address*/" is specified. When "Fabric" is specified for the *type* (Type), the default value is not specified.	Optional	Optional	Optional	Optional	Yes
Port information	A collection of port information	One or more Port elements are specified.	Optional	Optional	Optional	Optional	Yes (*1)

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
(Ports)							
Port name (Port name) (*18)	Port name	Specify the port name configured in the network device using a string of up to 64 characters. Alphanumeric characters and symbols (ASCII characters (0x20 to 0x7e) can be specified. Specify this when specifying a StagId element or when both SNMP monitoring and NETCONF monitoring are disabled. If left blank, the value for the port name obtained from the network device is specified. For the procedure to confirm port names, refer to "9.4.8.1 When Creating Network Configuration Information (XML Definition)" in the "Design Guide CE".	Optional (*19)	Optional (*19)	Optional (*19)	Optional (*19)	Yes
Port overview (description)	Overview of the port	The overview of the port (description) is specified. Specification is unnecessary as it is automatically collected from the network device.	-	-	-	-	Yes
Communication Status (PhysicalState)	Communication status	The value of line speed and the communication mode are specified. Specification format:*Line_speed (bps)*/*Communication_mode* For the communication mode, one of the following is specified: - F Represents full duplex. - H Represents half duplex. - - Represents unknown. Specification is unnecessary as it is automatically collected from the network device.	-	-	-	-	Yes
Management IP address for link destination device (Link ip)	Management IP address for link destination	An IP address in IPv4 format is specified.	-	-	-	-	Yes (*2)

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
Port Name of Link Destination (Link port)	The name of the link destination port of a physical interface	The name of the destination port to be linked to is specified.	-	-	-	-	Yes (*2)
Port Name of Link Destination (for display) (Link nic_index)	The NIC index of the link destination port of a physical interface	When the *Type of Link Destination Device* is "server" and *Connection Port Name of Device* (NicIndex) is specified during link information registration, the index number of the NIC is specified.	-	-	-	-	Yes (*2)
Type of Link Destination Device (Link kind)	Type of link destination device	The destination device to be linked to is specified. One of the following is specified: - netdevice Represents a network device. - server Represents a server.	-	-	-	-	Yes (*2)
S-TAG ID (StagId)	S-TAG value	Specify the S-TAG ID specified in the virtual machine interface of IPCOM VX. Specify an integer between 1 and 4094. When omitted, the values obtained from the MIB (isfexVmInterfaceTable) specific to the IPCOM VX are configured. Specify the values only when using IPCOM VA. (*20)	Optional	Optional	Optional	Optional	Yes
Link information (Links) (*6)	Link information destination	This element consists of one or more Link elements. Link information specified with the Links element is registered after all of the currently registered link information is deleted. When modifying only device information, do not specify the Links element to avoid modifying the current link information. In order to delete all current link information, specify the following elements for the Links element: <Links><Link></Link></Links>	Not possible	Not possible	Optional	Optional	Yes (*1)
Link information registration mode (Mode)	Link information registration mode	Specify the registration mode of the link information. Specify one of following items.	Not possible	Not possible	Optional	Optional	No

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		- add New registration When the information is the same as that of an already registered link, the link information will not be overwritten. - modify Modification After deleting all already registered link information, register the new link information. If left blank, "modify" is specified.					
Link (Link)	Link definition (This cannot be omitted when specifying link information)	Specify the Devices element once.	Not possible	Not possible	Optional	Optional	Yes (*1)
Device information (Devices)	Definition of device information (This cannot be omitted when specifying links)	Specify the Device element twice.	Not possible	Not possible	Optional	Optional	Yes (*1)
Admin IP address for the device (Device ip)	Admin IP address for the device	Specify the IP address in IPv4 format.	Not possible	Not possible	Optional (*12)	Optional (*12)	Yes
Device name (Device name)	Device name (Specification is not necessary)	The network device name registered from the admin IP address for devices is specified. When using devices other than network devices, the device name that is the connection destination set by auto-configuration functions is supplemented.	-	-	-	-	Yes
Device type (Device kind)	Device type	Specify the type of the device. Specify one of following items. - netdevice Represents a network device. - server Represents a server. - virtual Represents a virtual appliance.	Not possible	Not possible	Optional	Optional	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		If left blank, "netdevice" is specified.					
Connection port name of device (Port)	Connection port name of device	Specify a character string. - When device type is "netdevice" Specify the port name of the network device. For the procedure to confirm port names, refer to "9.4.8.1 When Creating Network Configuration Information (XML Definition)" in the "Design Guide CE". - When device type is "server" Specify the server NIC number. Specify the NIC number of a rack mount server or a tower server. The NIC number is defined in the preparations explained in "9.3.5 Pre-configuring Managed Servers" in the "Design Guide CE". Example If "1" is defined for the NIC number placed on the upper left of the back face of a rack mount server, specify "1".	Not possible	Not possible	Optional (*12)	Optional (*12)	Yes
Connection port name of device (for display (NicIndex)	Connection port name of device (for display	Specify an integer. When the device type is "server" and you want to display the link information on the [Resource Details] tab of the ROR console and NetworkViewer, specify the index of the physical NIC displayed in the resource details of the corresponding physical server. If an index that is not registered is specified, an error will occur.	Not possible	Not possible	Optional (*12)	Optional (*12)	Yes
External server information (FileServers)	Definition of the external server	Specify the element for the external server. In order to delete registered external server information, specify the following elements for the FileServers element: <FileServers><FileServer></FileServer></FileServers>	Not possible	Not possible	Optional	Optional	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
External server registration mode (Mode)	External server registration mode	Specify the registration mode of the external server. Specify one of following items. - add New registration When the information is the same as that of an already registered external server, the external server information will not be overwritten. - modify Modification Deletes an already registered external server and then registers new external server information. If left blank, "modify" is specified.	Not possible	Not possible	Optional	Optional	No
External server IP address (FileServer ip)	External server IP address (This cannot be omitted when specifying external server information)	Specify the IP address of the external server in IPv4 format.	Not possible	Not possible	Optional (*13)	Optional	Yes
External server account (User)	External server account (This cannot be omitted when specifying external server information)	Specify a character string containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").	Not possible	Not possible	Optional (*13)	Optional	Yes
External server password (Password)	Account password for the external server (This cannot be omitted when specifying external server information)	Specify a character string containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").	Not possible	Not possible	Optional (*13)	Optional	Yes
Password encryption of external server (PasswordEncryption)	Presence or absence of password encryption of the external server	Specify whether the password of the external server is encrypted. Specify one of following items. - true Encrypted - false Not encrypted If left blank, "false" is specified.	Not possible	Not possible	Optional	Optional	Yes

Element Name	Description	Remarks (Possible Values, Examples)	Specification				Output Using Export
			Individual Registration	Individual Modification	Batch Registration	Batch Modification	
		Specify "false" for initial registration as the password is entered in plain text at that time. When exporting the information, the password will be encrypted and "true" is set for this element to ensure security. Specify "true" only when registering an external server using an encrypted password.					

-: Specification is unnecessary when registering or modifying. The information for the element is supplied by automatic configuration. The information is notified when the network configuration information is exported.
Yes: The element is output when exporting the network configuration information.
No: The element is not output when exporting the network configuration information.
*1: The element is output only when the elements are defined under that element.
*2: The element is output only when values are specified for that element.
*3: The element is output only when login information is set. When login information is not set, the default value (the value used when omitted) for that element is output if available.
*4: Account information for network device models satisfying all of the following conditions can be confirmed.

Vendor Name	Model Name	Prompt Type	Prompt Character
Fujitsu	SR-X Ethernet Fabric (*)	Login prompt	Login:
		Password prompt	Password:
		Command prompt	*Arbitrary_character_string*#
			Arbitrary_character_string>
	IPCOM EX IPCOM VX IPCOM VA NS Appliance	Login prompt	login:
		Password prompt	Password:
		Command prompt	*Arbitrary_character_string*#
			Arbitrary_character_string>
Cisco	Catalyst ASA	Login prompt	Username:
		Password prompt	Password:
		Command prompt	*Arbitrary_character_string*#
			Arbitrary_character_string>
	Nexus	Login prompt	login:
		Password prompt	Password:
		Command prompt	*Arbitrary_character_string*#
			Arbitrary_character_string>
Brocade	VDX	Login prompt	Login:
		Password prompt	Password:
		Command prompt	*Arbitrary_character_string*#
			Arbitrary_character_string>

Vendor Name	Model Name	Prompt Type	Prompt Character
F5 Networks	BIG-IP	Login prompt Password prompt Command prompt	There are no particular restrictions.

The command prompt treats the *arbitrary character string* and the "#" or ">" that follows it as a prompt character string.
The model name of the BIG-IP LTM series is treated as being "BIG-IP".
*: Fujitsu PRIMERGY Converged Fabric Switch Blade (10Gbps 18/8+2) or Fujitsu Converged Fabric Switch.

*5: Only specify the values when there are special requirements.
*6: It is not necessary to register network link information between Cisco ASA and adjacent network devices.
*7: For details on the folder for registration of the rulesets for L-Platform templates and network resources (network device-specific), refer to "F.3 Creating a Folder for Registering Rulesets" in the "Design Guide CE".
*8: Required when *Type* (Type) is "Fabric" and *Fabric type* is "C-Fabric".
*9: Required when *VFAB*(Vfab) is specified.
*10: Required when specifying "SNMP" for the *monitoring method* (Method).
*11: Required when specifying the login information (LoginInfos).
*12: Required when specifying the device information (Devices). However, when the device type is "server", either one or both of the *Connection Port Name of Device* (Port) and the *Connection Port Name of Device (for display)* (NicIndex) must be specified.
*13: Required when specifying the external server information (FileServers).
*14: Required when specifying *the information of ports for sending and receiving of the IEEE802.1ad frame* (Dot1adPort) under VFAB(Vfab).
*15: Required when "host" is specified for the VFAB *operation mode* (mode attribute) under VFAB(Vfab).
*16: Required when specifying the *CIR port information* (CirPort) under VFAB(Vfab).
*17: Indicates linkaggregation*Domain ID to which the Link Aggregation Port Belongs_Link Aggregation Group Number (Last Number of ifDescr)*.
*18: When specifying "Fabric" for *type* (Type) and "C-Fabric" for *Fabric type*, port information cannot be registered using this definition.
*19: Required when specifying port information (Ports).
*20: For the settings specific to the IPCOM VA series, refer to "9.4.8.1 When Creating Network Configuration Information (XML Definition)" in the "Design Guide CE".
*21: Output when *Type* (Type) is "Fabric" and *Fabric type* is "C-Fabric".

Example

- When creating one network device:

```
<?xml version="1.0" encoding="utf-8"?>
<Netdevice ip="192.168.5.11" name="Firewall01">
  <Location>B1F</Location>
  <Types>
    <Type>Firewall</Type>
  </Types>
  <Maintenance>false</Maintenance>
  <AutoConfiguration>true</AutoConfiguration>
  <Redundancy group_id="1"></Redundancy>
  <MgmtInfos>
    <Snmps>
      <ReadCommunity>public</ReadCommunity>
    </Snmps>
    <LoginInfos>
      <LoginInfo protocol="telnet" auth_type="local password" authority="admin" check="true">
        <Tenant>TenantA</Tenant>
        <User>user</User>
        <Password>password</Password>
        <PrivilegedPassword>root_password</PrivilegedPassword>
        <PasswordEncryption>false</PasswordEncryption>
      </LoginInfo>
    </LoginInfos>
```

```
    <Monitoring>
      <Methods>
        <Method>ping</Method>
        <Method>SNMP</Method>
      </Methods>
      <Interval>300</Interval>
      <RetryCount>5</RetryCount>
      <Timeout>60</Timeout>
    </Monitoring>
    <MgmtURL>https://192.168.5.11</MgmtURL>
  </MgmtInfos>
</Netdevice>
```

- When creating multiple network devices in one operation:

```
<?xml version="1.0" encoding="utf-8"?>
<NetConfig>
<Netdevices>
  <Mode>add</Mode>
  <Netdevice ip="192.168.5.11" name="Switch1">
    <Location>B1F</Location>
    <Types>
      <Type>L2-Switch</Type>
    </Types>
    <Maintenance>false</Maintenance>
    <AutoConfiguration>true</AutoConfiguration>
    <Redundancy group_id="1"></Redundancy>
    <MgmtInfos>
      <Snmps>
        <ReadCommunity>public</ReadCommunity>
      </Snmps>
      <LoginInfos>
        <LoginInfo protocol="telnet" auth_type="local password" authority="admin"
check="true">
          <User>user</User>
          <Password>password</Password>
          <PrivilegedPassword>root_password</PrivilegedPassword>
          <PasswordEncryption>false</PasswordEncryption>
        </LoginInfo>
      </LoginInfos>
      <Monitoring>
        <Methods>
          <Method>ping</Method>
          <Method>SNMP</Method>
        </Methods>
        <Interval>300</Interval>
        <RetryCount>5</RetryCount>
        <Timeout>60</Timeout>
      </Monitoring>
      <MgmtURL>https://192.168.5.11</MgmtURL>
    </MgmtInfos>
  </Netdevice>
  <Netdevice ip="192.168.5.10" name="Firewall1">
    <Location>B1F</Location>
    <Types>
      <Type>Firewall</Type>
    </Types>
    <Maintenance>false</Maintenance>
    <AutoConfiguration>true</AutoConfiguration>
    <Redundancy group_id="2"></Redundancy>
    <MgmtInfos>
      <Snmps>
        <ReadCommunity>public</ReadCommunity>
```

```
      </Snmps>
      <LoginInfos>
        <LoginInfo protocol="telnet" auth_type="local password" authority="admin"
check="true">
          <Tenant>TenantA</Tenant>
          <User>user</User>
          <Password>password</Password>
          <PrivilegedPassword>root_password</PrivilegedPassword>
          <PasswordEncryption>false</PasswordEncryption>
        </LoginInfo>
      </LoginInfos>
      <Monitoring>
      <Monitoring>
        <Methods>
          <Method>ping</Method>
          <Method>SNMP</Method>
        </Methods>
        <Interval>300</Interval>
        <RetryCount>5</RetryCount>
        <Timeout>60</Timeout>
      </Monitoring>
      <MgmtURL>https://192.168.5.10:82</MgmtURL>
    </MgmtInfos>
  </Netdevice>
  <Netdevice ip="192.168.5.20" name="SLB1">
    <Location>B1F</Location>
    <Types>
      <Type>SLB</Type>
    </Types>
    <Maintenance>false</Maintenance>
    <AutoConfiguration>true</AutoConfiguration>
    <Redundancy group_id="3"></Redundancy>
    <MgmtInfos>
      <Snmps>
        <ReadCommunity>public</ReadCommunity>
      </Snmps>
      <LoginInfos>
        <LoginInfo protocol="telnet" auth_type="local password" authority="admin"
check="true">
          <Tenant>TenantA</Tenant>
          <User>user</User>
          <Password>password</Password>
          <PrivilegedPassword>root_password</PrivilegedPassword>
          <PasswordEncryption>false</PasswordEncryption>
        </LoginInfo>
      </LoginInfos>
      <Monitoring>
        <Methods>
          <Method>ping</Method>
          <Method>SNMP</Method>
        </Methods>
        <Interval>300</Interval>
        <RetryCount>5</RetryCount>
        <Timeout>60</Timeout>
      </Monitoring>
      <MgmtURL>https://192.168.5.20:82</MgmtURL>
    </MgmtInfos>
  </Netdevice>
  <Netdevice ip="192.168.5.30" name="IPCOMEXIN1">
    <Location>B1F</Location>
    <Types>
      <Type>Firewall</Type>
      <Type>SLB</Type>
```

```
    </Types>
    <Maintenance>false</Maintenance>
    <AutoConfiguration>true</AutoConfiguration>
    <Redundancy group_id="4"></Redundancy>
    <MgmtInfos>
      <Snmps>
        <ReadCommunity>public</ReadCommunity>
      </Snmps>
      <LoginInfos>
        <LoginInfo protocol="telnet" auth_type="local password" authority="admin"
check="true">
          <Tenant>TenantA</Tenant>
          <User>user</User>
          <Password>password</Password>
          <PrivilegedPassword>root_password</PrivilegedPassword>
          <PasswordEncryption>false</PasswordEncryption>
        </LoginInfo>
      </LoginInfos>
      <Monitoring>
        <Methods>
          <Method>ping</Method>
          <Method>SNMP</Method>
        </Methods>
        <Interval>300</Interval>
        <RetryCount>5</RetryCount>
        <Timeout>60</Timeout>
      </Monitoring>
      <MgmtURL>https://192.168.5.30:82</MgmtURL>
    </MgmtInfos>
  </Netdevice>
</Netdevices>
<Links>
  <Link>
    <Devices>
      <Device ip="192.168.1.1" kind="netdevice">
        <Port>lan0.1</Port>
      </Device>
      <Device ip="192.168.1.2" kind="netdevice">
        <Port>Fa2/1</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="192.168.1.3" kind="netdevice">
        <Port>Fa2/2</Port>
      </Device>
      <Device ip="192.168.1.4" kind="server">
        <Port>1</Port>
      </Device>
    </Devices>
  </Link>
</Links>
<FileServers>
  <Mode>add</Mode>
  <FileServer ip="192.168.5.20">
   <User>user</User>
   <Password>password</Password>
  </FileServer>
</FileServers>
</NetConfig>
```

- When creating Ethernet Fabric (Converged Fabric), IPCOM VX, and IPCOM VA network devices:

```
<?xml version="1.0" encoding="utf-8"?>
<NetConfig>
<Netdevices>
<Netdevice ip="172.16.3.3" name="cfab1" portprofile="enable">
  <Types>
    <Type>Fabric</Type>
  </Types>
  <FabricType>C-Fabric</FabricType>
  <ApplianceType>physical</ApplianceType>
  <Maintenance>false</Maintenance>
  <AutoConfiguration>true</AutoConfiguration>
  <Vfabs>
    <Vfab vfabid="10" name="VFAB-1-1" mode="network"></Vfab>
    <Vfab vfabid="20" name="VFAB-1-2" mode="network"></Vfab>
  </Vfabs>
  <MgmtInfos>
    <Snmps>
      <ReadCommunity>public</ReadCommunity>
    </Snmps>
    <LoginInfos>
      <LoginInfo protocol="ssh" auth_type="local password" authority="user" check="true">
        <User>user</User>
        <Password>password</Password>
        <PrivilegedPassword>root_password</PrivilegedPassword>
        <PasswordEncryption>false</PasswordEncryption>
      </LoginInfo>
    </LoginInfos>
    <Monitoring>
      <Methods>
        <Method>ping</Method>
        <Method>SNMP</Method>
      </Methods>
      <Interval>300</Interval>
      <RetryCount>3</RetryCount>
      <Timeout>30</Timeout>
    </Monitoring>
  </MgmtInfos>
</Netdevice>
<Netdevice ip="172.16.1.52" name="ipcomvx1">
  <Types>
    <Type>ManagementHost</Type>
  </Types>
  <ApplianceType>physical</ApplianceType>
  <Maintenance>false</Maintenance>
  <AutoConfiguration>false</AutoConfiguration>
  <MgmtInfos>
    <Snmps>
      <ReadCommunity>public</ReadCommunity>
    </Snmps>
    <LoginInfos>
      <LoginInfo protocol="telnet" auth_type="local password" authority="user" check="true">
        <User>user</User>
        <Password>password</Password>
        <PrivilegedPassword>root_password</PrivilegedPassword>
        <PasswordEncryption>false</PasswordEncryption>
      </LoginInfo>
    </LoginInfos>
    <Monitoring>
      <Methods>
        <Method>SNMP</Method>
      </Methods>
```

```
      <Interval>300</Interval>
      <RetryCount>3</RetryCount>
      <Timeout>30</Timeout>
    </Monitoring>
    <MgmtURL>http://172.16.1.52</MgmtURL>
  </MgmtInfos>
</Netdevice>
<Netdevice ip="172.16.1.53" name="ipcomva11">
  <Types>
    <Type>Firewall</Type>
  </Types>
  <ApplianceType>virtual</ApplianceType>
  <Maintenance>false</Maintenance>
  <AutoConfiguration>true</AutoConfiguration>
  <ManagementHost>172.16.1.52</ManagementHost>
  <Redundancy group_id="va1"></Redundancy>
  <MgmtInfos>
    <Snmps>
      <ReadCommunity>public</ReadCommunity>
    </Snmps>
    <LoginInfos>
      <LoginInfo protocol="telnet" auth_type="local password" authority="user" check="true">
        <User>user</User>
        <Password>password</Password>
        <PrivilegedPassword>root_password</PrivilegedPassword>
        <PasswordEncryption>false</PasswordEncryption>
      </LoginInfo>
    </LoginInfos>
    <Monitoring>
      <Methods>
        <Method>SNMP</Method>
      </Methods>
      <Interval>300</Interval>
      <RetryCount>3</RetryCount>
      <Timeout>30</Timeout>
    </Monitoring>
    <MgmtURL>http://172.16.1.53</MgmtURL>
  </MgmtInfos>
  <Ports>
    <Port name="LAN0.0">
      <StagId>110</StagId>
    </Port>
    <Port name="LAN0.1">
      <StagId>110</StagId>
    </Port>
    <Port name="LAN0.2">
      <StagId>110</StagId>
    </Port>
    <Port name="LAN0.3">
      <StagId>100</StagId>
    </Port>
  </Ports>
</Netdevice>
<Netdevice ip="172.16.1.54" name="ipcomva12">
  <Types>
    <Type>Firewall</Type>
  </Types>
  <ApplianceType>virtual</ApplianceType>
  <Maintenance>false</Maintenance>
  <AutoConfiguration>true</AutoConfiguration>
  <ManagementHost>172.16.1.52</ManagementHost>
  <Redundancy group_id="va2"></Redundancy>
  <MgmtInfos>
```

```
    <Snmps>
      <ReadCommunity>public</ReadCommunity>
    </Snmps>
    <LoginInfos>
      <LoginInfo protocol="telnet" auth_type="local password" authority="user" check="true">
        <User>user</User>
        <Password>password</Password>
        <PrivilegedPassword>root_password</PrivilegedPassword>
        <PasswordEncryption>false</PasswordEncryption>
      </LoginInfo>
    </LoginInfos>
    <Monitoring>
      <Methods>
        <Method>SNMP</Method>
      </Methods>
      <Interval>300</Interval>
      <RetryCount>3</RetryCount>
      <Timeout>30</Timeout>
    </Monitoring>
    <MgmtURL>http://172.16.1.54</MgmtURL>
  </MgmtInfos>
  <Ports>
    <Port name="LAN0.0">
      <StagId>120</StagId>
    </Port>
    <Port name="LAN0.1">
      <StagId>120</StagId>
    </Port>
    <Port name="LAN0.2">
      <StagId>120</StagId>
    </Port>
    <Port name="LAN0.3">
      <StagId>100</StagId>
    </Port>
  </Ports>
</Netdevice>
</Netdevices>
<Links>
  <Link>
    <Devices>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.0</Port>
      </Device>
      <Device ip="172.16.3.3" kind="netdevice" name="cfab1">
        <Port>3/1/0/11</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>lan0.1</Port>
      </Device>
      <Device ip="172.16.3.3" kind="netdevice" name="cfab1">
        <Port>3/1/0/12</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.2</Port>
      </Device>
```

```
      <Device ip="172.16.3.3" kind="netdevice" name="cfab1">
        <Port>3/1/0/13</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.3</Port>
      </Device>
      <Device ip="172.16.3.3" kind="netdevice" name="cfab1">
        <Port>3/1/0/14</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN1.0</Port>
      </Device>
      <Device ip="172.16.3.3" kind="netdevice" name="cfab1">
        <Port>3/1/0/15</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.53" kind="virtual" name="ipcomva11">
        <Port>LAN0.0</Port>
      </Device>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.0</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.53" kind="virtual" name="ipcomva11">
        <Port>lan0.1</Port>
      </Device>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>lan0.1</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.53" kind="virtual" name="ipcomva11">
        <Port>LAN0.2</Port>
      </Device>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.2</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.53" kind="virtual" name="ipcomva11">
        <Port>LAN0.3</Port>
      </Device>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.3</Port>
      </Device>
```

```
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.54" kind="virtual" name="ipcomva12">
        <Port>LAN0.0</Port>
      </Device>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.0</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.54" kind="virtual" name="ipcomva12">
        <Port>lan0.1</Port>
      </Device>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>lan0.1</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.54" kind="virtual" name="ipcomva12">
        <Port>LAN0.2</Port>
      </Device>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.2</Port>
      </Device>
    </Devices>
  </Link>
  <Link>
    <Devices>
      <Device ip="172.16.1.54" kind="virtual" name="ipcomva12">
        <Port>LAN0.3</Port>
      </Device>
      <Device ip="172.16.1.52" kind="netdevice" name="ipcomvx1">
        <Port>LAN0.3</Port>
      </Device>
    </Devices>
  </Link>
</Links>
</NetConfig>
```

- When creating a single VCS:

```
<?xml version="1.0" encoding="utf-8"?>
<Netdevice ip="192.168.5.11" name="VCS">
  <Location>B1F</Location>
  <Types>
    <Type>Fabric</Type>
  </Types>
  <FabricType>VCS</FabricType>
  <Maintenance>false</Maintenance>
  <MgmtInfos>
    <LoginInfos>
      <LoginInfo protocol="netconf" check="true">
        <User>admin</User>
        <Password>password</Password>
      </LoginInfo>
    </LoginInfos>
    <Monitoring>
```

```
      <Methods>
        <Method>NETCONF</Method>
      </Methods>
      <Interval>300</Interval>
      <RetryCount>5</RetryCount>
      <Timeout>60</Timeout>
    </Monitoring>
  </MgmtInfos>
</Netdevice>
```

15.7.2 Modification

When modifying network devices, only elements that have been defined can be modified.

The following elements can be modified:

- Admin IP Address
- Admin LAN subnet mask
- Device name
- Use of AMPP
- Location
- Type Information
- Auto-configuration for the network device
- Group ID
- SNMP Information
- Login Information
- Monitoring Information
- Web Management Window URL
- VFAB information
- Port Information and S-TAG ID

If defining multiple elements, they will be modified at the same time.
When performing batch modification, ensure the admin IP address is defined to identify the target resources for modification. Specify "modify" for Registration Mode (the Mode element).

The XML definition for modification of each element is shown below.

Example

- Changing the admin IP address, device name, and use of AMPP

```
<Netdevice ip="New Admin IP Address" name="New Device Name" portprofile="New value
for the use of the AMPP">
...
</Netdevice>
```

- Modifying a location:

```
<Location>Modified Location</Location>
```

- Modifying the type information:

```
<Types>
  <Type>Modified Type</Type>
</Types>
```

- Modifying auto-configuration for network device (when changing the value to "true")

```
<AutoConfiguration>true</AutoConfiguration>
```

- Modifying a Group ID:

```
<Redundancy group_id="Modified Group ID"></Redundancy>
```

- Modifying the SNMP information:

```
<Snmps>
  <ReadCommunity>Modified Community Name</ReadCommunity>
</Snmps>
```

- Modifying the login information:

```
<LoginInfo="Modified protocol" auth_type="Modified Management Method of
Authentication Information" authority="Modified Administrator Authority"
check="Modified Account Confirmation">
  <IpAddress>Modified Destination IP Address</IpAddress>
  <Port>Modified Destination Port Number</Port>
  <Tenant>Modified Tenant Name</Tenant>
  <User>Modified User Account for Connection</User>
  <Password>Modified Password for Connection</Password>
  <PrivilegedPassword>Modified Administrator Password</PrivilegedPassword>
  <PasswordEncryption>Presence or absence of password encryption after
modification</PasswordEncryption>
</LoginInfo>
```

- Modifying the monitoring information:

```
<Monitoring>
  <Methods>
    <Method>Monitoring Method After Modification</Method>
  </Methods>
  <Interval>Modified Monitoring Interval</Interval>
  <RetryCount>Modified Retry Count</RetryCount>
  <Timeout>Modified Timeout</Timeout>
</Monitoring>
```

- Modifying the Web management window URL:

```
<MgmtURL>Modified Web Management Window URL</MgmtURL>
```

- Modifying the VFAB information:

```
<Vfabs>
  <Mode>VFAB Registration Mode</Mode>
  <Vfab vfabid="VFAB ID" name="VFAB name after modification" mode="Operation mode
after modification" vfabauto="Auto-configuration of VFABs">
    <Tenants>
      <Tenant>Modified Tenant Name</Tenant>
      <Tenant>Modified Tenant Name</Tenant>
      ......
    </Tenants>
```

```
    <Dot1adPorts>
      <Dot1adPort name="Sending and Receiving Port of the IEEE802.1ad Frame after
Modification"></Dot1adPort>
    </Dot1adPorts>
    <CirPorts>
      <CirPort name="CIR port name or CIR Link Aggregation Port Identifier
Information after Modification"></CirPort>
    </CirPorts>
  </Vfab>
  ......
</Vfabs>
```

- Modifying the port information and S-TAG ID

```
<Ports>
  <Port name="Port Name">
    <StagId>New S-TAG ID</StagId>
  </Port>
</Ports>
```

Information

- Type information cannot be modified when the target network device for modification is already registered in a network pool.
  When changing the type information of a registered network device, unregister the device from the network pool.
- Type information cannot be modified when the target network device for modification has been registered as "Fabric" or "ManagementHost".
  In order to change the type information of the target network device from "Fabric" or "ManagementHost" to something else, unregister the network device and then re-register it.
- Type information of network devices which are already registered cannot be changed to "Fabric" or "ManagementHost".
  In order to change the type information of the target network device to "Fabric" or "ManagementHost", unregister the network device first and then re-register it.
- Redundancy configuration information cannot be modified when there is a firewall or server load balancer deployed for the network device to be modified.
- When modifying login information, all existing login information is replaced.
  All registered login information is deleted.
- The content of VFAB information modification differs depending on the value specified for the VFAB registration mode.
  "replace", "add", "modify", or "delete" can be specified.
  When omitted, "replace" is specified. The operation performed for each specified mode is as follows.
  - When "replace" is specified for the VFAB registration mode

    All existing VFAB information is replaced.
    It is necessary to describe all VFAB information, even that which has not been modified.
    If there is no specification, VFAB information will be deleted.
  - When "add" is specified for the VFAB registration mode

    Specified VFABs are added.
  - When "modify" is specified for the VFAB registration mode

    Specified VFAB information is modified.
  - When "delete" is specified for the VFAB registration mode

    Specified VFABs are deleted.

- When modifying port information, all existing port information is replaced.
  If there is nothing specified, port information will be deleted.
  However, the port information obtained from devices will not be modified even if there is nothing specified.

15.8 Resource Folders

The XML definition for resource folders is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Folder name="Resource Folder Name" label="Label">
  <Comment>Comment</Comment>
  <LServers>
    <LServer name="L-Server Name" label="Label">
      L-Server information
    </LServer>
    <LServer name="L-Server Name" label="Label">
      L-Server information
    </LServer>
    ...
  </LServers>
</Folder>
```

Table 15.15 List of Items Specified in XML Definitions for Resource Folders

Element Name	Description	Remarks (Possible Values, Examples)
Resource Folder Name (Folder name)	Name of the resource folder	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). When creating it in a resource folder or a tenant, specify the resource folder name or the tenant name using slashes ("/"), as shown below. /*Tenant_name*/*Resource_folder_name*
Label (Folder label)	Resource folder label (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Comment (Comment)	Comment for the resource folder (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.

For details on the elements of LServer tags, refer to "15.3 L-Servers".

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Folder name="folder001" label="Folder for work
1">
  <Comment>Created on 2010/XX/XX for work 1</
Comment>
  <LServers>
    <LServer name="L-Server1" label="Label">
      L-Server1 Information
    </LServer>
    <LServer name="L-Server2" label="Label">
      L-Server2 Information
    </LServer>
```

```
  </LServers>
</Folder>
```

15.9 Roles

The XML definition for roles is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Role name="Role name" label="Label">
  <BaseRole>Name of the based basic role</BaseRole>
  <Comment>Comment</Comment>
  <OperationGroups>
    <OperationGroup name="Operation Group name1">
      <Authorities>
        <Authority>Operation1</Authority>
        <Authority>Operation2</Authority>
      </Authorities>
    </OperatironGroup>
    <OperationGroup name="Operation Group name2">
      <Authorities>
        <Authority>Operation1</Authority>
          ...
      </Authorities>
        ...
    </OperationGroup>
      ...
  </OperationGroups>
</Role>
```

Table 15.16 List of Items Specified in XML Definitions for Roles

Element Name	Description	Remarks (Possible Values, Examples)
Role Name (Role name)	Name of the role	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
Label (Role label)	Role label (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Name of the based basic role (BaseRole)	Name of the basic role that has been copied	Specify the name of the existing basic role. There is no value in information displayed for the role when the role to display is a basic role (when the basic role that has been copied does not exist). When using the modify subcommand, the BaseRole element is optional. A basic role name cannot be modified. When using the modify subcommand, the value is disregarded even if it is specified.
Comment (Comment)	Comment for the role (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
Operation Group Name (OperationGroup)	Targeted operation group name (optional)	Example LServer When the OperationGroup tag is deleted during changing of settings of the role, all the operation authorities are deleted

Element Name	Description	Remarks (Possible Values, Examples)
		from that operation group. When not changing the settings of the role, perform change without updating the content of former OperationGroup tag.
Operation Name (Authority)	Operation authority name given to role (optional)	Example create For details on operation group and operation name, refer to "Table 15.17 Operation Group and Operation Name"

Table 15.17 Operation Group and Operation Name

Operation Group	Description of Operation Group	Operation Name	Description of Operation Name	Role								
				a	b	c	d	e	f	g	h	i
LPlatform	Operation authorities concerning L-Platforms	create	Subscribe to an L-Platform	-	-	Yes	No	-	Yes	Yes	No	No
		modify	Reconfiguration	-	-	Yes	No	-	Yes	Yes	No	No
		delete	Cancel	-	-	Yes	No	-	Yes	Yes	No	No
		ruleset	Modify FW/SLB settings	-	-	Yes	No	-	Yes	Yes	No	No
		showlog	Display the event log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LServer	Operation authorities concerning L-Servers	create	Create	-	-	Yes	No	-	Yes	Yes	No	No
		modify	Modify the configuration and move	-	-	Yes	No	-	Yes	Yes	No	No
		delete	Delete	-	-	Yes	No	-	Yes	Yes	No	No
		resource_operation	Modify the specifications and show the console screen	-	-	Yes	Yes	-	Yes	Yes	Yes	No
		start	Starting an L-Server	-	-	Yes	Yes	-	Yes	Yes	Yes	No
		stop	Stopping an L-Server	-	-	Yes	Yes	-	Yes	Yes	Yes	No
		image_collect	Collect a cloning image	-	-	Yes	Yes	-	-	Yes	Yes	No
		backup	Collect a snapshot and backup	-	-	Yes	Yes	-	Yes	Yes	Yes	No
		restore	Restore a snapshot and backup	-	-	Yes	Yes	-	Yes	Yes	Yes	No
		delete_backup	Delete a snapshot and backup	-	-	Yes	Yes	-	Yes	Yes	Yes	No

Operation Group	Description of Operation Group	Operation Name	Description of Operation Name	Role								
				a	b	c	d	e	f	g	h	i
		maintenance	Maintenance	Yes	-	-	-	-	-	Yes	-	-
Image	Operation authorities concerning image resources	management	Management (Modify and delete)	Yes	No	-	-	-	-	Yes	No	No
Console	Operation authorities concerning the ROR Console	home	Display [Home] tab	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		dashboard	Display [Dashboard] tab	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes
		resource	Display [Resource] tab	Yes	Yes	-	-	-	-	Yes	Yes	Yes
		template	Display [Template] tab	Yes	-	Yes	-	-	-	Yes	-	-
		lplatform	Display [L-Platform] tab	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		request	Display [Request] tab	No	-	No	-	-	No	No	-	-
		tenant	Display [Tenant] tab	Yes	-	No	-	-	-	Yes	-	-
		charge	Display [Accounting] tab	No	-	No	-	-	-	No	-	-
		account	Display Account tab	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Yes: The default value grants the operation authority.
No: The default value does not grant the operation authority.
-: Not customizable.

Letters in the second line of the Role section of the table indicate the following roles.
a: infra_admin
b: infra_operator
c: tenant_admin
d: tenant_operator
e: tenant_monitor
f: tenant_user
g: administrator
h: operator
i: monitor

15.10 User

This section explains the XML definitions of users.

15.10.1 Tenant Management Roles and Tenant User Role

The XML definition for users with tenant management roles and tenant user roles is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Users>
```

```
  <User name="User ID">
    <Password>Password</Password>
    <Roles>
      <Role name="Role name">
        <Scopes>
          <Scope>Access scope</Scope>
        </Scopes>
      </Role>
    </Roles>
    <MailAddress>User's mail address</MailAddress>
    <ContractName>Company name or Department name</ContractName>
    <EmergencyMailAddress>User's emergency contact mail address</
EmergencyMailAddress>
    <TelephoneNumber>User's telephone number</TelephoneNumber>
    <Comment>"Comment 1"</Comment>
    <ActualName>
      <FirstName>First Name</FirstName>
      <LastName>Last Name</LastName>
      <MiddleName>Middle Name</MiddleName>
    </ActualName>
  </User>
</Users>
```

Table 15.18 List of Items Specified in XML Definitions for Users

Element Name	Description	Remarks (Possible Values, Examples)
User ID (User name)	User ID	Specify a character string beginning with an alphanumeric character and containing between 1 and 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods ("."). -
Password (Password)	Password for the user	Specify this when using internal authentication or also registering the user in the directory service using Single Sign-On authentication, in either of the following cases: - Creating of a user - Changing of the user password in the user information Specify a character string that meets the following conditions: - A character string containing between 8 and 64 alphanumeric characters and symbols

Role name (*)
(Role name)
	Role of the user	Specify the role name to allocate to the access scope. Multiple roles cannot be specified, except for the lplatform_user role.
		- Tenant management roles
		  - tenant_admin (Tenant Administrator)
		  - tenant_operator (Tenant Operator)
		  - tenant_monitor (Tenant Monitor)
		- Tenant user role
		  - tenant_user (Tenant User)
		It is not possible to change the tenant management roles and the tenant user role to the infrastructure administrative roles or the multiple roles.
		Specify the lplatform_user role for the L-Platform that the user uses when creating or changing the tenant user and when changing from the tenant management role to the tenant user role. This is also the same for a tenant user who is assigned a role that is based on the tenant_user role.

Element Name	Description	Remarks (Possible Values, Examples)
Access scope (*) (Scope)	Access scope for the specified role	Specify the scope of access to allow for the user. Specify the name of the tenant that the user belongs. Specify the existing tenant. The tenant (access scope) who can specify it is only one.
E-mail address (MailAddress)	User's email address	Specify a character string of up to 64 alphanumeric characters or symbols.
Company name or department name (ContractName)	Company name or department name (optional)	Specify a character string up to 30 characters.
User's emergency contact mail address (EmergencyMailAddress)	User's emergency contact email address (optional)	Specify a character string of up to 64 alphanumeric characters or symbols.
User's telephone number (TelephoneNumber)	User's telephone number (optional)	Specify a character string of up to 24 alphanumeric characters or symbols.
Description (Comment)	Comment for the user (optional)	Specify a character string up to 256 characters.
First Name (FirstName)	User's first name	Specify a character string up to 15 characters.
Last Name (LastName)	User's last name	Specify a character string up to 15 characters.
Middle Name (MiddleName)	User's middle name	Specify a character string up to 15 characters.

* Note: Role (lplatform_user) is specified for the L-Platform that the user uses when changing from the tenant management role to the tenant user role. Multiple specification of the lplatform_user role is possible. Moreover, it is possible to specify multiple access scopes (L-Platform) for the lplatform_user role.

Example

A definition example when changing the role from tenant administrator to tenant user:

```
<Roles>
  <Role name="tenant_user">
    <Scopes>
      <Scope>tenantA</Scope>
    </Scopes>
  </Role>
  <Role name="lplatform_user">
    <Scopes>
      <Scope>tenantA/lplatform1</Scope>
      <Scope>tenantA/lplatform2</Scope>
    </Scopes>
  </Role>
</Roles>
```

15.10.2 Infrastructure Administrative Roles and Multiple Roles

```
<?xml version="1.0" encoding="utf-8"?>
<Users>
  <User name="User ID" label = "Label" >
```

```
    <Password>Password</Password>
    <MailAddress>User's mail address</MailAddress>
    <Comment>"Comment 1"</Comment>
    <UserGroup>User Group Name</UserGroup>
      <Roles>
      <Role name="Role Name 1">
        <Scopes>
          <Scope>Access Scope 1</Scope>
          <Scope>Access Scope 2</Scope>
          <Scope>Access Scope 3</Scope>
        </Scopes>
      </Role>
      <Role name="Role Name 2">
        <Scopes>
          <Scope>Access Scope 1</Scope>
          <Scope>Access Scope 2</Scope>
          <Scope>Access Scope 3</Scope>
        </Scopes>
      </Role>
    </Roles>
  </User>
</Users>
```

Table 15.19 List of Items Specified in XML Definitions for Users

Element Name	Description	Remarks (Possible Values, Examples)
User ID (User name)	Name of the user	Specify a character string beginning with an alphanumeric character and containing between 1 and 32 alphanumeric characters, underscores ("_"), hyphens ("-") and periods ("."). -
Label (User label)	Label for the user (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Password (Password)	Password for the user	Specify this when using internal authentication or also registering the user in the directory service using Single Sign-On authentication, in either of the following cases: - Creating of a user - Changing of the user password in the user information Specify a character string that meets the following conditions: - A character string containing between 8 and 64 alphanumeric characters and symbols
E-mail address (MailAddress)	User's email address (optional)	Specify a character string of up to 64 alphanumeric characters or symbols.
Description (Comment)	Comment for the user (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
User group name (UserGroup)	Name of the user group the user belongs to (optional)	Specify the name of a user group. If omitted, the user group that the current user belongs to will be assigned. The same name as an existing name of the tenant cannot be specified.
Role name (Role name)	Role name (optional)	Specify the role name to allocate to the access scope. If omitted, the role assigned to the user group will be assigned. Specify one of the following roles: - Infrastructure administrative roles - Multiple roles

Element Name	Description	Remarks (Possible Values, Examples)
		- A role created from an infrastructure administrative role or a multiple role It is not possible to change the infrastructure administrative roles and the multiple roles to the tenant management roles or the tenant user role.
Access scope (Scope)	Access scope for the specified role	Specify the scope of access to allow for the user. - When restricting the access scope Specify resource folder names or resource names. - When not restricting the access scope Specify "all".

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Users>
  <User name="test_user01" label="test_user01">
    <Password>test_user01</Password>
    <Comment>test_user</Comment>
    <UserGroup>admin</UserGroup>
  </User>
</Users>
```

15.11 User Groups

The XML definition for user groups is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<UserGroup name ="User Group name 1" label="label 1">
  <Comment>Comment 1</Comment>
   <Roles>
    <Role name="Role Name 1">
      <Scopes>
        <Scope>Access Scope 1</Scope>
        <Scope>Access Scope 2</Scope>
        <Scope>Access Scope 3</Scope>
      </Scopes>
    </Role>
    <Role name="Role Name 2">
      <Scopes>
        <Scope>Access Scope 1</Scope>
        <Scope>Access Scope 2</Scope>
        <Scope>Access Scope 3</Scope>
      </Scopes>
    </Role>
  </Roles>
</UserGroup>
```

Table 15.20 List of Items Specified in XML Definitions for User Groups

Element Name	Description	Remarks (Possible Values, Examples)
User group name (UserGroup name)	Name of the user group	Specify a Unicode character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").

Element Name	Description	Remarks (Possible Values, Examples)
Label (UserGroup label)	Label for the user group (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Comment (Comment)	Comment for the user group (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
Role Names (Role name)	Role name (optional)	Specify the role name to allocate to the access scope. For details on specifiable role names, refer to "5.1 Restricting Access Using Roles" in the "Design Guide CE".
Access scope (Scope)	Role access scope	Specify the scope of access to allow for the user. - When restricting the access scope Specify resource folder names or resource names. - When not restricting the access scope Specify "all".

Example

```
<?xml version="1.0" encoding="utf-8"?>
<UserGroup name="admin" label="admin">
  <Comment>admin_group</Comment>
  <Roles>
    <Role name="administrator">
      <Scopes>
        <Scope>all</Scope>
      </Scopes>
    </Role>
  </Roles>
</UserGroup>
```

15.12 Tenants

The XML definition for tenants is shown below.

XML Definition for Creating and Modifying a Tenant

```
<?xml version="1.0" encoding="utf-8"?>
<Tenants>
  <Tenant name ="Name of the tenant">
    <DisplayName>Display Name</DisplayName>
    <MailAddress>User's mail address</MailAddress>
    <CutOffDate>Cut off date</CutOffDate>
    <AccountingMailAddress>Accounting mail address</
AccountingMailAddress>
    <Pools>
      <Pool name="Local pool name" type="Local pool type"
label="Label">
        <Comment>Comment</Comment>
        <Priority>Priority</Priority>
        <Attributes>
          <OverCommit>Overcommit attributes</OverCommit>
          <CalculatedUsing>Calculation methods for free space</
CalculatedUsing>
          <Thin>Thin Provisioning attributes</Thin>
```

```
        </Attributes>
      </Pool>
    </Pools>
    <GlobalPoolLinks>
      <GlobalPoolLink>Global pool name</GlobalPoolLink>
       ...
    </GlobalPoolLinks>
    <Attrs>
      Attr name="Item name for tenant configuration information
1" value="Value for tenant configuration information 1" />
      Attr name="Item name for tenant configuration information
2" value="Value for tenant configuration information 2" />
       ...
    </Attrs>
  </Tenant>
</Tenants>
```

Table 15.21 List of Items Specified in XML Definitions for Tenant

Element Name	Description	Remarks (Possible Values, Examples)
Tenant name (Tenant name)	Name of the tenant (*1)	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Creation in a resource folder and tenant is not possible.
Display Name (DisplayName)	Tenant display name	Specify a character string of up to 30 alphanumeric characters or symbols.
E-mail address (MailAddress)	Mail address of the tenant administrator	Specify a character string of up to 64 alphanumeric characters or symbols.
Cut off date (CutOffDate)	Cut off date for accounting information	2-digit number to represent the date (1 to 31)
Accounting mail address (AccountingMailAddress)	Mail address to send the usage fee information to	Specify a character string of up to 64 alphanumeric characters or symbols.
Local pool name (Pool name)	Name of the local pool to create in the tenant	Specify the resource pool name (local pool name) to create in the tenant. If the Pools element is omitted, no resource pool is created in the tenant.
Local pool type (Pool type)	Type of the local pool (optional)	Specify the type of the local pool to create in the tenant. The following types can be specified: - vm (VM pool) - server (Server pool) - storage (Storage pool) - network (Network pool) - address (Address pool) - image (Image pool)
Label (Pool label)	Label of the local pool (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.

Element Name	Description	Remarks (Possible Values, Examples)
Comment (Comment)	Comment for the local pool (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
Priority (Priority)	Local pool priority (optional)	Specify the priority for the local pool as a value between 1 and 10. If omitted, "5" is set. For the priority order, "1" is the highest and "10" is the lowest.
Overcommit attributes (*2) (OverCommit)	Setting for overcommit (optional)	Set enabling/disabling of overcommit for a VM pool. If omitted, "false" is set. - When enabling overcommit Specify "true". - When disabling overcommit Specify "false".
Calculation methods for free space (*2) (CalculatedUsing)	Settings for calculation methods for the free space of resources (optional)	Set the calculation methods for free space for VM pools that have overcommit enabled. If omitted, "limit" is set. - When calculating the free space using a reservation value Specify "reserve". - When calculating the free space using the upper limit value Specify "limit".
Thin Provisioning attributes (*2) (Thin)	Settings for Thin Provisioning attributes (optional)	Set Provisioning attributes for storage pools. If omitted, "false" is set. - When configuring Thin Provisioning attributes Specify "true". - When configuring Thick Provisioning attributes Specify "false".
Global pool name (GlobalPoolLink)	Name of the global pool (optional)	Specify the resource pool name to be defined in a global pool of a tenant. If the GlobalPoolLinks element is omitted, no global pool is defined for the tenant. If specifying a resource pool in a resource folder, specify the resource folder name using slashes ("/").
Item name of tenant configuration information (Attr name)	Item name of tenant configuration information (optional)	Specify the item name of the tenant configuration information. For details on the item names that can be specified, refer to "Table 15.22 Items of Tenant Configuration Information". Specification of multiple items of tenant configuration information is possible.
Value of tenant configuration information (Attr value)	Value of tenant configuration information (optional)	Specify the value of the tenant configuration information. For details on the values that can be specified, refer to "Table 15.22 Items of Tenant Configuration Information".

*1: User group of the same name as the specified name of the tenant is created.

*2: When upgrading an admin server from ROR V2.3.0 to V3.0.0, if the migration procedure is not performed according to the configuration methods for the overcommit functions, this element cannot be configured. Edit the definition files separately. For details, refer to "2.3.1.1 Overcommit Definition Files" in the "Release Notes".

Table 15.22 Items of Tenant Configuration Information

name	value
workflow.policy	Specify whether to enable the application process settings for each tenant. Specify one of following items. - default (the default value used during creation) Configure the settings based on the overall settings. - custom Configure the settings according to the application process for each tenant.
workflow.subscribe	Specify the administrator to approve or evaluate L-Platform usage application. Specify one of following items. - infra Evaluation by the infrastructure administrator - tenant Approval by the tenant administrator - infra_tenant (the default value used during creation) Evaluation by the infrastructure administrator and approval by the tenant administrator - none Neither evaluation by the infrastructure administrator nor approval by the tenant administrator
workflow.reconfigure	Specify the administrator to approve or evaluate L-Platform configuration changes. Specify one of following items. - infra Evaluation by the infrastructure administrator - tenant Approval by the tenant administrator - infra_tenant (the default value used during creation) Evaluation by the infrastructure administrator and approval by the tenant administrator - none Neither evaluation by the infrastructure administrator nor approval by the tenant administrator
workflow.unsubscribe	Specify the administrator to approve or evaluate L-Platform cancellation. Specify one of following items. - infra Evaluation by the infrastructure administrator - tenant Approval by the tenant administrator - infra_tenant (the default value used during creation)

name	value
	Evaluation by the infrastructure administrator and approval by the tenant administrator - none Neither evaluation by the infrastructure administrator nor approval by the tenant administrator

Tenant Creation Default Definition File

When creating a tenant using the ROR console, the default values can be changed.

To change the default values in tenant creation, modify the tenant creation default definition file.

Location of the Definition File

[Windows Manager]
Installation_folder\SVROR\Manager\etc\customize_data

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data

Definition File Name

tenant_config.xml

Definition File Format

```
<?xml version='1.0' encoding='utf-8'?>
<Tenant>
  <Pools>
    <Pool name="Local pool name" type="Local pool type">
      <Priority>Priority</Priority>
    </Pool>
  </Pools>
  <GlobalPoolLinks>
    <GlobalPoolLink>Global pool name</GlobalPoolLink>
  </GlobalPoolLinks>
</Tenant>
```

Table 15.23 List of Items Specified in Initial Values of Definition File for Tenant Creation

Element Name	Description	Remarks (Possible Values, Examples)
Local pool name (Pool name)	Name of the local pool to create in the tenant	Specify the name of the local pool to create in the tenant. For the local pool name, enter a character string beginning with an alphanumeric character, and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). If other values are configured, an error occurs when [OK] is clicked in the tenant creation window.
Local pool type (Pool type)	Type of the local pool	Specify the type of the local pool to create in the tenant. The following types can be specified: - vm (VM pool) - server (Server pool) - storage (Storage pool) - network (Network pool) - address (Address pool) - image (Image pool)

Element Name	Description	Remarks (Possible Values, Examples)
		If other values are configured, "undefined" is displayed on the tenant creation window, and an error occurs when [OK] is clicked.
Priority (Priority)	Local pool priority	Specify the priority for the local pool. For the priority order, specify a number between 1 and 10. If other values are configured, an error occurs when [OK] is clicked in the tenant creation window.
Global pool name (GlobalPoolLink)	Name of the global pool	Specify the resource pool name to be defined in a global pool of a tenant, using the hierarchy described as follows: /*Resource_folder_name*/*Global_pool_name* The global pool names are not displayed in the tenant creation window, in the following cases: - When a resource pool which does not exist is specified - When something other than a resource pool is specified

Example Definition File

An example definition file is indicated below.

```
<?xml version='1.0' encoding='utf-8'?>
<Tenant>
  <Pools>
    <Pool name="TenantVMHostPool" type="vm">
      <Priority>5</Priority>
    </Pool>
    <Pool name="TenantServerPool" type="server">
      <Priority>5</Priority>
    </Pool>
    <Pool name="TenantStoragePool" type="storage">
      <Priority>5</Priority>
    </Pool>
    <Pool name="TenantNetworkPool" type="network">
      <Priority>5</Priority>
    </Pool>
    <Pool name="TenantAddressPool" type="address">
      <Priority>5</Priority>
    </Pool>
    <Pool name="TenantImagePool" type="image">
      <Priority>5</Priority>
    </Pool>
  </Pools>
  <GlobalPoolLinks>
    <GlobalPoolLink>/VMHostPool</GlobalPoolLink>
    <GlobalPoolLink>/ServerPool</GlobalPoolLink>
    <GlobalPoolLink>/StoragePool</GlobalPoolLink>
    <GlobalPoolLink>/NetworkPool</GlobalPoolLink>
    <GlobalPoolLink>/AddressPool</GlobalPoolLink>
    <GlobalPoolLink>/ImagePool</GlobalPoolLink>
  </GlobalPoolLinks>
</Tenant>
```

Sample Definition File

Sample definition files that have appropriate resource pools configured for each operation form are provided.

Copy the sample definition files relevant to the tenant operations, to the storage location for the definition files.

- Installation Directories

  [Windows Manager]
  Installation_folder\SVROR\Manager\etc\files\tenant_config_samples

  [Linux Manager]
  /etc/opt/FJSVrcvmr/files/tenant_config_samples

- Sample Definition File

  - Tenants where combinations of virtual and physical L-Servers are operated

    lserver_multi/tenant_config.xml

  - Tenants on which physical L-Servers are operated

    lserver_physical/tenant_config.xml

  - Tenants on which virtual L-Servers are operated

    lserver_vm/tenant_config.xml

  - Tenants which do not use local pools

    pool_nothing/tenant_config.xml

15.13 Server NIC Definition

To register the server NIC definition, create the following files:

[Windows Manager]
*Installation_folder***SVROR\Manager\etc\customize_data\nicdefctl\model***_Chassis_model_name_product_name.xml_ (*1)
*Installation_folder***SVROR\Manager\etc\customize_data\nicdefctl\host**_VM_host_name.xml_ (*2)

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data/nicdefctl/model/_Chassis_model_name_product_name.xml_ (*1)
/etc/opt/FJSVrcvmr/customize_data/nicdefctl/host/_VM_host_name.xml_ (*2)

*1: For the *chassis name* and *product name* used as file name, set the specified value of element name for server NIC definition using lower case. When using a rack mount server or a tower server, set the file name to create to "*Product name*.xml". For the *product name*, specify the value of the model attribute of the Server element using lower case letters, removing blank spaces.

Example

When "PRIMERGY RX300 S6" is displayed on the GUI, specify "primergyrx300s6" for the file name.

*2: For a VM host name used as a file name, set the same format as the element name for server NIC definition.

The XML definition for server NIC definition is shown below.

```
<Server chassis_model="Chassis Model Name" model="Product Name" name = "VM Host Name">
  <NICGroups>
    <NICGroup>
      <NICs>
        <NIC index="Index Number" redundant="Active/Standby Type"/>
      </NICs>
      <PhysicalLANSegments>
        <PhysicalLANSegment name="Physical LAN Segment Name"/>
      </PhysicalLANSegments>
    </NICGroup>
  </NICGroups>
</Server>
```

Table 15.24 List of Items Specified in XML for Server NIC Definition

Element Name	Description	Remarks (Possible Values, Examples)
Chassis Model Name (Server chassis_model)	Chassis model name When using a blade server, specify the chassis model name. This cannot be specified when a rack mount server, a tower server, or a VM host name is specified.	Specify the following values for the chassis model name. - When the chassis is a BX900 series "BX900" - When the chassis is a BX600 series "BX600" - When the chassis is a BX400 series "BX400"
Product Name (Server model)	Server product name Specify the name when using a blade server, rack mount server, or tower server. When specifying the VM host name, the name cannot be specified.	Specify the product name that is displayed by selecting the [Resource Details] tab which is the server attribute of the server tree.
VM Host Name (Server name)	VM host name Specify when using a VM host name. When specifying the chassis model name or the product name, the name cannot be specified.	Specify the server name that is displayed by selecting the [Resource Details] tab which is the VM host attribute of the server tree.
NIC Definition Group Information (NICGroups)	Collection of NIC definition group	Specify one or more NICGroup elements.
NIC Definition Group (NICGroup)	NIC definition and physical LAN segment group	Specify one NICs element and one PhysicalLANSegments element.
NIC Definition Information (NICs)	A collection of NIC definitions	Specify one or two NIC elements.
Index Number (NIC index)	NIC index number	Specify an integer starting from "1". - For blade servers The index number of physical network information displayed by selecting the [Resource Details] tab which is the server attribute of the server tree. - For rack mount servers or tower servers The number corresponding to the name of a NIC recognized by server virtualization software. (*)
Active/Standby Type (NIC redundant)	Type of active or standby, when using NICs in teaming configurations When only specifying one NIC for the NIC definition information, this specification is invalid. When specifying two NICs for the	When using the element with teaming configurations, specify active or standby. - Active Indicates active. - Standby Indicates standby.

Element Name	Description	Remarks (Possible Values, Examples)
	NIC definition information, this specification cannot be omitted. When "Active" is specified for two NICs, load balancing is performed based on virtual port IDs. For details on load balancing based on virtual port IDs, refer to the VMware manual. The values specified for this element are only valid when the virtual L-Server destination of server virtualization software is VMware. When the server virtualization software is not VMware, this specification is disabled.	
Physical LAN Segment Information (PhysicalLANSegments)	Collection of physical LAN segments	Specify one or more PhysicalLANSegment elements. When sharing server NIC configurations, multiple PhysicalLANSegment elements are necessary.
Physical LAN segment name (PhysicalLANSegment name)	Physical LAN segment identifier name	Specify character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify the identifier name of physical LAN segment that will use the NIC definition information within the NIC definition group.

* Note: For VMware, index numbers are integers starting from 1 (1, 2, 3 ...). The numbers correspond to the names of NICs (vmnic0, vmnic1, vmnic2 ...) of the managed servers recognized by VMware.

Example

The sample XML files for server NIC definitions are stored in the following folders:

The configuration used by default is described in the sample file.

[Windows Manager]

*Installation_folder***SVROR\Manager\etc\customize_data\nicdefctl\sample\model**

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data/nicdefctl/sample/model

For bx900_d2952.xml

```
<?xml version="1.0" encoding="utf-8"?>
<Server chassis_model="BX900" model="D2952">
  <NICGroups>
    <NICGroup>
      <NICs>
        <NIC index="1" redundant="Active" />
        <NIC index="2" redundant="Standby" />
      </NICs>
      <PhysicalLANSegments>
        <PhysicalLANSegment name="BX900_BX924S2_PGSW111_CB1CB2" />
        <PhysicalLANSegment name="BX900_BX924S2_PGSW112_CB1CB2" />
        <PhysicalLANSegment name="BX900_BX924S2_PGSW109_CB1CB2" />
```

```
        <PhysicalLANSegment name="BX900_BX924S2_PGSW201_CB1CB2" />
      </PhysicalLANSegments>
    </NICGroup>
    <NICGroup>
      <NICs>
        <NIC index="3" redundant="Active" />
        <NIC index="4" redundant="Standby" />
      </NICs>
      <PhysicalLANSegments>
        <PhysicalLANSegment name="BX900_BX924S2_PGSW111_CB3CB4" />
        <PhysicalLANSegment name="BX900_BX924S2_PGSW112_CB3CB4" />
        <PhysicalLANSegment name="BX900_BX924S2_PGSW109_CB3CB4" />
        <PhysicalLANSegment name="BX900_BX924S2_PGSW201_CB3CB4" />
      </PhysicalLANSegments>
    </NICGroup>
    <NICGroup>
      <NICs>
        <NIC index="7" redundant="Active" />
        <NIC index="8" redundant="Standby" />
      </NICs>
      <PhysicalLANSegments>
        <PhysicalLANSegment name="BX900_BX924S2_PGSW109_CB5CB6" />
        <PhysicalLANSegment name="BX900_BX924S2_PGSW201_CB7CB8" />
      </PhysicalLANSegments>
    </NICGroup>
    <NICGroup>
      <NICs>
        <NIC index="9" redundant="Active" />
        <NIC index="10" redundant="Standby" />
      </NICs>
      <PhysicalLANSegments>
        <PhysicalLANSegment name="BX900_BX924S2_PGSW111_CB7CB8" />
        <PhysicalLANSegment name="BX900_BX924S2_PGSW112_CB7CB8" />
      </PhysicalLANSegments>
    </NICGroup>
  </NICGroups>
</Server>
```

After Modifying the Server NIC Definition

Virtual switches, port groups, and virtual bridges already deployed can continue to be operated without any modifications, even if the server NIC definition is modified.
Newly deployed virtual switches, port groups, and virtual bridges should be configured according to the server NIC definition that has been modified.
This also applies when physical LAN segments referred to from network resources are modified.
When modifying already deployed networks, directly operate server virtualization software to modify them.

15.14 VMware Exclusion Port Group Definition File

Create the definition files of port group excluding VMware in the following folders in order to deploy L-Servers, even when the service console and port group are the same.

[Windows Manager]
*Installation_folder***SVROR\Manager\etc\customize_data\vnetwork_excluded_vmware.rcxprop**

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data/vnetwork_excluded_vmware.rcxprop

The definition files of port groups to exclude from VMware are as follows:

```
Port group name to exclude
```

- If "#" is specified for the first letter, the line will be recognized as a comment and ignored.
- When a blank line is specified, the line will also be ignored.
- The character code is UTF-8.
- Describe one port group name in one line. When excluding multiple port groups, describe the names in multiple lines.

Example

```
Service Console
VMkernel
Service Console 2
```

15.15 Network Device Model Definition

Create the model definition file for network devices in the following folders:

[Windows Manager]
*Installation_folder***SVROR\Manager\etc\customize_data\network_device_model.xml**

[Linux Manager]
/etc/opt/FJSVrcvmr/customize_data/network_device_model.xml

The XML definition of model definitions for network devices is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<NetworkDeviceCategory>
  <Vendors>
    <Vendor name="Vendor Name" enterprise_num="Vendor Number">
      <Products>
        <Product name="Device Name">
          <Types>
            <Type>Type</Type>
          </Types>
          <Models>
            <Model name="Model Name">
              <Types>
                <Type>Type</Type>
              </Types>
              <SysObjectId>sysObjectID</SysObjectId>
            </Model>
          </Models>
        </Product>
      </Products>
    </Vendor>
  </Vendors>
</NetworkDeviceCategory>
```

Table 15.25 List of Items Specified in XML Definitions of Model Definitions for Network Devices

Element Name	Description	Remarks (Possible Values, Examples)
Vendor Information (Vendors)	Collection of vendors	Specify one or more Vendor elements.

Element Name	Description	Remarks (Possible Values, Examples)
Vendor name (*1) (Vendor name)	Vendor name of the network device	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify the same arbitrary name as used for the *Vendor name* of the folder (*2) where the rulesets for L-Platform templates and network resources (network device-specific) are registered.
Vendor number (*3) (Vendor enterprise_num)	Vendor number of the enterprise OID of the network device (optional)	Specify the numbers allocated to the vendors continuing on from the enterprise MIB (1.3.6.1.4.1).
Device name information (Products)	Device name information	Specify one or more Product elements.
Device name (Product name)	Network device name (product name)	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify the same arbitrary name as used for the *unit_name* or *model_name* of the folder (*2) where the rulesets for L-Platform templates and network resources (network device-specific) are registered.
Type information (Types)	Type information (optional)	Specify one or more Type elements.
Type (*4) (Type)	Type (This cannot be omitted when specifying type information)	Specify the type of the network device. - L2-Switch - Firewall - SLB
Model name information (Models)	Model name information	Specify one or more Model elements.
Model Name (Model name)	Model name of network device	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). Specify the same arbitrary name as used for the *unit_name* or *model_name* of the folder (*2) where the rulesets for L-Platform templates and network resources (network device-specific) are registered.
Type information (Types)	Type information (optional)	Specify one or more Type elements.
Type (*4) (Type)	Type (This cannot be omitted when specifying type information)	Specify the type of the network device. - L2-Switch - Firewall - SLB
sysObjectID (SysObjectId)	sysObjectID of network device	Specify the OID character string including numbers and periods ("."). When the standard MIB sysObjectID for a network device is unknown, it can be confirmed using the snmpwalk command.

Element Name	Description	Remarks (Possible Values, Examples)

		Example
		This example shows checking using the snmpwalk command.
		`>snmpwalk -v 1 -c [SNMP community name] -On [IP address] sysObjectID`
		sysObjectID is displayed in the following format:
		`.1.3.6.1.2.1.1.2.0 = OID: .[sysObjectID]`
		When specifying the sysObjectID displayed in the command above, exclude the period (".") which is the first character of the command.

*1: If two or more Vendor information (Vendor) that have the same Vendor Number are defined, the earliest one will take effect.
If only the vendor name is to be defined, specify the Vendor name and Vendor enterprise_num, and do not specify the apparatus name (Products) or model name (Models).

*2: For details on the folder for registration of the rulesets for L-Platform templates and network resources (network device-specific), refer to "F.3 Creating a Folder for Registering Rulesets" in the "Design Guide CE".

*3: The vendor numbers for major vendors are shown for reference.

Vendor Name	Organization name registered in IANA	Vendor Number
Fujitsu	Fujitsu Limited	211
Brocade	Brocade Communications Systems, Inc. (previous was 'McData Corporation')	289
	Brocade Communications Systems, Inc.	1588
	Brocade Communications Systems, Inc. (previous was 'Foundry Networks, Inc.')	1991
	Brocade Communications Systems, Inc. (previous was 'NuView Inc.')	2427
	Brocade Communications Systems, Inc. (previous was 'McDATA,Inc')	4369
	Brocade Communications Systems, Inc. (previous was 'Rhapsody Networks Inc.')	6905
	Brocade Communications Systems, Inc. (previous was 'McDATA Corp.')	8244
Cisco	ciscoSystems	9
	Cisco Systems, Inc.	5771
	Cisco Systems	5842
Alaxala_Networks	ALAXALA Networks Corporation	21839
Alcatel-Lucent	Alcatel-Lucent (previously was 'Alcatel Data Network')	637
	Alcatel-Lucent (previously was Tropic Networks)	7483
	Alcatel-Lucent, 4ESS	35710
Allied_Telesis	Allied Telesis, Inc.	207
Blue_Coat	Blue Coat Systems	14501

Vendor Name	Organization name registered in IANA	Vendor Number
Extreme_Networks	Extreme Networks	1916
Fortinet	Fortinet, Inc.	12356
F5_Networks	F5 Labs, Inc.	3375
	F5 Networks Inc	12276
Hitachi_Cable	Hitachi Cable, Ltd.	278
HP	Hewlett-Packard	11
H3C	H3C	25506
Juniper_Networks	Juniper Networks, Inc.	2636
	Juniper Networks/Unisphere	4874
	Juniper Networks/Funk Software	1411
NEC	NEC Corporation	119
Panasonic_Electric_Works	Panasonic Electric Works Co., Ltd.	396
Radware	RND	89
3Com	3Com	43

IANA: Internet Assigned Number Authority

*4: If a type (Type) has been specified under both Product name and Models, the type under Models is given priority.
No network device type is specified if neither is specified.

Example

```
<?xml version="1.0" encoding="UTF-8"?>
<NetworkDeviceCategory>
  <Vendors>
    <Vendor name="Fujitsu" enterprise_num="211">
      <Products>
        <Product name="SR-X300">
          <Types>
            <Type>L2-Switch</Type>
          </Types>
          <Models>
            <Model name="SR-X316T1">
              <SysObjectId>1.3.6.1.4.1.211.1.127.65.53</SysObjectId>
            </Model>
            <Model name="SR-X324T1">
              <SysObjectId>1.3.6.1.4.1.211.1.127.65.54</SysObjectId>
            </Model>
            <Model name="SR-X340TR1">
              <SysObjectId>1.3.6.1.4.1.211.1.127.65.55</SysObjectId>
            </Model>
          </Models>
        </Product>
        <Product name="SR-X500">
          <Types>
            <Type>L2-Switch</Type>
          </Types>
          <Models>
            <Model name="SR-X526R1">
              <SysObjectId>1.3.6.1.4.1.211.1.127.65.52</SysObjectId>
            </Model>
          </Models>
        </Product>
```

```
      </Products>
    </Vendor>
  </Vendors>
</NetworkDeviceCategory>
```

Information

It is not necessary to specify supported device models in network device model definitions because model information is obtained automatically.

The values of Vendor elements, ProductName elements, ModelName elements, and Type elements of the network configuration information are used for the vendor name, device name, model name, and type of the network device preferentially.

If the Vendor elements, ProductName elements, ModelName elements, or Type elements are not specified in the XML definition of the network configuration information, identify the vendor name, device name, model name, or type from the model definition file.

In the model definition file, the vendor name, device name, model name, and type of a network device are identified using the OID character string specified in the SysObjectId element in the Model element.

- The model definition file of the network device is searched from the top.
  The value of the name attribute of the Model element is the device name, the value of the Product element is the unit name, the value of the Vendor element is the vendor name, and the value of the Type element is the type of sysObjectID which has been matched first.
- If no matching 0ID character string is found in the model definition file of the network device, it is taken as meaning the network device has no vendor name, device name, model name, or type.

15.16 Parameter Files (for Scripts)

This section explains XML definitions of variable information to be used by the ruleset script.

15.16.1 For Scripts of Automatic Configuration Rulesets

Create a parameter file for scripts of an automatic configuration ruleset at the following location:

- For the ruleset used for the L-Platform template

  [Windows Manager]
  *Installation_folder***SVROR\Manager\etc\scripts***vendor_name**unit_name or model_name***rulesets***ruleset_name***default_param.prm**

  [Linux Manager]
  /etc/opt/FJSVrcvmr/scripts/*vendor_name*/*unit_name or model_name*/**rulesets/***ruleset_name*/**default_param.prm**

- For the ruleset used for the network resources

  [Windows Manager]
  *Installation_folder***SVROR\Manager\etc\scripts\network_resource***Ruleset_name****default_param.prm**

  [Linux Manager]
  /etc/opt/FJSVrcvmr/scripts/network_resource/Ruleset_name**/default_param.prm**

The changeable XML definition to be used by the ruleset script for automatic configuration is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<RulesetParameter>
  <Ruleset name="Ruleset_name" type="Ruleset_type" category="config">
    <Tenant>Tenant Name</Tenant>
    <LplatformModel>L-Platform_model</LplatformModel>
    <SelectDeviceType>Configurable_device_type</SelectDeviceType>
    <MaxSegment>Maximum Segment Number</Maxsegment>
```

```
      <MaxServer>Maximum Server Number</MaxServer>
    <RulesetDescription>Ruleset Description</RulesetDescription>
  </Ruleset>
  <Configuration>
    <DeviceModel>Network device model</DeviceModel>
  </Configuration>
  <LNetworkDeviceInterfaces>
    <LNetworkDeviceInterface name="Network Identifier Parameter Name 1">
      <SegmentType>Segment Type Name1</SegmentType>
      <NetworkResourceId>Network Resource ID1</NetworkResourceId>
    </LNetworkDeviceInterface>
    <LNetworkDeviceInterface name="Network Identifier Parameter Name 2">
      <SegmentType>Segment Type Name2</SegmentType>
      <NetworkResourceId>Network Resource ID2</NetworkResourceId>
    </LNetworkDeviceInterface>
    ...
  </LNetworkDeviceInterfaces>
  <Parameters>
    <Parameter name="Parameter Variable 1" segmentlabel="Segment name"
serverlabel="Server name" label="Parameter Variable Display Name 1" view="display
existence">
      <Syntax>Syntax</Syntax>
      <Value>Parameter Value1</Value>
      <ParameterDescription>Parameter Description1</ParameterDescription>
    </Parameter>
    <Parameter name="Parameter Variable 2" segmentlabel="Segment name"
serverlabel="Server name" label="Parameter Variable Display Name 2" view="display
existence">
      <Syntax>Syntax</Syntax>
      <Value>Parameter Value2</Value>
      <ParameterDescription>Parameter Description2</ParameterDescription>
    </Parameter>
    ...
  </Parameters>
</RulesetParameter>
```

Table 15.26 List of Specified XML Items for Parameter Information to be Handed Over to Scripts of Automatic Configuration Ruleset

Element Name	Description	Remarks (Possible Values, Examples)
Ruleset name (Ruleset name)	Name of the ruleset	Specify a character string up to 32 characters.
Ruleset type (type)	The type of network devices for which the ruleset can be used (optional)	Specify the network device type. Specify either one of the following: - Firewall - SLB If left blank, "Firewall" is specified.
Tenant name (Tenant)	The name of the tenant for which the ruleset can be used (optional)	Specify a character string up to 32 characters. If left blank, the ruleset can be used for all tenants.
Ruleset category (category)	Ruleset category (optional)	Specify "config" for the ruleset category. When omitted, "config" is specified.
L-Platform model (LplatformModel)	L-Platform model	Specify the model of the L-Platform. Specify one of following items.

Element Name	Description	Remarks (Possible Values, Examples)
	Specify the model of the L-Platform realized by the ruleset. (optional)	- 1 L-Platform with Firewall only - 2 L-Platform with SLB only - 3 L-Platform with Firewall and SLB If left blank, "1" is set.
Configurable device type (SelectDeviceType)	The type of network devices which can be automatically configured by the ruleset (optional)	Specify the network device type. Specify one of following items. - 1 Firewall - 2 SLB - 3 Firewall+SLB If left blank, "1" is set.
Maximum Segment Number (MaxSegment)	The maximum number of segments which can be used with a ruleset When configuring systems involving multiple hierarchy models, this maximum segment number is the upper limit of multiple hierarchy models. When the ruleset is used for network resources or SLB, specification is not necessary.	Specify an integer between 1 and 99. When you specify an integer between 11 and 99, specify an integer between 1 and 10 for *maximum server number*.
Maximum Server Number (MaxServer)	The maximum number of servers which can be set for server specific configuration for one segment unit for ruleset. The total of the maximum number of servers and the maximum number of segments is the upper limit of the number of servers that can be created using an L-Platform. When the ruleset is used for network resources, specification is not necessary.	Specify an integer between 1 and 99. When you specify an integer between 11 and 99 for *maximum segment number*, specify an integer between 1 and 10.
Ruleset Description	Ruleset description	Specify a character string up to 256 characters.

Element Name	Description	Remarks (Possible Values, Examples)
(RulesetDescription)		
Network device model (DeviceModel)	Network device model	Specify the network device model. Specify "IPCOMVA". This is valid only when the configuration target is an IPCOM VA.
Network Identifier Parameter Information (LNetworkDeviceInterfaces)	Collection of network identifier parameter information	Specify one or more LNetworkDeviceInterface elements.
Network Identifier Parameter Name (LNetworkDeviceInterface name)	Network identifier parameter name for the virtual interface of the network device When the ruleset is used for network resources, specification is not necessary.	Specify the parameter variable name described in script.
Segment Type Name (SegmentType)	Name specifying segment types for rulesets (DMZ or Intranet) When configuring a multiple hierarchy model using an L-Platform, only segments with this segment type name can be created. When the ruleset is used for network resources, specification is not necessary.	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
Network Resource ID (NetworkResourceId)	Network resource ID for network identifier parameter When the ruleset is used for network resources, specification is not necessary.	-
Parameter Information (Parameters)	Collection of parameter information (optional)	Specify one or more Parameter elements.
Parameter Variable Name (Parameter name)	Parameter variable name	Specify the parameter variable name described in script.
Display name of the segment with parameter variables enabled (Parameter segmentlabel)	Display name of the segment with parameter variables enabled For parameters not related to segments, specification is not necessary.	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
Display name of the server with parameter variables enabled (Parameter serverlabel)	Display name of the server with parameter variables enabled	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").

Element Name	Description	Remarks (Possible Values, Examples)
	For parameters not related to servers, specification is not necessary.	
Parameter Variable Display Name (Parameter label)	Parameter variable display name	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
Display Existence (Parameter view)	Existence of parameter variable values	To enable tenant administrators and tenant users to operate parameter variable values, specify whether to display the relevant parameters. - true displayed - false not displayed For an infrastructure administrator or a dual-role administrator, the relevant parameter variables values are displayed regardless of whether this element is specified.
Syntax (Syntax)	Parameter variable format	Specify the format of the parameter variable. - INTEGER(*0..255*) An integer Specify the value range in the format (minimum..maximum). - DisplayString(SIZE(*0..256*)) Character string Specify the maximum and minimum number of characters using SIZE. For DisplayString(SELECT("*AA*"|"*BB*"|"*CC*")), select the character string from SELECT. - Physical Address MAC address Specify the address in MAC address format. - IpAddress IP address Specify the address in IPv4 address format or IPv6 address format. - DisplayString(SELECT IPADDRESS("*SegA*"|"*SegB*"|"*SegC*")) Specify the *name of the segment type* (SegmentType) for *SegA, SegB*, and *SegC*. For the segments specified in *SegA, SegB,* and *SegC*, the IP addresses of the servers which can be server load balancing targets will be listed and become selectable. If *SegA, SegB,* and *SegC* are not specified, it will be assumed that all segments on the L-Platform have been specified.

Element Name	Description	Remarks (Possible Values, Examples)
		When this format is specified, specification of *parameter values* (Value) is disabled. When a server load balancer is selected in the L-Platform details window, the servers configured as the distribution targets will be highlighted. For details on how to display the L-Platform window, refer to "8.3.11 Server Load Balancer (SLB) Settings" in the "User's Guide for Tenant Administrators CE" and "5.3.10 Server Load Balancer (SLB) Settings" in the "User's Guide for Tenant Users CE".
Parameter Values (Value)	Parameter values	Specify the values omitted from the parameter variables. When no values are omitted, this element is not specified.
Parameter Description (ParameterDescription)	Parameter description Specify the meanings of parameter variables, the format of specified values, and the scope description.	Specify a character string up to 256 characters.

15.16.2 For Scripts of Operation Ruleset

Create a parameter file for scripts of an operation ruleset at the following location:

[Windows Manager]
*Installation_folder***SVROR\Manager\etc\scripts***vendor_name**unit_name or model_name***operations***ruleset_name***default_param.prm**

[Linux Manager]
/etc/opt/FJSVrcvmr/scripts/*vendor_name*/*unit_name or model_name*/**operations/***ruleset_name*/**default_param.prm**

The changeable XML definition to be used by the ruleset script for operations is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<RulesetParameter>
  <Ruleset name="Ruleset_name"> type="SLB" category="operation"
action="Ruleset_action">
    <Tenant>Tenant Name</Tenant>
    <RulesetDescription>Ruleset Description</RulesetDescription>
  </Ruleset>
  <Parameters>
    <Parameter name="Parameter Variable1" label="Parameter Variable Display Name1"
view="display existence">
      <Syntax>Syntax</Syntax>
      <Value>Parameter Value1</Value>
      <ParameterDescription>Parameter Description1</ParameterDescription>
    </Parameter>
    <Parameter name="Parameter Variable2" label="Parameter Variable Display Name2"
view="display existence">
      <Syntax>Syntax</Syntax>
      <Value>Parameter Value2</Value>
      <ParameterDescription>Parameter Description2</ParameterDescription>
    </Parameter>
    ...
  </Parameters>
</RulesetParameter>
```

Table 15.27 List of Specified XML Items for Parameter Information to be Handed Over to Scripts of Operation Ruleset

Element Name	Description	Remarks (Possible Values, Examples)
Ruleset name (Ruleset name)	Name of the ruleset	Specify a character string up to 32 characters.
Ruleset type (type)	The type of network devices for which the ruleset can be used	Specify the network device type, "SLB".
Ruleset category (category)	Ruleset category	Specify "operation" for the ruleset category.
Ruleset action (action)	Action of the operation ruleset Changes available user privileges according to the action of the operation ruleset.	Specify the action of the operation ruleset. Specify one of following items. - show Operation rulesets with display processes (*1) - operate Operation rulesets with operational processes (*2)
Tenant name (Tenant)	The name of the tenant for which the ruleset can be used (optional)	Specify a character string up to 32 characters. If left blank, the ruleset can be used for all tenants.
Ruleset Description (RulesetDescription)	Ruleset description	Specify a character string up to 256 characters.
Parameter Information (Parameters)	Collection of parameter information (optional)	Specify one or more Parameter elements.
Parameter Variable Name (Parameter name)	Parameter variable name	Specify the parameter variable name described in script.
Parameter Variable Display Name (Parameter label)	Parameter variable display name	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
Display Existence (Parameter view)	Existence of parameter variable values	Specify display existence in order to operate parameter variable values. - true displayed - false not displayed
Syntax (Syntax)	Parameter variable format	Specify the format of the parameter variable. - INTEGER(*0..255*) An integer Specify the value range in the format (minimum..maximum). - DisplayString(SIZE(*0..256*))

Element Name	Description	Remarks (Possible Values, Examples)
		Character string Specify the maximum and minimum number of characters using SIZE. For DisplayString(SELECT("*AA*"|"*BB*"|"*CC*")), select the character string from SELECT. - Physical Address MAC address Specify the address in MAC address format. - IpAddress IP address Specify the address in IPv4 address format or IPv6 address format. - DisplayString(SELECT IPADDRESS SLB SERVER()) The IP addresses of the target servers for server load balancing will be listed and become selectable. When this format is specified, specification of *parameter values* (Value) is disabled.
Parameter Values (Value)	Parameter values	Specify the values omitted from the parameter variables. When no values are omitted, this element is not specified.
Parameter Description (ParameterDescription)	Parameter description Specify the meanings of parameter variables, the format of specified values, and the scope description.	Specify a character string up to 256 characters.

*1: Refers to the rulesets which only display information. This type of ruleset can be used by infrastructure monitors.

*2: Refers to the rulesets which operate network devices. This type of ruleset cannot be used by infrastructure monitors. If the ruleset performs one or more operations on network devices, it is a ruleset with operational processes.

15.17 Network Device Interface Configuration File

Create the following files to configure the interfaces in the network devices using the scripts called by the auto-configuration function.

[Windows Manager]
*Installation_folder***SVROR\Manager\etc\scripts\network_resource\Unm_network_setting.xml**

[Linux Manager]
/etc/opt/FJSVrcvmr/scripts/network_resource/Unm_network_setting.xml

The XML definition of the interface configuration file of network device is as follows:

```
<?xml version="1.0" encoding="utf-8"?>
<UnmNetwork>
<Networks>
  <PXENetworkLink name="Network Resource Name"/>
    <NetworkDevices>
      <NetworkDevice name="Node Name">
        <Ipv4Addresses>
          <Ipv4Address address="IPv4 Address1" parameternumber="Sequential Number1"/>
          <Ipv4Address address="IPv4 Address2" parameternumber="Sequential Number2"/>
          ...
        </Ipv4Addresses>
```

```
        <Ipv6Prefix>IPv6 Prefix</Ipv6Prefix>
        <Ipv6Prefixlen>IPv6 Prefix Length</Ipv6Prefixlen>
        <Ipv6Addresses>
          <Ipv6Address address="IPv6 Address1" parameternumber="Sequential Number1"/>
          <Ipv6Address address="IPv6 Address2" parameternumber="Sequential Number2"/>
          ...
        </Ipv6Addresses>
        <Vrid>VRID</Vrid>
      </NetworkDevice>
      ...
    </NetworkDevices>
  </Network>
  ...
</Networks>
</UnmNetwork>
```

Table 15.28 List of Defined XML Items for Interface Configuration Files of Network Devices

Element Name	Description	Remarks (Possible Values, Examples)
Network Resource Name (Network name)	Name of the network resource	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), periods ("."), or hyphens ("-").
Node Name (NetworkDevice name)	Name of node	Specify a character string containing up to 32 alphanumeric characters, underscores ("_"), hyphens ("-"), and periods (".") .
IPv4 Address (Ipv4Address address)	IPv4 address used in the specified node (optional)	Specify the IP address in IPv4 format.
Sequential Serial Number (parameternumber)	Sequential serial number for reserved variables	Specify an integer between 1 and 99.
IPv6 Prefix (Ipv6Prefix)	IPv6 prefix used in the specified node (optional)	Specify the IPv6 prefix.
IPv6 Prefix Length (Ipv6Prefixlen)	IPv6 prefix length used in the specified node (optional)	Specify the IPv6 prefix length.
IPv6 Address (Ipv6Address address)	IPv6 address used in the specified node (optional)	Specify the IP address in the IPv6 format.
Sequential Serial Number (parameternumber)	Sequential serial number for reserved variables	Specify an integer between 1 and 99.
VRID (Vrid)	VRID values used in the specified node	Specify an integer between 1 and 255.

15.18 User (for Basic mode)

The XML definition for users is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<User name="User ID" label = "Label" >
  <Password>Password</Password>
  <Comment>Comment 1</Comment>
```

```
  <UserGroup>User Group Name</UserGroup>
   <Roles>
    <Role name="Role Name 1">
      <Scopes>
        <Scope>Access Scope 1</Scope>
        <Scope>Access Scope 2</Scope>
        <Scope>Access Scope 3</Scope>
      </Scopes>
    </Role>
    <Role name="Role Name 2">
      <Scopes>
        <Scope>Access Scope 1</Scope>
        <Scope>Access Scope 2</Scope>
        <Scope>Access Scope 3</Scope>
      </Scopes>
    </Role>
  </Roles>
</User>
```

Table 15.29 List of Items Specified in XML Definitions for Users

Element Name	Description	Remarks (Possible Values, Examples)
User ID (User name)	Name of the user	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-").
Label (User label)	Label for the user (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Password (Password)	Password for the user	Specify in the following cases: - Changing of the user password in the user information - Creating of a user when using internal authentication to manage user information in Basic mode Specify a character string that meets the following conditions: - For single sign or user management using a directory service in Basic mode: A character string containing between 8 and 64 alphanumeric characters and symbols - For user management using internal authentication in Basic mode Character string of up to 16 alphanumeric characters or symbols
Comment (Comment)	Comment for the user (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
User group name (UserGroup)	Name of the user group the user belongs to (optional)	Specify the name of a user group. If omitted, the user group that the current user belongs to will be assigned.
Role name (Role name)	Role name (optional)	Specify the role name to allocate to the access scope. For details on specifiable role names, refer to "5.1 Restricting Access Using Roles" in the "Design Guide CE".
Access scope (Scope)	Access scope for the specified role	Specify the scope of access to allow for the user. - When restricting the access scope Specify resource folder names or resource names. - When not restricting the access scope

Element Name	Description	Remarks (Possible Values, Examples)
		Specify "all".

Example

```
<?xml version="1.0" encoding="utf-8"?>
<User name="test_user01"
label="test_user01">
  <Password>test_user01</Password>
  <Comment>test_user</Comment>
  <UserGroup>admin</UserGroup>
</User>
```

15.19 Tenants (for Basic mode)

The XML definition for tenants is shown below.

```
<?xml version="1.0" encoding="utf-8"?>
<Tenant name ="Tenant name" label="Label">
  <Comment>Comment</Comment>
  <UserGroup name="User group name" label="Label">
    <Comment>Comment</Comment>
    <Role name="Role name">
        <Scopes>
          <Scope>Tenant name</Scope>
        </Scopes>
    </Role>
  </UserGroup>
  <User name="User ID" label = "Label" >
    <Password>Password</Password>
    <Comment>Comment</Comment>
    <UserGroup>User Group Name</UserGroup>
  </User>
  <Pools>
    <Pool name="Resource pool name" type="Resource pool type"
label="Label">
      <Comment>Comment</Comment>
      <Priority>Priority</Priority>
    </Pool>
  </Pools>
  <GlobalPoolLinks>
    <GlobalPoolLink>Global pool name</GlobalPoolLink>
       ...
  </GlobalPoolLinks>
</Tenant>
```

Table 15.30 List of Items Specified in XML Definitions for Tenant

Element Name	Description	Remarks (Possible Values, Examples)
Tenant name (Tenant name)	Tenant Name	Specify a character string beginning with an alphanumeric character and containing up to 32 alphanumeric characters, underscores ("_"), and hyphens ("-"). When creating it in a resource folder, specify the resource folder name using slashes ("/"). Creation in a tenant is not possible.
Label	Tenant label	Specify a character string of up to 32 alphanumeric characters or symbols.

Element Name	Description	Remarks (Possible Values, Examples)
(Tenant label)	(optional)	
Comment (Comment)	Comment for a tenant (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
User group name (UserGroup name)	Name of the user group to create in the tenant	Specify a user group name to create. If the UserGroup element is omitted, "supervisor" is set. For details on elements in the UserGroup element, refer to "15.11 User Groups". Create a user group when using directory service authentication.
User ID (User name)	Name of the user to create in the tenant	Specify the user ID to create. If the User element is omitted, no user is created. The following elements can be specified for User elements. - *Label* (User label) - *Password* (Password) - *Comment* (Comment) - *User Group Name* (UserGroup name) Role names (Role name) and access scopes (Scope) cannot be specified. For details on each element, refer to "15.10 User". When using directory service authentication, register the users registered in the directory service with the manager. A user and a manager are not converted, when no users are registered in the directory service.
Resource pool name (Pool name)	Name of the resource pool to create in the tenant	Specify the name of the resource pool to create in the tenant. If the Pools element is omitted, no resource pool is created in the tenant.
Resource pool type (Pool type)	Resource Pool Types	Specify the type of the resource pool to create in the tenant. It can be specified using the following methods: - vm (VM pool) - server (Server pool) - storage (Storage pool) - network (Network pool) - address (Address pool) - image (Image pool)
Label (Pool label)	Label for the resource pool (optional)	Specify a character string of up to 32 alphanumeric characters or symbols.
Comment (Comment)	Comment for the resource pool (optional)	Specify a character string of up to 256 alphanumeric characters or symbols.
Priority (Priority)	Resource pool priority (optional)	Specify the priority for the resource pool as between 1 and 10. If omitted, "5" is set. For the priority order, "1" is the highest and "10" is the lowest.
Global pool name (GlobalPoolLink)	Name of the global pool	Specify the resource pool name to be defined in a global pool of a tenant. If the GlobalPoolLinks element is omitted, no global pool is defined for the tenant.

Element Name	Description	Remarks (Possible Values, Examples)
		If specifying a resource pool in a resource folder, specify the resource folder name using slashes ("/").

Example

```
<?xml version="1.0" encoding="utf-8"?>
<Tenant name ="TenantFolder" label="TenantFolder Label">
  <Comment>TenantFolder Comment</Comment>
  <UserGroup name="TenantUserGroup" label="TenantUserGroup Label">
    <Comment>TenantUserGroup Comment</Comment>
    <Role name="administrator">
        <Scopes>
          <Scope>TenantFolder</Scope>
        </Scopes>
    </Role>
  </UserGroup>
  <User name="TenantAdminUser" label="TenantAdministratorUser Label">
    <Password>tenant123</Password>
    <Comment>TenantAdministratorUser Comment</Comment>
    <UserGroup>TenantUserGroup</UserGroup>
  </User>
  <Pools>
    <Pool name="VMHostPool" type="vm" label="VMHostPool Label">
      <Comment>VMHostPool Comment</Comment>
      <Priority>5</Priority>
    </Pool>
    <Pool name="ServerPool" type="server" label="ServerPool Label">
      <Comment>ServerPool Comment</Comment>
      <Priority>5</Priority>
    </Pool>
    <Pool name="StoragePool" type="storage" label="StoragePool Label">
      <Comment>StoragePool Comment</Comment>
      <Priority>5</Priority>
    </Pool>
    <Pool name="NetworkPool" type="network" label="NetworkPool Label">
      <Comment>NetworkPool Comment</Comment>
      <Priority>5</Priority>
    </Pool>
    <Pool name="AddressPool" type="address" label="AddressPool label">
      <Comment>AddressPool Comment</Comment>
      <Priority>5</Priority>
    </Pool>
    <Pool name="ImagePool" type="image" label="ImagePool label">
      <Comment>ImagePool Comment</Comment>
      <Priority>5</Priority>
    </Pool>
  </Pools>
  <GlobalPoolLinks>
    <GlobalPoolLink>/VMHostPool</GlobalPoolLink>
    <GlobalPoolLink>/ServerPool</GlobalPoolLink>
       ...
  </GlobalPoolLinks>
</Tenant>
```

15.20 L-Platform Template

15.20.1 Software Information

This section explains the software information manipulation commands.
You can use already registered software information. Refer to "Appendix C Registered Software IDs" for details.

15.20.1.1 Overview of Software Information

Software information files are XML documents that list configuration information for the software (operating system) included in a cloning image.
Create and register one software information file for each item of software.
Software information for operating systems is included with the products, so infrastructure administrators will not usually need to create software information. Refer to "Appendix C Registered Software IDs" for information on the software information included with this product.
If information such as license information is required, the infrastructure administrator must modify the file contents. Refer to "15.20.1.2 File Information Details" for information on a description of items (tags).
New software information will need to be created when registering software such as OSS. Infrastructure administrators must take this model into account when performing creation. The software information model is stored in the following folder:

[Windows Manager]

```
Installation_folder\RCXCFMG\templates\softwares\
```

[Linux Manager]

```
/opt/FJSVcfmg/templates/softwares/
```

15.20.1.2 File Information Details

Software information files use the following XML format:

```
<?xml version="1.0" encoding="UTF-8" ?>
<software version="2.0">
    <id>[Software ID]</id>
    <lcid>[Locale ID]</lcid>
    <name>[Software name]</name>
    <ownerOrg>[Owner (tenant)]</ownerOrg>
    <ownerUser>[Owner (user)]</ownerUser>
    <category>[Software category]</category>
    <osCategory>[Operating system category]</osCategory>
    <version>[Version]</version>
    <officialVersion>[Official version]</officialVersion>
    <patch>[Patch version number]</patch>
    <license>[License]</license>
    <support>[Support]</support>
    <productId>[Model number]</productId>
</software>
```

The following table shows descriptions of each of these items (tags), as well as their settings:
Modify software information files if necessary, by referring to the information in this table.
Tag names in square brackets [ ] can be omitted.

Tag name	Format	Setting range	Mandatory	Description
[id]	-	-	No	The ID allocated when the software information was registered. No value is specified at new creation.
[lcid]	string	Fixed value	Yes	The locale for the software information.

Tag name	Format	Setting range	Mandatory	Description
				Select one of the following: - "en": English - "zh": Chinese
[name]	string	Up to 85 characters	Optional	The name of the software. Specify this item when registering software information.
ownerOrg	string	Fixed value	Yes	The tenant name to which the software belongs. The value is fixed as "cfmgadm".
ownerUser	string	Fixed value	Yes	The user ID of the user registering the software. The value is fixed as "cfmgadm".
category	string	Fixed value	Yes	The category of the software. The value is fixed as "OS".
osCategory	string	List	Yes	Select one of the following options: - "windows": Windows - "linux": Linux - "windows64": Windows (64 bit) - "linux64": Linux (64 bit) - "solaris":Solaris - "other":Other
version	string	1 to 10 characters	Yes	Specify the software version. (Example) 9.2.0
officialVersion	-	-	No	The official version.
patch	-	-	No	Specify information about the patches that have been applied in the image information files.
license	string	Up to 85 characters	Optional	License information for the software. If "OS" was selected for the category item, specify the product key for the Windows operating system. This can be specified only when the operating system is Windows. - If the server virtualization software is RHEL-KVM Windows Server 2008 R2 and Windows Server 2012 can be specified as the guest OS. - If the server virtualization software is Citrix XenServer: When using Linux Manager or using Windows Manager and a cloning image where "OS settings" are disabled, the guest OS will not use this setting. Refer to "17.5.1 Collecting and Registering" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on "OS setting" when collecting cloning images. (Example) XXXXX-XXXXX-XXXXX-XXXXX-XXXXX - If the server virtualization software is OVM for x86 When using Linux Manager or using Windows Manager and a cloning image where "OS settings" are disabled, the guest OS will not use this setting. Refer to "17.5.1 Collecting and Registering" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on "OS setting" when collecting cloning images. (Example) XXXXX-XXXXX-XXXXX-XXXXX-XXXXX
support	string	Up to 85 characters	Optional	Support information for the software.
productId	-	-	No	The software product ID.

The meanings of the symbols in the Mandatory column are as follows:
Yes: If a tag was specified, you must specify the value.
Optional: Value can be omitted.
No: A value setting is not required. Tag only specification.

15.20.2 Image Information

This section explains the image information in detail.

15.20.2.1 Overview of Image Information

Image information files are XML documents that list the configuration information for cloning images.

Create and register a separate image information file for each cloning image.

Infrastructure administrators must take this model into account when performing creation.

A model image information file is stored in the following folder:

[Windows Manager]

```
Installation_folder\RCXCFMG\templates\images\
```

[Linux Manager]

```
/opt/FJSVcfmg/templates/images/
```

Refer to "15.20.2.2 File Information Details" for information on a description of cloning items (tags).

The software ID (which was assigned when the software information was registered) must be entered as the software ID in the image information.

15.20.2.2 File Information Details

Image information files use the following XML format:

```
<?xml version="1.0" encoding="UTF-8" ?>
<image version="2.0">
    <id>[Cloning image ID]</id>
    <name>[Image information name]</name>
    <resourceId>[Resource ID]</resourceId>
    <imageName>[Cloning image name]</imageName>
    <ownerOrg>[Owner (tenant)]</ownerOrg>
    <ownerUser>[Owner (user)]</ownerUser>
    <publicCategory>[Public category]</publicCategory>
    <serverCategory>[Sever category]</serverCategory>
    <serverApplication>[Server application]</serverApplication>
    <serverType>[Default server type]</serverType>
    <cpuBit>[CPU bit number]</cpuBit>
    <sysvolSize>[System disk size]</sysvolSize>
    <maxCpuPerf>[Maximum CPU performance]</maxCpuPerf>
    <numOfMaxCpu>[Maximum number of CPUs]</numOfMaxCpu>
    <maxMemorySize>[Maximum memory size]</maxMemorySize>
    <numOfMaxDisk>[Maximum number of data disks]</numOfMaxDisk>
    <maxDiskSize>[Maximum data disk size]</maxDiskSize>
    <maxSysvolSize>[Maximum system disk size]</maxSysvolSize>
    <numOfMaxNic>[Maximum number of NICs]</numOfMaxNic>
    <initialPassword>[Initial password]</initialPassword>
    <icon>[Icon type]</icon>
    <virtualization>[Image type]</virtualization>
    <virtualizationMethod>[Virtualization method]</virtualizationMethod>
    <filterPool>[Filter string]</filterPool>
    <dataDiskFlag>[Data disk use]</dataDiskFlag>
    <vmType>[Virtual machine type]</vmType>
    <storeType>[Storage location type]</storeType>
```

```
    <relation>[Related software name]</relation>
    <adminUser>[Administrator user name]</adminUser>
    <rootPassword>[Root role password]</rootPassword>
    <softwares>
        <software>
            <id>[Software ID]</id>
            <order>[Display order]</order>
            <patches>
                <patch>
                    <id>[Patch ID]</id>
                    <locale>
                        <lcid>[Locale ID]</lcid>
                        <componentName>[Component name]</componentName>
                        <description>[Description]</description>
                    </locale>
                    ...
                </patch>
                ...
            </patches>
        </software>
        ...
    </softwares>
    <vdisks>
        <vdisk>
            <no>[Disk number]</no>
            <diskSize>[Disk capacity]</diskSize>
        </vdisk>
        ...
    </vdisks>
</image>
```

The following table shows descriptions of each of these items (tags), as well as their settings:
Modify image information files if necessary, by referring to the information in this table.
Tag cloning names in square brackets [ ] can be omitted.

Tag name	Format	Setting range	Mandatory	Description
id	string	0 to 32 characters	Optional	The cloning image ID. When image information is updated, cloning image ID to be updated is specified. When new image information is created, specify nothing.
name	string	Up to 85 characters	Yes	The name of image information is specified.
resourceId	string	1 to 256 characters	Yes	The resource ID. Specify the resource ID that was confirmed using the cfmg_listvmimage command.
imageName	string	1 to 32 characters	Yes	The cloning image name. Specify the cloning image ID that was confirmed using the cfmg_listvmimage command.
ownerOrg	string	Fixed value	Yes	The tenant name to which the cloning image belongs. The value is fixed as "cfmgadm".
ownerUser	string	Fixed value	Yes	The user ID of the user registering the cloning image. The value is fixed as "cfmgadm".
publicCategory	string	List	Yes	This item selects the cloning image category. Select one of the following options: - "PUBLIC": Show the cloning image to all users. - "PRIVATE": Show the cloning image to the owner (user)

Tag name	Format	Setting range	Mandatory	Description
				only. This can only be specified if the replication function is being used. It cannot be specified at template creation.
serverCategory	string	Fixed value	Yes	This item selects the category of the server included in the cloning image. The value is fixed as "GENERAL". The server is a generic server.
serverApplication	string	List	Yes	The usage of the server included in the cloning image. One or more of the following options can be selected: - "WEB": Web server - "AP": Application server - "DB": DB server If multiple options are specified, separate each option with a forward slash ("/"). Options can be specified in any order. (Example) WEB/AP, AP/WEB/DB, etc.
serverType	string	0 to 32 characters	Optional	The server type. If this cloning image has been used, specify the name of the L-Server template that is to be selected as the default from amongst the L-Server templates that have been set using Resource Management.
cpuBit	integer	List	Yes	The CPU bit count of the server included in the cloning image. Select one of the following options: - 32: 32 bit - 64: 64 bit
sysvolSize	decimal	In decimal notation, to one decimal place (0.1 to 99999.9)	Yes	The size of the system disk for the server to be deployed. Specify this value in GB. The value must be greater than the size of the system disk included in the cloning image.
[maxCpuPerf]	decimal	In decimal notation, to one decimal place (0.1 to 99999.9)	Yes	The maximum specifiable CPU performance for the server. Specify the maximum CPU performance in GHz that can be specified for the server in the [L-Platform Template] window. Do not specify if the server virtualization software is OVM for SPARC. The CPU performance cannot be specified and the limit cannot be imposed because the physical CPU performance will be that of the VM host.
[numOfMaxCpu]	integer	1 to 99	Yes	The maximum specifiable number of CPUs for the server. Specify a value up to the maximum number of CPUs that the user can specify in the [L-Platform Template] window.
[maxMemorySize]	decimal	In decimal notation, to one decimal place (0.1 to 99999.9)	Yes	Specify in GB the maximum memory size that can be specified for the server. If the server virtualization software is RHEL-KVM and memory hot plug is enabled in a VM-specific information definition file, ensure that you specify a value less than or equal to max_definable_memory_size.
numOfMaxDisk	integer	0 to 99	Yes	The maximum number of extension disks that can be added to the server. Specify a value up to the maximum number of disks that can be specified.

Tag name	Format	Setting range	Mandatory	Description
[maxDiskSize]	decimal	In decimal notation, to one decimal place (0.1 to 99999.9)	Yes	The maximum specifiable disk size for extension disks. Specify a value in GB, up to the maximum disk size that can be specified for extended disks.
[maxSysvolSize]	decimal	In decimal notation, to one decimal place (0.1 to 99999.9)	Yes	The maximum specifiable disk size for system disks. Specify a value in GB up to the maximum disk size that can be specified for system disks.
numOfMaxNic	integer	1 to 99	Yes	The maximum number of network interface cards (NICs) that can be added to the server. Specify a value up to the maximum number of NICs that can be specified.
initialPassword	string	Up to 85 characters	Optional	The initial password for the operating system. The automatically generated password can be set on Windows and Solaris if this is omitted. Specify the password for the following user. [Windows] Specified password is set to OS. If this setting is omitted, an automatically-generated password will be set in the OS. - When the server virtualization software is VMware or Hyper-V, the local administrator account password will be configured. - When the server virtualization software is RHEL-KVM, the local administrator account password will be configured. Windows Server 2008 R2 and Windows Server 2012 can be specified as the guest OS. For other OSs, please specify the same password as the one that has been set in the cloning image. - When the server virtualization software is OVM for x86 Specify the password for the local administrator account. When using Linux Manager or using Windows Manager and a cloning image where "OS setting" are disabled, the password specified here is not set in the OS. Please specify the same password set in the cloning image. Refer to "17.5.1 Collecting and Registering" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on "OS setting" when collecting cloning images. - When the server virtualization software is Citrix XenServer Specify the password for the local administrator account. When using Linux Manager or using Windows Manager and a cloning image where "OS setting" are disabled, the password specified here is not set in the OS. Please specify the same password set in the cloning image. Refer to "17.5.1 Collecting and Registering" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" for information on "OS setting" when collecting cloning images. [Linux]

Tag name	Format	Setting range	Mandatory	Description
				Specify the super user password. The password specified here is not set to OS. Please specify the same password as the one that has been set in the cloning image. [Solaris] - When the server virtualization software is Solaris zone Specify the superuser password. The specified password is set in the OS. If this setting is omitted, an automatically-generated password will be set in the OS. - When the server virtualization software is OVM for SPARC Specify a string of no more than 8 characters for the super user password. The specified password is set in the OS. If this setting is omitted, an automatically-generated password will be set in the OS. [Other] Specify the password for default users (such as the super user), that can log in. The password specified here is not set to OS. Please specify the same password as the one that has been set in the cloning image.
icon	string	List	Yes	The icon of the server included in the cloning image. Select an icon from the following list that corresponds to serverApplication: - unit_tag_web.png: WEB - unit_tag_ap.png: AP - unit_tag_db.png: DB - unit_tag_webap.png: WEB/AP - unit_tag_webdb.png: WEB/DB - unit_tag_apdb.png: AP/DB - unit_tag_webapdb.png: WEB/AP/DB - unit_tag_blank.png: Other
virtualization	string	List	Yes	The virtual or physical cloning image type. Select one of the following options: - "hvm": Virtual - "pv": Physical
[vitualizationMethod]	string	List	Optional	The cloning image virtualization type. Specify only if the server virtualization software is OVM for x86. Select one of the following options: - "pv": para virtualization - "hvm": full virtualization - "pvhvm": full virtualization + PV driver
[filterPool]	string	1 to 85 characters	Optional	The string for filtering the VM pool choices for the cloning image.
[dataDiskFlag]	string	List	Yes	Specify true if a data disk is included in the image. Select one of the following: - "true": Data disk exists - "false": Data disk absent If nothing was specified, the setting will be "false".
[vmType]	string	List	Yes	Specify the VM type for the image. Select one of the following:

Tag name	Format	Setting range	Mandatory	Description
				- "VMware": VMware - "Hyper-V": Hyper-V - "RHEL-Xen": RHEL-Xen - "RHEL-KVM": RHEL-KVM - "Solaris Containers": Solaris Zones - "Citrix-Xen": Citrix XenServer - "OVM-x86": OVM for x86 - "OVM-SPARC": OVM for SPARC
[storeType]	string	List	Yes	For RHEL-KVM images, specify the storage location type. Select one of the following: - "Virtual Disk": Virtual disk - "Raw Disk": Existing disk For RHEL-KVM images, if this is omitted, "Raw Disk" will be set by default. For images other than RHEL-KVM, all settings will be ignored.
[relation]	string	List	Yes	For Solaris zone images, specify a related software name. Select one of the following: - "BladeLogic": BladeLogic - "None": No related software
[adminUser]	string	1 to 8 characters	Yes	When using Solaris zones and a Solaris 11 image, specify an administrator name. It must be composed of alphanumeric characters, and start with an alphabetic character. When omitted or when "root" is specified, root is created as a user. When something other than "root" is specified, root is created as a role.
[rootPassword]	string	1 to 255 characters	Yes	When using Solaris zones and a Solaris 11 image, specify the Root role password. When something other than "root" is specified for the administrator, if this is omitted, an automatically-generated password will be set for the OS. When the administrator user is omitted or when "root" is specified, this setting is ignored even if it is specified.
softwares	-	-	No	The software installed on the server. This tag is required.
software	-	1 or more	No	Specify as many <software> tags as there are software programs installed on the server.
id	string	1 to 32 characters	Yes	The software ID of the software. Specify the software ID that was displayed in the registration results obtained using the cfmg_addsoft command or in the output results obtained using the cfmg_listsoft command.
order	integer	0 or more	Yes	The order in which software programs are displayed. Specify the software in order, starting from "0". Make sure that the operating system is listed first.
patches	-	-	No	Patch information for the software.
[patch]	-	0 or more	No	Specify as many <patch> tags as there are patches or updates that need to be applied. These tags are required only when patch information exists.

Tag name	Format	Setting range	Mandatory	Description
id	string	1 to 32 characters	Yes	Specify a patch ID for the patch, such as the update number. The same patch ID cannot be specified multiple times for one software ID.
locale	-	1 or more	No	Patch information for each locale.
lcid	string	Fixed value	Yes	The locale for patch information. Select one of the following: - "en": English - "zh": Chinese
componentName	string	Up to 85 characters	Optional	The name of the component to which the patch is applied. Specify an empty string if the patch specification does not include the concept of components. If patch information that matches all of the software ID, patch ID, and locale is already registered, it will be updated by information that is registered later.
description	string	Up to 85 characters	Optional	A description for the patch. If patch information that matches all of the software ID, patch ID, and locale is already registered, it will be updated by information that is registered later.
[vdisks]	-	-	No	Specify the data disk that is included in the image.
vdisk	-	1 or more	Yes	Specify for each of the data disks included in the image.
no	integer	1-99	Yes	Specify the number of the disk to be connected to the L-Server. Specify the same value as is output to the <no> tag with the cfmg_listvmimage command.
diskSize	decimal	In decimal notation, to one decimal place (0.1 to 99999.9)	Yes	Specify the size of the disk. Specify the same value as is output to the <diskSize> tag with the cfmg_listvmimage command.

The meanings of the symbols in the Mandatory column are as follows:
Yes: If a tag was specified, you must specify the value.
Optional: Value can be omitted.
No: A value setting is not required. Tag only specification.

15.20.3 Segment Information

This section explains the segment information in detail.

15.20.3.1 Overview of Segment Information

Network resource information is an XML document listing the configuration information for networks.
Create and register a separate segment information file for each segment.
Refer to "15.20.3.2 File Information Details" for information on an explanation of items (tags).
Infrastructure administrators must take this model into account when performing creation.
A model segment information file is stored in the following folder:

[Windows Manager]

```
Installation_folder\RCXCFMG\templates\networks\
```

[Linux Manager]

```
/opt/FJSVcfmg/templates/networks/
```

15.20.3.2 File Information Details

Segment information files use the following XML format:

```
<?xml version="1.0" encoding="UTF-8" ?>
<category version="2.0">
    <ownerOrg>[Owner (tenant)]</ownerOrg>
    <ownerUser>[Owner (user)]</ownerUser>
    <resourceId>[Resource ID]</resourceId>
    <type>[Network type]</type>
    <segmentType>[Segment type information]</segmentType>
</category>
```

The following table shows descriptions of each of these items (tags), as well as their settings:
Modify segment information files if necessary, by referring to the information in this table.

Tag name	Format	Setting range	Mandatory	Description
category	-	1 or more	No	
ownerOrg	string	Fixed value	Yes	The tenant name to which the network belongs. The value is fixed as "cfmgadm".
ownerUser	string	Fixed value	Yes	The user ID of the user registering the network. The value is fixed as "cfmgadm".
resourceId	string	1 to 32 characters	Yes	The resource ID. Specify the resource ID of the ROR network resource that was obtained using the cfmg_listvnet command.
type	string	List	Yes	The network type. Select one of the following options: - "MANAGEMENT": Management segment - "BUSINESS": Business segment
segmentType	string	1 to 32 characters	Optional	Specify an arbitrary string for identifying the segment (maximum of 32 ASCII characters, excluding <, >, &, ", and `).

The meanings of the symbols in the Mandatory column are as follows:
Yes: If a tag was specified, you must specify the value.
Optional: Value can be omitted.
No: A value setting is not required. Tag only specification.

15.20.4 Template Information

This section explains the template information in detail.

15.20.4.1 Overview of Template Information

Template information is defined in XML documents that list the configuration information for L-Platform templates.

Create and register one template information file for each L-Platform template.

Infrastructure administrators must take this model into account when performing creation.

A model template information file is stored in the following folder:

[Windows Manager]

```
Installation_folder\RCXCFMG\templates\templates\
The following models are stored:
    sample1.xml(Single server configuration)
```

```
    sample2.xml(Two-layer configuration)
    sample3.xml(Three-layer configuration)
```

[Linux Manager]

```
/opt/FJSVcfmg/templates/templates/
The following models are stored:
    sample1.xml(Single server configuration)
    sample2.xml(Two-layer configuration)
    sample3.xml(Three-layer configuration)
```

Refer to "15.20.4.2 File Information Details" for information on a description of items (tags).

The cloning image ID of the cloning image registered with Resource Management is entered for the cloning image ID in the template information.

15.20.4.2 File Information Details

Template information files use the following XML format:

```
<?xml version="1.0" encoding="UTF-8" ?>
<template version="1.1">
    <id>[Template ID]</id>
    <lcid>[Locale ID]</lcid>
    <name>[Template name]</name>
    <baseTemplateId>[Base template ID]</baseTemplateId>
    <ownerOrg>[Owner (tenant)]</ownerOrg>
    <ownerUser>[Owner (user)]</ownerUser>
    <publicCategory>[Public category]</publicCategory>
    <designSheetPath>[Path to the design sheet]</designSheetPath>
    <releaseDate>[Release date]</releaseDate>
    <numOfMaxVnet>[Maximum number of VNETs]</numOfMaxVnet>
    <numOfMaxVm>[Maximum number of VMs]</numOfMaxVm>
    <productId>[Model number]</productId>
    <description>[Description]</description>
    <keyword>[Search keyword]</keyword>
    <estimate>[Rough cost estimate]</estimate>
    <license>[License]</license>
    <support>[Support]</support>
    <vnets>
        <vnet>
            <id>[Network ID]</id>
            <name>[Name]</name>
            <numOfMaxVm>[Maximum number of VMs]</numOfMaxVm>
            <resourceId>[Network resource ID]</resourceId>
            <category>[Network type]</category>
            <segmentType>[Segment type information]</segmentType>
            <order>[Display order]</order>
        </vnet>
        ...
    </vnets>
    <numOfGip>[Number of global IP addresses]</numOfGip>
    <numOfMaxGip>[Maximum number of global IP addresses]</numOfMaxGip>
    <connector>[Connection destination]</connector>
    <slbDesignType>[UI type of SLB]</slbDesignType>
    <lnetdevs>
        <lnetdev>
            <name>[LNetDev name]</name>
            <type>[LNetDev type]</type>
            <lnetdevIfs>
                <lnetdevIf>
                    <name>[Interface name]</name>
                    <networkId>[Network ID]</networkId>
                </lnetdevIf>
```

```
            ...
        </lnetdevIfs>
        <ruleset>
            <name>[Ruleset name]</name>
            <designtype>[UI type]</designtype>
            <lplatformModel>[L-Platform model]</lplatformModel>
            <description>[Ruleset description]</description>
            <deviceModel>[Device model]</deviceModel>
            <parameters>
                <parameter>
                    <name>[Parameter name]</name>
                    <label>[Display name]</label>
                    <segmentlabel>[Segment display name]</segmentlabel>
                    <serverlabel>[Server display name]</serverlabel>
                    <view>[Display flag]</view>
                    <required>[Flag indicating whether parameter is required]</required>
                    <syntax>[Syntax]</syntax>
                    <value>[Parameter value]</value>
                    <summary>[Parameter summary]</summary>
                    <description>[Parameter description]</description>
                </parameter>
                ...
            </parameters>
            <parameterGroups>
                <parameterGroup>
                    <name>[Parameter group name]</name>
                    <id>[Parameter group ID]</id>
                    <parameters>
                        <parameter>
                            <name>[Parameter name]</name>
                            <label>[Display name]</label>
                            <view>[Display flag]</view>
                            <value>[Parameter value]</value>
                            <description>[Parameter description]</description>
                        </parameter>
                        ...
                    </parameters>
                    <parameterSecondGroups>
                        <parameterSecondGroup>
                            <name>[Parameter group name]</name>
                            <id>[Parameter group ID]</id>
                            <parameters>
                                <parameter>
                                    <name>[Parameter name]</name>
                                    <label>[Display name]</label>
                                    <view>[Display flag]</view>
                                    <value>[Parameter value]</value>
                                    <description>[Parameter description]</description>
                                </parameter>
                                ...
                            </parameters>
                        </parameterSecondGroup>
                        ...
                    </parameterSecondGroups>
                </parameterGroup>
                ...
            </parameterGroups>
        </ruleset>
    </lnetdev>
</lnetdevs>
<servers>
    <server>
        <no>[Server serial number]</no>
```

```
            <imageId>[Cloning image ID]</imageId>
            <name>[Server name]</name>
            <serverType>[Server type]</serverType>
            <pool>[Deployment destination pool resource name]</pool>
            <sparePool>[Spare pool resource name]</sparePool>
            <storagePool>[Storage pool resource name]</storagePool>
            <diskResourceId>[Disk resource ID]</diskResourceId>
            <diskResourceName>[Disk resource name]</diskResourceName>
            <powerPriority>[Startup priority level]</powerPriority>
            <useDataDisk>[Data disk use]</useDataDisk>
            <nicgroups>
                <management>[Control NIC]</management>
                <nicgroup>
                    <index>[NIC group index]</index>
                    <networkId>[Connection destination network ID]</networkId>
                </nicgroup>
                ...
            </nicgroups>
            <vnics>
                <management>[Control NIC]</management>
                <vnic>
                    <no>[NIC serial number]</no>
                    <networkId>[Connection destination network ID]</networkId>
                    <group>[NIC group index]</group>
                </vnic>
                ...
            </vnics>
            <vdisks>
                <vdisk>
                    <no>[Disk serial number]</no>
                    <diskSize>[Disk capacity]</diskSize>
                    <resourceId>[Resource ID]</resourceId>
                    <resourceName>[Disk resource name]</resourceName>
                    <storagePool>[Storage pool resource name]</storagePool>
                    <contained>[Disk contained in image]</contained>
                </vdisk>
                ...
            </vdisks>
        </server>
        ...
    </servers>
</template>
```

The following table shows descriptions of each of these items (tags), as well as their settings:

Modify template information files if necessary, by referring to the information in this table.

Tag names in square brackets [ ] can be omitted.

Tag name	Format	Setting range	Mandatory	Description
[id]	string	0 to 32 characters	No	The ID assigned to the template. If this template ID is omitted, one is automatically assigned.
[lcid]	string	Fixed value	Yes	The locale for the software information. Select one of the following: - "en": English - "zh": Chinese
[name]	string	Up to 85 characters	Optional	The template name. The template name specified here is used for the default system name for the L-Platform system.

Tag name	Format	Setting range	Mandatory	Description
				For the system name, the characters that can be used and the length of the name vary depending on the method for setting resource names. It is recommended that template names be specified within the following range, which is effective for any method for setting resource names: - Names containing no more than 23 alphanumeric characters, underscores ("_") and hyphens ("-") Refer to "9.5 Setting the Method for Setting Resource Names" in the "Setup Guide CE" for information on the method for setting resource names.
baseTemplateId	-	-	No	The name of the base template.
ownerOrg	string	Fixed value	Yes	The tenant name to which the template belongs. The value is fixed as "cfmgadm".
ownerUser	string	Fixed value	Yes	The user ID of the user registering the template. The value is fixed as "cfmgadm".
publicCategory	string	Fixed value	Yes	The category of the template. The value is fixed as "PUBLIC". The template is available to all users.
designSheetPath	-	-	No	The storage folder for the design sheet.
releaseDate	string	0 to 10 characters	Optional	The date when the template is made available. The format is "yyyy/mm/dd".
numOfMaxVnet	integer	1 to 99	Yes	The maximum number of segments that can be used by the system in the template.
numOfMaxVm	integer	0 to 30	Yes	The maximum number of servers that can be used by the template's system.
productId	-	-	No	The product ID of the template that will be used for billing purposes.
description	string	Up to 85 characters	Optional	Enter template descriptions, including information about the system that the template produces and the contents of the template.
keyword	string	Up to 85 characters	Optional	The search keyword for the template. The template search function finds templates that use this keyword. Case is not distinguished for half-width and full-width alphanumerics.
estimate	decimal	Fixed value	Yes	The price of the template. The value is fixed as "0".
license	string	List	Yes	Specifies whether a license has been assigned to the template. Select one of the following options: - "0": No license assigned - "1": License assigned
support	string	List	Yes	Specifies whether support has been assigned to the template. Select one of the following options:

Tag name	Format	Setting range	Mandatory	Description
				- "0": No support assigned - "1": Support assigned
vnets	-	-	No	The details of the system segments.
vnet	-	0 or more	No	As many segment information files as there are segments.
id	string	1 to 20 characters	Yes	The ID that identifies the segments within the template. Specify any ID within the template. Specify the value specified in this designated value, in the vnic networkID.
name	string	0 to 20 characters	Optional	The segment name.
numOfMaxVm	integer	0 to 30	Yes	The maximum number of servers that can be added to the segment and used.
[resourceId]	string	1 to 256 characters	Yes	The resource ID of the virtual network assigned to the segment. Confirm the resource ID using the cfmg_listvnet command. If omitted, the selection is automatic. To omit this, also omit the tag.
[category]	string	1 to 10 characters	Yes	The segment type for filtering the network resources that can be selected. Select one of the following options: - "BUSINESS": Business segment - "MANAGEMENT": Management segment If this is omitted, "BUSINESS" will be used. To omit this, also omit the tag.
[segmentType]	string	1 to 32 characters	Yes	The segment type information for filtering the network resources that can be selected. If this is omitted, no filtering will be performed. To omit this, also omit the tag.
[order]	integer	0 or more	Yes	The order for displaying the segments. Smaller numbers are displayed earlier in the order. When you specify the same value as other segments, there is no guaranteed order for display amongst those segments with the same value. If this is not specified, the order is automatically determined with a number starting at 0 set in the order in the XML file.
[numOfGip]	integer	0 or more	Yes	Specify the default value for the number of global IP addresses assigned during creation of a new L-Platform. When this setting is omitted or "0" is specified, no global IP address is assigned. Specify this element only if you specified LNetDev of a firewall and you specified "Simple" for "designtype" of the ruleset.
[numOfMaxGip]	integer	1 or more	Yes	Specify the upper limit value for the number of global IP addresses which can be specified by the L-Platform user.

Tag name	Format	Setting range	Mandatory	Description
				When omitted, no limit is set. Specify this element only if you specified LNetDev of a firewall and you specified "Simple" for "designtype" of the ruleset.
[connector]	string	List	Yes	Specify the connection destination for the external LAN. Select one of the following: - "internet": Internet - "intranet": Intranet - "both": Both - "none": No connection Specify this tag only if you specified LNetDev and you specified "Simple" for "designtype" of the ruleset.
[slbDesignType]	string	List	Yes	Specify the type of user interface for the server load balancer. Select one of the following: - "UserCustomize": User-customized - "Simple": Simple setup When omitted, it is assumed that "UserCustomize" is specified.
[lnetdevs]	-	-	No	The system LNetDevs.
lnetdev	-	1 or more	No	Specify as many <lnetdev> tags as there are LNetDevs.
name	string	1 to 32 characters	Yes	The LNetDev name.
type	string	List	Yes	The LNetDev type. Select one of the following: - "Firewall": Firewall - "SLB": Server load balancer
lnetdevIfs	-	-	No	The LNetDev virtual interface definition.
lnetdevIf	-	1 or more	No	Specify as many <lnetdevlf> tags as there are virtual interfaces.
name	string	1 character or more	Yes	The name of the network ID parameter corresponding to the LNetDev virtual interface.
networkId	string	1 to 20 characters	Yes	The corresponding VNET segment ID.
ruleset	-	-	No	The ruleset.
name	string	1 to 32 characters	Yes	The ruleset name.
[designtype]	string	List	Yes	Specify the type of the user interface. Select one of the following: - "UserCustomize": User-customized - "Simple": Simple setup Specify the same value as was set in the ruleset.
lplatformModel	integer	List	Yes	Specify the L-Platform model. Select one of the following: - 1: Firewall only - 2: Server load balancer only - 3: Firewall and server load balancer

Tag name	Format	Setting range	Mandatory	Description
description	string	1 to 256 characters	Optional	The ruleset description.
[deviceModel]	string	List	Yes	Specify the network device model corresponding to the setup window. Select one of the following: - "NSAppliance": NS appliance Specify the same value as was set in the ruleset.
parameters	-	-	No	The ruleset parameters.
parameter	-	1 or more	No	Specify as many <parameter> tags as there are parameters.
name	string	1 character or more	Yes	The parameter name.
label	string	0 to 32 characters	Optional	The parameter name to be displayed on the GUI.
segmentlabel	string	0 to 32 characters	Optional	Specify the segment name displayed in the GUI.
serverlabel	string	0 to 32 characters	Optional	Specify the server name displayed in the GUI.
view	string	List	Yes	The parameter display flag. Select one of the following options: - "true": Display - "false": No display
[required]	string	List	Yes	Specify whether the parameter is required. Select one of the following options: - "true": Required - "false": Optional If omitted, "false" will be used.
[syntax]	string	List	Yes	Specify the parameter syntax. Select one of the following: - "INTEGER(0..255)": integer Specify the range of values with "minimum value...maximum value" format - "DisplayString (SIZE (0...256))": string Specify the minimum number of characters and the maximum number of characters with SIZE (0 to 256) - "DisplayString(SELECT("AA" | "BB" | "CC"))": string Select a SELECT string (AA, BB, and CC are arbitrary strings) - "Physical Address": Media Access Control address Media Access Control address format (xx:xx:xx:xx:xx:xx) - "IpAddress": IP address IPv4 address format (xxx.xxx.xxx.xxx) or IPv6 address format (xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx) - DisplayString (SELECT IPADDRESS("SegA"|"SegB"|"SegC")): Select server (IP address) from target segments

Tag name	Format	Setting range	Mandatory	Description
				- DisplayString (SELECT IPADDRESS SLB SERVER()): Select server (IP address) from target SLB servers
value	string	1 character or more	Yes	The parameter value.
summary	string	0 to 256 characters	Optional	Specify a summary for the parameter.
description	string	0 to 256 characters	Optional	The parameter description.
[parameterGroups]	-	-	No	Specify the parameter groups of the ruleset. Specify only when parameter groups have been set in the ruleset.
parameterGroup	-	1 or more	No	Specify as many <parameterGroup> tags as there are parameter groups.
name	string	1 character or more	Yes	Specify the parameter group name. Specify the same value as was set in the ruleset.
id	integer	Fixed value	Yes	Specify the identifier information to be assigned to the parameter group name. The value is fixed as "0".
parameters	-	-	No	Specify the parameters within the parameter group.
parameter	-	1 or more	No	Specify as many <parameter> tags as there are parameters.
name	string	1 character or more	Yes	Specify the parameter name. Specify the same value as was set in the ruleset.
label	string	0 to 32 characters	Optional	Specify the parameter name to be displayed on the GUI. This tag will be ignored even if specified. Specify a space.
view	String	Fixed value	Yes	Specify the parameter display flag. The value is fixed as "true".
value	String	1 character or more	Yes	Specify the parameter value.
description	String	0 to 256 characters	Optional	Specify the parameter description. This tag will be ignored even if specified. Specify a space.
[parameterSecondGroups]	-	-	No	Specify the second parameter group of the ruleset. Specify only when parameter groups have been set in the ruleset.
parameterSecondGroup	-	1 or more	No	Specify as many <parameterSecondGroup> elements as there are second parameter groups.
name	String	1 character or more	Yes	Specify the name of the second parameter group. Specify the same value as was set in the ruleset.
id	integer	Fixed value	Yes	Specify the identifier information to be assigned to the parameter group name. The value is fixed as "0".

Tag name	Format	Setting range	Mandatory	Description
parameters	-	-	No	Specify the parameters within the parameter group.
parameter	-	1 or more	No	Specify as many <parameter> tags as there are parameters.
name	string	1 character or more	Yes	Specify the parameter name. Specify the same value as was set in the ruleset.
label	string	0 - 32 characters	Optional	Specify the parameter name to be displayed on the GUI. This element will be ignored even if specified. Specify a space.
view	string	Fixed value	Yes	Specify the parameter display flag. The value is fixed as "true".
value	string	1 character or more	Yes	Specify the parameter value.
description	string	0 - 256 characters	Optional	Specify the parameter description. This element will be ignored even if specified. Specify a space.
servers	-	-	No	Specify the server.
server	-	0 or more	No	Server information for the number of servers that exist.
no	integer	0 to 29	Yes	This item specifies a serial number for the server that is unique within the template.
imageId	string	1 to 32 characters	Yes	The image ID of an image to be deployed on the server. It is necessary to register the image information in advance and check the image ID.
[useDataDisk]	string	List	Yes	Specify true if a data disk is included in the image. Select one of the following values: - "true": Data disk used - "false": Data disk not used If nothing was specified, the setting will be "false".
name	string	Up to 85 characters	Yes	The name of the server. This is a name that is used to distinguish servers within the template, and is not the host name.
serverType	string	1 to 32 characters	Yes	The name of the L-Server template to be selected as the default template from amongst the L-Server templates that have been set up using Resource Management. Specify the same value as was specified in the image information file.
[pool]	string	1 character or more	Yes	The resource name (resource name in Resource Management) of the deployment destination pool of the server. Specify the resource name of the VM pool for virtual, and of the server pool for physical. Specify resource names starting with a forward slash "/". (Example) /vmPool_2 If this is omitted, the first pool registered with

Tag name	Format	Setting range	Mandatory	Description
				Resource Management will be selected. This can also be modified during deployment.
[sparePool]	string	1 character or more	Yes	The resource name (resource name in Resource Management) of the spare server pool for when a physical server fails.
[storagePool]	string	1 character or more	Yes	The resource name (resource name in Resource Management) of the storage pool at the server deployment destination. Specify resource names starting with a forward slash "/". (Example) /StoragePool_2 If omitted, the first storage pool registered with Resource Management will be selected. This can also be modified during deployment. Cannot be specified when the server virtualization software is OVM for x86. The storage pool is selected automatically.
[diskResourceId]	string	1 to 256 characters	Yes	Specify the resource ID of an existing disk when directly specifying an existing disk as the system disk. This can only be specified if the server virtualization software is RHEL-KVM or OVM for SPARC.
[diskResourceName]	string	1 to 32 characters	Yes	Specify the resource name of an existing disk when directly specifying an existing disk as the system disk. This can only be specified if the server virtualization software is RHEL-KVM or OVM for OVM for SPARC. This must be specified if diskResourceId was specified.
[powerPriority]	integer	1 to 256	Yes	This setting indicates the priority level when performing batch power supply operations within either the L-Platform or within the tenant. The smaller the value, the higher the priority level. When omitted, the value is set to 128.
[nicgroups]	-	-	No	The redundant network interface card (NIC) groups.
[management]	integer	1 or more	Yes	The index of the NIC group to be specified in the control NIC. This is mandatory if "management" under "vnics" has been omitted. "management" cannot be set in both "nicgroup" and "vnics".
nicgroup	-	-	No	Specify as many <nicgroup> tags as there are redundant network interface card (NIC) groups. A nicgroup without an NIC cannot be defined.
index	integer	1 to 99	Yes	A number for the NIC group that is unique within the server.

Tag name	Format	Setting range	Mandatory	Description
networkId	string	1 to 20 characters	Yes	The network ID of the segment to which the NIC group is to connect.
vnics	-	-	No	The network interface card (NIC).
[management]	integer	1 or more	Yes	The NIC number specified in the control NIC. Specify the value specified in <no> under <vnic>. When <nicgroups> is specified, this item is mandatory in the case of omitting <management> under <nicgroups>. One of the NIC/NIC Groups defined in either <nicgroup> or <vnic> must be specified. It is not possible to specify a NIC whose <group> is specified. It is not possible to assign management settings to both <nicgroup> and <vnics>.
[vnic]	-	1 or more	No	As many <vnic> tags as there are NICs.
no	integer	1 to 99	Yes	This item specifies a serial number for the NIC that is unique within the server.
networkId	string	1 to 20 characters	Yes	The segment ID for the segment that the NIC connects to. Specify the value that was specified in the vnet id.
[group]	integer	1 to 99	Yes	If grouping is performed for this NIC, the index number of the NIC group (value of "index" in "nicgroup"). If this is omitted, no grouping will be performed.
vdisks	-	-	No	The extension disk for the server.
[vdisk]	-	0 or more	No	As many <vdisk> tags as there are disks. These tags are required only when extension disks exist. - If the server virtualization software is Hyper-V, specify up to three. - If the server virtualization software is OVM for SPARC, only existing disks can be specified. - Cannot be specified if the server virtualization software is Solaris Zones, and the server is managed by BladeLogic.
[no]	integer	1 or more	Yes	A serial number for the disk that is unique within the server. If it is a data disk that is included in the image, specify the same value as is output to the <no> tag with the cfmg_listvmimage command.
[diskSize]	decimal	In decimal notation, to one decimal place (0.1 to 99999.9)	Yes	The size of the disk. Specify this value in GB. If it is a data disk that is included in the image, specify the same value as is output to the <diskSize> tag with the cfmg_listvmimage command.
[resourceId]	string	1 to 256 characters	Yes	The resource ID of an existing disk if an existing disk is to be connected.

Tag name	Format	Setting range	Mandatory	Description
				Make sure to specify it when the server virtualization software is OVM for SPARC.
[resouceName]	string	1 to 32 characters	Yes	The disk resource name of an existing disk if an existing disk is to be connected. Make sure to specify it when the server virtualization software is OVM for SPARC.
[storagePool]	string	1 character or more	Yes	The resource name (resource name in Resource Management) of the storage pool at the extension disk deployment destination. Specify resource names starting with a forward slash "/". (Example)/StoragePool_2 Cannot be specified when the server virtualization software is OVM for x86. The storage pool is selected automatically.
[contained]	string	List	Yes	Specify true if the data disk is included in the image. Select one of the following values: - "true": Disk contained in image - "false": New disk If nothing was specified, the setting will be "false".

The meanings of the symbols in the Mandatory column are as follows:
Yes: If a tag was specified, you must specify the value.
Optional: Value can be omitted.
No: A value setting is not required. Tag only specification.

Appendix A GUI/CLI

This appendix provides references for operation using the GUI/CLI based on functions.

Table A.1 L-Server

Function	Operations	
	GUI	CLI
Creating an L-Server	"16.1 Creation Using an L-Server Template" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" create
Deleting an L-Server	"17.4 Deleting" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" delete
Modifying basic information	"17.2.2 Modifying the Basic Information" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" modify
Modifying specifications	"17.2.1 Modifying Specifications" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" modify
Viewing lists	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource List] tab in the orchestration tree. Displays only an L-Server in the selected resource folder, when a resource folder is selected.	"3.6 rcxadm lserver" list
Viewing detailed information	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource Details] tab in the orchestration tree.	"3.6 rcxadm lserver" show
Attaching or detaching disks	"17.2.3 Attaching and Detaching Disks" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" attach "3.6 rcxadm lserver" detach
Increasing disk capacity	-	"3.6 rcxadm lserver" modify
Starting an L-Server	"17.1.1 Starting an L-Server" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" start
Stopping an L-Server	"17.1.2 Stopping an L-Server" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" stop
Restarting an L-Server	"17.1.3 Restarting an L-Server" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" restart
Migration of L-Servers between servers	"17.7 Migration between VM Hosts" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.6 rcxadm lserver" migrate
Snapshot collection (Virtual servers only)	"17.6.1 Snapshot" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"4.1 rcxadm image" snapshot

Function	Operations	
	GUI	CLI
Snapshot restoration (Virtual servers only)	"17.6.1 Snapshot" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"4.1 rcxadm image" restore
Snapshot deletion (Virtual servers only)	"17.6.1 Snapshot" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"4.1 rcxadm image" delete
System image backup (Physical servers)	"17.6.2 Backup and Restore" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"4.1 rcxadm image" backup
System image restoration (Physical servers)	"17.6.2 Backup and Restore" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"4.1 rcxadm image" restore
Changing physical server usage	"17.9 Changing Physical Server Usage" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" **When only the configuration definition is created** - Settings "16.1 Creation Using an L-Server Template" or "16.2.1 [General] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" - Operations "17.1.1 Starting an L-Server" and "17.1.2 Stopping an L-Server" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" **When resources are already allocated** - Settings - First L-Server "16.1 Creation Using an L-Server Template" or "16.2.1 [General] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" - Modifications "16.1 Creation Using an L-Server Template" or "16.2.1 [General] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" "17.1.2 Stopping an L-Server" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" - Operations "17.1.1 Starting an L-Server" and "17.1.2 Stopping an L-Server" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	**When only the configuration definition is created** - Settings "3.6 rcxadm lserver" create - Operations "3.6 rcxadm lserver" start "3.6 rcxadm lserver" stop **When resources are already allocated** - Settings - First L-Server "3.6 rcxadm lserver" create - Modifications "3.6 rcxadm lserver" create "3.6 rcxadm lserver" stop - Operations "3.6 rcxadm lserver" start "3.6 rcxadm lserver" stop

Function	Operations	
	GUI	CLI
Server redundancy (HA) (Server switchover for physical servers)	"16.2.2 [Server] Tab" or "16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"15.2 L-Server Template" and "15.3 L-Servers"
Positioning (Virtual servers only)	"16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"15.2 L-Server Template" and "15.3 L-Servers"
Exclusion (Virtual servers only)	"16.3.2 [Server] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"15.3 L-Servers"
Collecting cloning images	"17.5.1 Collecting and Registering" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"4.1 rcxadm image" create
Deleting cloning images	"17.5.4 Deleting" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"4.1 rcxadm image" delete
Viewing cloning images	"17.5.2 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"4.1 rcxadm image" list

Table A.2 Resource Pool

Function	Operations	
	GUI	CLI
Creating resource pools	"Chapter 20 Resource Pool Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.10 rcxadm pool" create
Viewing lists	"20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource List] tab.	"3.10 rcxadm pool" list
Viewing detailed information	"20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource Details] tab.	"3.10 rcxadm pool" show
Registering resources	"Chapter 19 Resource Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.10 rcxadm pool" register
Releasing resource registration	"Chapter 19 Resource Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.10 rcxadm pool" unregister
Modifying - Name - Label - Comment - Priority	"Chapter 20 Resource Pool Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.10 rcxadm pool" modify
Moving resource pools	"Chapter 20 Resource Pool Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.10 rcxadm pool" move

Function	Operations	
	GUI	CLI
Deleting resource pools	"Chapter 20 Resource Pool Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.10 rcxadm pool" delete
Viewing available pools	"20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Available Pool] tab.	The same type of information can be obtained by combining commands. - Resource pool list "3.10 rcxadm pool" list - Resource lists under resource pools "3.10 rcxadm pool" list -name *name*
Max. number of possible L-Servers View	"20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.10 rcxadm pool" list -name *name* -template *template_name*

Table A.3 Resource Folder

Function	Operations	
	GUI	CLI
Creating resource folders	"21.2 Creating" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.5 rcxadm folder" create
Viewing lists	"21.3 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource List] tab.	"3.5 rcxadm folder" list
Viewing detailed information	"21.3 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource Details] tab.	"3.5 rcxadm folder" show
Modifying - Name - Label - Comment - Priority	"21.4 Modifying Basic Information" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.5 rcxadm folder" modify
Moving resource folders	"21.6 Moving" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.5 rcxadm folder" move
Deleting resource folders	"21.5 Deleting" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.5 rcxadm folder" delete

Table A.4 Physical Storage Unit Resources

Function	Operations	
	GUI	CLI
Viewing lists	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource List] tab in the storage tree.	"3.13 rcxadm storage" list

Function	Operations	
	GUI	CLI
Viewing detailed information	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource Details] tab in the storage tree.	"3.13 rcxadm storage" show
Modifying - Label - Comment	"7.10.2 Changing Storage Unit Basic Information" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.13 rcxadm storage" modify

-: Not supported

Table A.5 Virtual Storage Resources (RAID Groups, Aggregates, and VMFS)

Function	Operations	
	GUI	CLI
Creating resources	-	-
Viewing lists	Operate using the [Resource List] tab explained in "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE", or the [Resource List] tab of the storage tree.	"3.15 rcxadm vstorage" list
Viewing detailed information	Operate using the [Resource Details] tab explained in "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE", or the [Resource Details] tab of the storage tree.	"3.15 rcxadm vstorage" show
Moving virtual storage resources to specified resource pools	"Chapter 19 Resource Operations" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.15 rcxadm vstorage" move
Modifying - Label - Comment	"7.10.3 Changing Virtual Storage Resource Basic Information" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.15 rcxadm vstorage" modify

-: Not supported

Table A.6 Disk Resources (LUN, FlexVol, Virtual disks)

Function	Operations	
	GUI	CLI
Creating resources	-	-
Viewing lists	Operate using the [Resource List] tab explained in "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE", or the [Resource List] tab of the storage tree.	"3.3 rcxadm disk" list
Viewing detailed information	Operate using the [Resource Details] tab explained in "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE", or the [Resource Details] tab of the storage tree.	"3.3 rcxadm disk" show

Function	Operations	
	GUI	CLI
Modifying - Label - Comment	"7.10.4 Changing Disk Resource Basic Information" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.3 rcxadm disk" modify
Deleting disk resources	-	-

-: Not supported

Table A.7 Storage Management Software

Function	Operations	
	GUI	CLI
Registration	-	"5.17 rcxadm storagemgr" register
Viewing lists	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource List] tab in the storage tree.	"5.17 rcxadm storagemgr" list
Viewing detailed information	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource Details] tab in the storage tree.	"5.17 rcxadm storagemgr" show
Unregistration	-	"5.17 rcxadm storagemgr" unregister
Modifying - Label - Comment	"7.10.1 Changing Storage Management Software Basic Information" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"5.17 rcxadm storagemgr" modify
Modifying - IP address - Port number - User name - Password	-	"5.17 rcxadm storagemgr" modify

-: Not supported

Table A.8 VM Management Software

Function	Operations	
	GUI	CLI
Registration	"5.2 Registering VM Management Software" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	-
Viewing lists	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"5.18 rcxadm vmmgr" list

Function	Operations	
	GUI	CLI
	Operate using the [Resource List] tab in the management software tree.	
Viewing detailed information	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource Details] tab in the management software tree.	"5.18 rcxadm vmmgr" show
Deleting VM management software	"9.6 Deleting VM Management Software" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	-
Modifying - Positioning - IP address - User name - Password	"7.7 Changing VM Management Software Settings" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	-

-: Not supported

Table A.9 Network Resources

Function	Operations	
	GUI	CLI
Creating and registering resources in resource pools	"14.3 Network Resources" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.9 rcxadm network" create
Viewing lists	Operate using the [Resource List] tab explained in "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.9 rcxadm network" list
Viewing detailed information	Operate using the [Resource Details] tab explained in "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.9 rcxadm network" show
Moving network resources to specified resource pools	"19.3 Moving" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.9 rcxadm network" move
Deleting network resources	"19.5 Deleting" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.9 rcxadm network" delete

Table A.10 Address Set Resources

Function	Operations	
	GUI	CLI
Creating and registering resources in resource pools	-	"3.1 rcxadm addrset" create
Viewing lists	Operate using the [Resource List] tab explained in "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.1 rcxadm addrset" list

Function	Operations	
	GUI	CLI
Viewing detailed information	Operate using the [Resource Details] tab explained in "20.6 Viewing" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.1 rcxadm addrset" show
Moving address pools to specified resource folders	"19.3 Moving" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.1 rcxadm addrset" move
Deleting address set resources	"19.5 Deleting" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.1 rcxadm addrset" delete

-: Not supported

Table A.11 User Accounts

Function	Operations	
	GUI	CLI
Registration	"3.1 Registering User Accounts" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"7.1 rcxadm user" create
Viewing lists	"3.2 Viewing a User Account" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"7.1 rcxadm user" list
Viewing detailed information	"3.2 Viewing a User Account" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"7.1 rcxadm user" show
Modifying - User ID (*) - Label - Comment - User groups - Password - Operations and access scope	"3.3 Modifying a User Account" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"7.1 rcxadm user" modify
Deleting user accounts	"3.4 Deleting a User Account" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"7.1 rcxadm user" delete

* Note: This can only be changed for Basic mode.

Table A.12 User Groups

Function	Operations	
	GUI	CLI
Creating user groups	- (*)	"7.2 rcxadm usergroup" create
Viewing lists	- (*)	"7.2 rcxadm usergroup" list
Viewing detailed information	- (*)	"7.2 rcxadm usergroup" show
Modifying - User ID	- (*)	"7.2 rcxadm usergroup" modify

Function	Operations	
	GUI	CLI
- Label - Comment - User groups - Password - Operations and access scope		
Deleting user groups	- (*)	"7.2 rcxadm usergroup" delete

* Note: This function is only available for Basic mode.

Table A.13 L-Server Templates

Function	Operations	
	GUI	CLI
Import	"15.1.7 Import" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"8.1 rcxadm template" import
Edit	"15.1.3 Modifying" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	-
Export	"15.1.6 Export" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"8.1 rcxadm template" export
Deleting L-Server templates	"15.1.5 Deleting" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"8.1 rcxadm template" delete
Modifying - Name - Label - Comment	-	"8.1 rcxadm template" modify
Viewing lists	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Template List] tab in the orchestration tree.	"8.1 rcxadm template" list
Viewing detailed information	-	"8.1 rcxadm template" show

-: Not supported

Table A.14 Directory Service Operations for User Authentication

Function	Operations	
	GUI	CLI
Registration	-	"5.4 rcxadm authctl" register
Changing directory service connection information	-	"5.4 rcxadm authctl" modify
Viewing detailed information	-	"5.4 rcxadm authctl" show

Function	Operations	
	GUI	CLI
Unregistration	-	"5.4 rcxadm authctl" unregister
Migrating the information from a directory service on upgrade	-	"5.4 rcxadm authctl" export

-: Not supported

Table A.15 Server NIC Definitions

Function	Operations	
	GUI	CLI
Viewing lists	-	"5.15 rcxadm nicdefctl" list
Viewing detailed information	-	"5.15 rcxadm nicdefctl" show
Reflecting server NIC definitions	-	"5.15 rcxadm nicdefctl" commit

-: Not supported

Table A.16 Network Devices

Function	Operations	
	GUI	CLI
Creating network devices	-	"3.8 rcxadm netdevice" create
Viewing lists	Operate using the [Resource List] tab explained in "A.6 [Resource List] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.8 rcxadm netdevice" list
Viewing detailed information	Operate using the [Resource Details] tab explained in "A.7 [Resource Details] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.8 rcxadm netdevice" show
Modifying basic information	-	"3.8 rcxadm netdevice" modify
Deleting network devices	"9.4.2 Deleting Network Devices" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.8 rcxadm netdevice" delete
Maintenance mode settings	"22.1 Switchover of Maintenance Mode" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"3.8 rcxadm netdevice" set
Setting of auto-configuration availability	-	"3.8 rcxadm netdevice" set
Import	-	"3.7 rcxadm netconfig" import
Export	-	"3.7 rcxadm netconfig" export
Backing up of network device files	-	"3.8 rcxadm netdevice" cfbackup
Restoring of network device files	-	"3.8 rcxadm netdevice" cfrestore

Function	Operations	
	GUI	CLI
Viewing the list of backed up network device files	-	"3.8 rcxadm netdevice" cflist
Export of network device files	-	"3.8 rcxadm netdevice" cfexport
Modifying comments of network device files	-	"3.8 rcxadm netdevice" cfmodify
Deleting backup error history	-	"3.8 rcxadm netdevice" cfclearerr

-: Not supported

Table A.17 Firewall

Function	Operations	
	GUI	CLI
Viewing lists	Operate using the [Resource List] tab explained in "A. 6 [Resource List] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.4 rcxadm firewall" list
Viewing detailed information	Operate using the [Resource Details] tab explained in "A.7 [Resource Details] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.4 rcxadm firewall" show
Viewing ruleset detailed information	Operate using the [Resource Details] tab explained in "A.7 [Resource Details] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	-

-: Not supported

Table A.18 Server Load Balancers

Function	Operations	
	GUI	CLI
Viewing lists	Operate using the [Resource List] tab explained in "A. 6 [Resource List] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.12 rcxadm slb" list
Viewing detailed information	Operate using the [Resource Details] tab explained in "A.7 [Resource Details] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	"3.12 rcxadm slb" show
Viewing ruleset detailed information	Operate using the [Resource Details] tab explained in "A.7 [Resource Details] Tab" in the "User's Guide for Infrastructure Administrators (Resource Management) CE".	-
Operations	-	"3.12 rcxadm slb" operate

-: Not supported

Table A.19 External Servers

Function	Operations	
	GUI	CLI
Viewing detailed information	-	"3.17 rcxadm filesrvctl" show

-: Not supported

Table A.20 Server Management Software

Function	Operations	
	GUI	CLI
Registration	"5.12 Registering BMC BladeLogic Server Automation" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"5.16 rcxadm servermgr" register
Deleting server management software	"9.9 Deleting BMC BladeLogic Server Automation" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"5.16 rcxadm servermgr" unregister
Modifying basic information	"7.11 Changing BMC BladeLogic Server Automation Settings" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"5.16 rcxadm servermgr" modify
Viewing lists	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource List] tab in the management software tree.	"5.16 rcxadm servermgr" list
Viewing detailed information	"A.1 ROR Console" in the "User's Guide for Infrastructure Administrators (Resource Management) CE" Operate using the [Resource Details] tab in the management software tree.	"5.16 rcxadm servermgr" show
Updating	"17.5.1 Collecting and Registering" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	"5.16 rcxadm servermgr" refresh

Table A.21 VDI Management Software

Function	Operations	
	GUI	CLI
Registering VDI management software	"5.15 Registering VDI Management Software" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	-
Deleting VDI management software	"9.12 Deleting VDI Management Software" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	-
Modifying VDI management software	"7.13 Changing VDI Management Software Settings" in the "User's Guide for Infrastructure Administrators (Resource Management) CE"	-

-: Not supported

Appendix B Script Execution when Operating L-Platforms or L-Servers

This appendix explains the function for executing scripts, created and deployed in advance by users, before and after operations where the following operations are executed using the GUI or a command.

- L-Platform
  - Application for use
  - Cancellation
  - Reconfiguration
  - Batch start
  - Batch stop
- L-Server
  - Creating an L-Server
  - Deleting address set resources
  - Turning the Power ON
  - Turning the Power OFF
- Tenant
  - Create
  - Deleting address set resources
  - Reconfiguration
  - Power on all servers in the Tenant
  - Power off all servers in the Tenant

B.1 Usage Method of Scripts

The usage method of scripts is shown below.

- Creating scripts describing details to execute before and after operations
  For details on script format, refer to "B.2 Script Format".
- Executing scripts describing details to execute before and after operations
  For details on advisory notes for script usage, refer to "B.3 Advisory Notes for Script Usage".

B.2 Script Format

Create scripts in the following format.

Storage Location of Scripts

[Windows Manager]
Installation_folder\SVROR\Manager\etc\user_script

[Linux Manager]
/etc/opt/FJSVrcvmr/user_scripts

Script Name

Execution_order_resource_name_execution_timing-arbitrary_line.extension

Script Format

Specify as follows:

Table B.1 List of Items Specified in Scripts

Items	Content of Description
Execution order	Describe the script execution order. Specify a two-digit integer. When specifying the same execution order in multiple scripts, the order is not guaranteed.
Resource name	For details on resource names, refer to "Names of Resources and Operations which are the Targets of Script Startup before and after Operations".
Execution timing	When executing scripts either before or after operations start, specify as follows: - Before operations pre_*operation name* - After operations post_*operation name* For details on operation names, refer to "Names of Resources and Operations which are the Targets of Script Startup before and after Operations".
Arbitrary character string (optional)	Specify the arbitrary character string without using blank spaces. Any characters except blank spaces can be used for the filename, and its length can be up to the maximum character string length supported by the OS. When deploying multiple scripts for the same operation, users can specify a character string to distinguish the usage of the script.
Extension	[Windows Manager] A format which can be directly executed from the command line. [Linux Manager] Privileges for execution must be given.

Example

- Name of script for operations before cancelling an L-Platform

  00_lplatform_pre_delete.bat

- Name of script for operations after applying for an L-Platform

  00_lplatform_post_create.bat

- Name of script for operations after creating an L-Server

  01_lserver_post_create-sample.bat

- Name of script for operations before stopping an L-Server

  00_lserver_pre_stop.sh

Names of Resources and Operations which are the Targets of Script Startup before and after Operations

The names of resources and operations which are the targets of script startup before and after operations are as follows:

Table B.2 Names of Resources and Operations which are the Targets of Script Startup before and after Operations

Resource Name	Operation Name		Remarks
lplatform	Subscribe to a New L-Platform	create	When executing the scripts after operations, the created L-Server statuses are as below. - For Physical L-Servers Scripts are executed while the OS is running. - For Virtual L-Servers Scripts are executed when the L-Server is powered off. However, when coordinating with VDI, while the OS is not guaranteed to start, the scripts are executed when the L-Server is powered on.
	L-Platform Reconfiguration (When an L-Server is added)	create	When multiple L-Servers are added in a single operation, the script is executed as many times as the number of L-Servers added. The script is only executed when an L-Server is added. When L-Server specifications are modified or a disk added, the script is not executed. When executing the scripts after operations, the added L-Server status is the same as that at the timing of subscription.
	L-Platform Reconfiguration (When an L-Server is deleted)	delete	When multiple L-Servers are deleted in a single operation, the script starts as many times as the number of L-Servers added. The script is only executed when an L-Server is deleted. When L-Server specifications are modified or a disk deleted, the script is not executed.
	Cancellation of an L-Platform	delete	-
	Powering on of all servers in the L-Platform	start	The operation is executed, even when some L-Servers created during subscription are powered off.
	Powering off of all servers in the L-Platform	stop	-
lserver (common to physical L-Servers and virtual L-Servers)	Creating an L-Server	create	When executing rcxadm lserver create, or creating an L-Server using the [Resource] tab.
	Deleting an L-Server	delete	When executing rcxadm lserver delete, or deleting an L-Server using the [Resource] tab.
	Starting an L-Server	start	The operation is not executed during batch power on operations. The operation is executed, even when some L-Servers added to the L-Platform are powered off during L-Platform configuration modification.
	Stopping an L-Server	stop	The operation is not executed during batch power off operations.
tenant	Creating a Tenant	create	When multiple tenants are added in one operation, the script is executed for each tenant added.
	Deleting a Tenant	delete	-
	Power on all servers in the tenant	start	When all the tenants are chosen, the script is executed for each tenant.
	Power off for all servers in the Tenant	stop	When all the tenants are chosen, the script is executed for each tenant.

Resource Name	Operation Name		Remarks
	Modifying a Tenant	modify	-

Exit Status

This command returns the following values:

0

The command executed successfully.

non-zero

An error has occurred.

Standard Output and Errors

Standard output and errors are output in the following folders:

[Windows Manager]
Installation_folder\SVROR\Manager\var\script_log

[Linux Manager]
/opt/FJSVrcvmr/var/script_log

Standard output and errors are output in the folders with the following names:

- Standard Output

  Output_date_script_name_stdout.txt

- Standard Error

  Output_date_script_name_stderr.txt

Output_date is in the following format.

YYYY-MM-DD HH-MM-SS

When the same scripts are executed at the same time, the file name ends with *-X*.

X is a sequential number starting from "1".

Temporary Files

Scripts are used to output information as temporary files when events occur.
For details on output data, refer to "Table B.3 Meanings and Values of Variables".

Storage Location of Temporary Files

[Windows Manager]
Installation_folder\SVROR\Manager\var\tmp\rcxtempfile

[Linux Manager]
/opt/FJSVrcvmr/var/tmp/rcxtempfile

File Name of Temporary Files

Execution timing.xx.xx

The execution timing is the values specified in "Table B.1 List of Items Specified in Scripts".

xx.xx is in the following format:

Manager_process_ID.Numbers_created_randomly_not_to_overlap

The file name above with the full path name is created as the first argument.

It is not necessary to consider the file names in the script files, if loading the file name using the argument created the above.

Temporary File Format

The information which user scripts will receive is as follows:

Format

Temporary files are output in the following format.

Variable name= *Value*

Line break codes are as follows:

[Windows Manager]
CR+LF

[Linux Manager]
LF

The meanings and values of variables are as follows:

Table B.3 Meanings and Values of Variables

Variable	Meaning	Value
EVENT	Character string displayed in the event column of ROR console when an event occurs	Character string enclosed by double quotes (")
PROGRESS	Timing at which an event occurs	- Before operations "Started" - After operations "Completed" - When a task ends in an error "Error"
TASK_ID	Task ID which is the target of operation	Character string enclosed by double quotes (") When the operation target is not a task: ""
RESOURCE_NAME	Name of the resource which is the target of operation	Character string enclosed by double quotes (")
RESOURCE_TYPE	Type of the resource which is the target of operation	Character string enclosed by double quotes (")
RESOURCE_ID	ID of the resource which is the target of operation	Character string enclosed by double quotes (")
TENANT_NAME	Name of the tenant which is the target of operation	Character string enclosed by double quotes (") - When not belonging to a tenant: "" - When the executing timing is post_delete: ""
TENANT_ID	ID of the tenant which is the target of operation	Character string enclosed by double quotes (") - When not belonging to a tenant: "-" - When the executing timing is post_delete: ""
TIME	Time an event occurred	*YYYY-MM-DD HH:MM:SS*
CLIENT_IP	IP address of the client executing an operation using the [Resource] tab.	*XX.XX.XX.XX* - When the operation uses the [L-Platform] tab or L-Platform API: "127.0.0.1"
USER_ID	ID of the user executing an operation	Character string enclosed by double quotes (")

Variable	Meaning	Value
		- When the command is executed by the special administrator: "" - For create or delete for an L-Platform in the status that the application process is valid: ""
USER_NAME	Name of the user executing an operation	Character string enclosed by double quotes (") - When the command is executed by the special administrator: "" - For create or delete for an L-Platform in the status that the application process is valid: ""
USER_GROUP_ID	User group ID	Character string enclosed by double quotes (") - When the operation target is not a task: "" - The user does not belong to a group: "" - For create or delete for an L-Platform in the status that the application process is valid: ""
USER_GROUP_NAME	User group name which the user executed operations belongs to	Character string enclosed by double quotes (") - When the operation target is not a task: "" - When the user does not belong to a group: "" - For create or delete for an L-Platform in the status that the application process is valid: ""
OWNER	The name of the user who owns the target resource	Character string enclosed by double quotes (") - If the resource is something other than L-Platform: "" - If the resource is an L-Platform deployed by a tenant administrator or dual-role administrator: "" - When the executing timing is post_delete: ""
FULL_NAME	Unique name of the resource which is the target of operation	Character string enclosed by double quotes (") - A character string of a hierarchized resource folder connected with slashes "/" before RESOURCE_NAME - When the executing timing is post_delete: ""
FOLDER_TYPE	Folder type is the target of operation	Character string enclosed by double quotes (") - When the target resource is L-Platform: "LPLATFORM" - When the target resource is Tenant: "TENANT" - If the resource is something other than the above: ""

B.3 Advisory Notes for Script Usage

Advisory notes for script usage are given below.

- A prerequisite for the use of scripts is operational checks by the user. This function does not check the validity of the user script itself. Any trouble occurring from execution of scripts is the responsibility of the user.

- When an operation is stopped due to an error, scripts after that operation will not be executed.
  When the following conditions are satisfied, the scripts are executed even if an error occurs during the operation.
  - When an error occurs in some L-Server operations while performing "Batch power on" or "Batch power off"
  - When communication with VM management software such as vCenter is not possible after L-Server power operations are executed

  In the case above, PROGRESS="Error".
  By identifying the character string above in the scripts, the scripts can be set not to execute, when an error occurs.
- When a manager is restarted during an operation, scripts from before that operation will be executed again.
- During the script execution, the operation is not recovered if the status is as follows: Search for the relevant process using the Task Manager (for Windows) or the ps command (for Linux), and then manually stop the script.
  - When the script before operations is not recovered
    - Recent operations have not progressed from 0%
    - FJSVrcx:INFO:21164:*Script name*:script execution started event log is output
    - FJSVrcx:INFO:21165:*Script name*:script execution completed or JSVrcx:ERROR:61195: *Script name*:script error (return value = value) event log is not output
  - When the script after operations is not recovered
    - FJSVrcx:INFO:21164:*Script name*:script execution started event log is output
    - FJSVrcx:INFO:21165:*Script name*:script execution completed or JSVrcx:ERROR:61195: *Script name*:script error (return value = value) event log is not output
- When subscribing, unsubscribing, and batch power operations of L-Platform are executed, none of the creation, deletion, or power operation scripts of L-Servers are executed.

B.4 Information Output of Virtual L-Servers

This section explains the function for outputting the information for each virtual L-Server included in an L-Platform as a csv file, after deploying or deleting an L-Platform.

Prerequisites

- Only Windows is supported as the OS of the manager.
- VMware and Hyper-V are supported for managed servers.

Overview

The following files are generated when deployment and deletion of an L-Platform is performed.

Storage Location of Files

[Windows Manager]
Installation folder\SVROR\Manager\etc\event_handler

Output Timing and File Name

Output Timing	File Name
Generated after creating an L-Platform	xen_desktop_create_info.csv xen_desktop_create_info.csv.lck (*)
Generated before deleting an L-Platform	xen_desktop_delete_info.csv xen_desktop_delete_info.csv.lck (*)

* Note: The lock file is to prevent simultaneous access.

File Format

Item (Line Number)	Description	
Label (first line)	hostname,account,guid,tenantname	
Data (second and later lines)	hostname	*L-Server name*
	account	*User ID*
	guid	The identifier on the VM host to which the L-Server has been deployed
	tenantname	The *tenant name* where the L-Platform was created

Example

An example of an output file is given below:

```
hostname,account,guid,tenantname
WDHVQ44KH-S-0001-13,Sample-WDHVQ44KH,6C48D4DD-9F14-3E57-98FC-36F1D64232F9,SampleTenant
0HCVNNJZO-S-0001-15,Sample-0HCVNNJZO-S,6CWE4DD-5T14-3907-9MMV-58F1D64FG999,SampleTenant
```

Point

- When there are no csv files, a new csv file is created.
- Every time an L-Platform is created or deleted, a line is added to the end of the csv file.
- The csv file is not deleted. Manually delete the file if it is not necessary.

Usage Method

Creating the following definition file, enables output of a csv file after deploying an L-Platform.

It is not necessary to restart the manager after creating or deleting a definition file.

Location of the Definition File

[Windows Manager]
Installation_folder\SVROR\Manager\etc\customize_data

File Name

vmguest_uuid_output.rcxprop

Definition File Format

Describe the file in the following format.

```
CSV_FILE_PATH=Output destination of the csv file
```

Example

```
CSV_FILE_PATH=C:\temp
```

- Creates a csv file in the path specified for CSV_FILE_PATH.
- When one of following conditions is satisfied, a csv file is created in the default storage location (*Installation_folder*\etc\event_handler).
  - When the specified path is a non-existent or invalid path
  - When double-byte characters are included in the file path

    - When there is no CSV_FILE_PATH definition

- Ensure write permission is possessed for the specified path. When there is a path, but write permission is not possessed, no files are generated.

Appendix C Registered Software IDs

Following the software information come with this product.
Please use as needed.

location

Location listed below.

[Windows Manager]

```
Installation_folder\RCXCFMG\templates\softwares\
```

[Linux Manager]

```
/opt/FJSVcfmg/templates/softwares/
```

Registered Software IDs

Registered Software IDs of this product listed below.

Registered Software IDs	Software Name	Version
SW00000001	Windows Server 2008 Standard (32bit)	6.0
SW00000002	Windows Server 2008 Standard (64bit)	6.0
SW00000003	Windows Server 2008 Enterprise (32bit)	6.0
SW00000004	Windows Server 2008 Enterprise (64bit)	6.0
SW00000005	Windows Server 2008 R2 Foundation	6.1
SW00000006	Windows Server 2008 R2 Standard	6.1
SW00000007	Windows Server 2008 R2 Enterprise	6.1
SW00000008	Windows Server 2008 R2 Datacenter	6.1
SW00000009	Red Hat Enterprise Linux 5 (for x86)	5
SW00000010	Red Hat Enterprise Linux 5 (for Intel64)	5
SW00000011	Red Hat Enterprise Linux 6 (for x86)	6
SW00000012	Red Hat Enterprise Linux 6 (for Intel64)	6
SW00000013	SUSE Linux Enterprise Server 11 (x86)	11
SW00000014	SUSE Linux Enterprise Server 11 (AMD64)	11
SW00000015	SUSE Linux Enterprise Server 11 (Intel64)	11
SW00000016	Oracle Solaris 10	5.10
SW00000017	Oracle Solaris 11	5.11
SW00000018	Windows Server 2012 Essentials	6.2
SW00000019	Windows Server 2012 Foundation	6.2
SW00000020	Windows Server 2012 Standard	6.2
SW00000021	Windows Server 2012 Datacenter	6.2
SW00000022	Windows Server 2012 R2 Essentials	6.3
SW00000023	Windows Server 2012 R2 Foundation	6.3
SW00000024	Windows Server 2012 R2 Standard	6.3
SW00000025	Windows Server 2012 R2 Datacenter	6.3
SW00000026	Oracle Linux 6	6

Registered Software IDs	Software Name	Version
SW00000027	Red Hat Enterprise Linux 7 (for Intel64)	7

Point

Software information for newly supported OS's is not added when you upgrade from an older version.
Use the templates stored in "location" and either register using the cfmg_addsoft command or register from the [Templates] tab of the ROR console.
Refer to "9.3 cfmg_addsoft (Registering Software Information)" for information on the cfmg_addsoft command.
Refer to "Chapter 8 Template" in the "User's Guide for Infrastructure Administrators CE" for information on how to register software information using the ROR console.

The following OS, ID not registered. It offers format for registration. Please use <license> tag to fill the Windows OS Product Key, software information to register.

Software Name	Version	Software information file Name
Windows Server 2003 R2, Standard	5.2	WS2003R2_SE.xml
Windows Server 2003 R2, Enterprise	5.2	WS2003R2_EE.xml
Windows Server 2003 R2, Standard x64 Edition	5.2	WS2003R2_SE_x64.xml
Windows Server 2003 R2, Enterprise x64 Edition	5.2	WS2003R2_EE_x64.xml

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