FUJITSU

ServerView Resource Coordinator VE

Installation Guide

Windows

Preface

Purpose

This manual explains how to install ServerView Resource Coordinator VE (hereinafter Resource Coordinator VE).

Target Readers

This manual is written for people who will install Resource Coordinator VE.
It is strongly recommended that you read the "ServerView Resource Coordinator VE Setup Guide" and the Software Release Guide 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.

Organization

This manual consists of four chapters, two appendices, and a glossary. The contents of these chapters, the appendices, and the glossary are listed below.

Title	Description
Chapter 1 Operational Environment	Explains the operational environment of Resource Coordinator VE.
Chapter 2 Installation	Explains how to install Resource Coordinator VE.
Chapter 3 Uninstallation	Explains how to uninstall Resource Coordinator VE.
Chapter 4 Upgrading from Earlier Versions	Explains how to upgrade from earlier versions of Resource Coordinator.
Appendix A Advisory Notes for Environments with Systemwalker Centric Manager or ETERNUS SF Storage Cruiser	Explains advisory notes regarding use of Resource Coordinator VE with Systemwalker Centric Manager or ETERNUS SF Storage Cruiser.
Appendix B Manager Cluster Operation Settings and Deletion	Explains the settings necessary when using Resource Coordinator VE on cluster systems, and the method for deleting Resource Coordinator VE from cluster systems.
Glossary	Explains the terms used in this manual. Please refer to it when necessary.

Notational Conventions

The notation in this manual conforms to the following conventions.

・ When functions vary due to the basic software (OS) installed on managed servers, it is indicated as follows:

[Windows]	Sections related to Windows (When not using Hyper-V)
[Linux]	Sections related to Linux
[VMware]	Sections related to VMware
[Hyper-V]	Sections related to Hyper-V
[Windows/Hyper-V]	Sections related to Windows and Hyper-V
[Windows/Linux]	Sections related to Windows and Linux
[Linux/VMware]	Sections related to Linux and VMware
[VM host]	Sections related to VMware and Windows Server 2008 with Hyper-V enabled

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

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

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

・ Button names are shown enclosed by angle 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.

Related Manuals

The following manuals are provided with Resource Coordinator VE. Please refer to them when necessary.

・ ServerView Resource Coordinator VE Installation Guide (This manual)

Explains the methods for installing and configuring the software components of Resource Coordinator VE.

・ ServerView Resource Coordinator VE Setup Guide

Explains Resource Coordinator VE and its functions, as well as the settings and operations necessary for setup.

・ ServerView Resource Coordinator VE Operation Guide

Explains the functions provided by Resource Coordinator VE as well as the settings and operations necessary when using it.

・ ServerView Resource Coordinator VE Command Reference

Explains the types, formats, and functions of the commands used with Resource Coordinator VE.

・ ServerView Resource Coordinator VE Messages

Explains the meanings of messages output by Resource Coordinator VE, and the corrective action to be taken.

Related Documentation

Please refer to these manuals when necessary.

・ Systemwalker Resource Coordinator Virtual server Edition Installation Guide

・ Systemwalker Resource Coordinator Virtual server Edition Setup Guide

・ Systemwalker Resource Coordinator Virtual server Edition Operation Guide

Abbreviations

The following abbreviations are used in this manual:

Abbreviation	Products
Windows	Microsoft(R) Windows Server(R) 2008 Standard (x86, x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x86, x64) 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 Vista(R) Business Microsoft(R) Windows Vista(R) Enterprise Microsoft(R) Windows Vista(R) Ultimate Microsoft(R) Windows(R) XP Professional operating system

Abbreviation	Products
Windows Server 2008	Microsoft(R) Windows Server(R) 2008 Standard (x86, x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x86, x64)
Windows 2008 x64 Edition	Microsoft(R) Windows Server(R) 2008 Standard (x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x64)
Windows Server 2003	Microsoft(R) Windows Server(R) 2003 R2, Standard Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise Edition Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
Windows 2003 x64 Edition	Microsoft(R) Windows Server(R) 2003 R2, Standard x64 Edition Microsoft(R) Windows Server(R) 2003 R2, Enterprise x64 Edition
Windows Vista	Microsoft(R) Windows Vista(R) Business Microsoft(R) Windows Vista(R) Enterprise Microsoft(R) Windows Vista(R) Ultimate
Windows XP	Microsoft(R) Windows(R) XP Professional operating system
Linux	Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.5 for x86) Red Hat(R) Enterprise Linux(R) ES (4.5 for x86) Red Hat(R) Enterprise Linux(R) AS (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.6 for x86) Red Hat(R) Enterprise Linux(R) ES (4.6 for x86) Red Hat(R) Enterprise Linux(R) AS (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.7 for x86) Red Hat(R) Enterprise Linux(R) ES (4.7 for x86) Red Hat(R) Enterprise Linux(R) AS (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.8 for x86) Red Hat(R) Enterprise Linux(R) ES (4.8 for x86) Red Hat(R) Enterprise Linux(R) AS (4.8 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.8 for EM64T) Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.1 (for x86) Red Hat(R) Enterprise Linux(R) 5.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.2 (for x86) Red Hat(R) Enterprise Linux(R) 5.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64) SUSE Linux Enterprise Server 10 SP2 for x86, AMD64, Intel64
Red Hat Enterprise Linux	Red Hat(R) Enterprise Linux(R) AS (v.4 for x86) Red Hat(R) Enterprise Linux(R) ES (v.4 for x86) Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.5 for x86) Red Hat(R) Enterprise Linux(R) ES (4.5 for x86) Red Hat(R) Enterprise Linux(R) AS (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.5 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.6 for x86) Red Hat(R) Enterprise Linux(R) ES (4.6 for x86)

Abbreviation	Products
	Red Hat(R) Enterprise Linux(R) AS (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.6 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.7 for x86) Red Hat(R) Enterprise Linux(R) ES (4.7 for x86) Red Hat(R) Enterprise Linux(R) AS (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.7 for EM64T) Red Hat(R) Enterprise Linux(R) AS (4.8 for x86) Red Hat(R) Enterprise Linux(R) ES (4.8 for x86) Red Hat(R) Enterprise Linux(R) AS (4.8 for EM64T) Red Hat(R) Enterprise Linux(R) ES (4.8 for EM64T) Red Hat(R) Enterprise Linux(R) 5 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.1 (for x86) Red Hat(R) Enterprise Linux(R) 5.1 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.2 (for x86) Red Hat(R) Enterprise Linux(R) 5.2 (for Intel64) Red Hat(R) Enterprise Linux(R) 5.3 (for x86) Red Hat(R) Enterprise Linux(R) 5.3 (for Intel64)
Red Hat 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)
SUSE Linux Enterprise Server	SUSE Linux Enterprise Server 10 SP2 for x86, AMD64, Intel64
VMware	VMware(R) Infrastructure 3 VMware vSphere(TM) 4
Excel	Microsoft(R) Office Excel(R) 2007 Microsoft(R) Office Excel(R) 2003 Microsoft(R) Office Excel(R) 2002
Excel 2007	Microsoft(R) Office Excel(R) 2007
Excel 2003	Microsoft(R) Office Excel(R) 2003
Excel 2002	Microsoft(R) Office Excel(R) 2002
Resource Coordinator	Systemwalker Resource Coordinator
Resource Coordinator VE	ServerView Resource Coordinator VE
ServerView Agent	ServerView SNMP Agents for MS Windows (32bit-64bit) ServerView Agents Linux for SUSE Linux Enterprise Server (SLES) and Red Hat Enterprise Linux (RHEL) ServerView Agents VMware for VMware ESX Server

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Contents

Chapter 1 Operational Environment

This chapter explains the operational environment of ServerView Resource Coordinator VE.

1.1 Software Environment

Resource Coordinator VE is composed of the following software.

・ ServerView Resource Coordinator VE

1.1.1 Software Organization

Resource Coordinator VE is composed of the following software.

Table 1.1 Software Organization

Software	Function
ServerView Resource Coordinator VE 2.1.0 Manager (hereinafter Manager)	Used to control managed servers and neighboring network devices Operates on the admin server
ServerView Resource Coordinator VE 2.1.0 Agent (hereinafter Agent)	Performs pre-configuration during deployment, monitors operating servers, and controls backup and cloning Operates on managed servers (*1)
ServerView Resource Coordinator VE V2.1.0 HBA address rename setup service (hereinafter HBA address rename setup service)	Improves the reliability of the HBA address rename setup function used by admin servers (*2) Operates on computers other than the admin server and managed servers

*1: When an agent of an earlier version of Systemwalker Resource Coordinator Virtual server Edition has already been installed on a managed server it can be used as is.
When managers of this version and agents of earlier versions are being used together, only operation of functions that can be used with the applicable version of agents are guaranteed.
*2: For the HBA address rename setup function, refer to "3.3 Defining the Storage Environment" of the "ServerView Resource Coordinator VE Setup Guide".

1.1.2 Software Requirements

This section explains the requirements for installation of Resource Coordinator VE.

1.1.2.1 Required Basic Software

The basic software listed below is required when using Resource Coordinator VE.

Table 1.2 Required Basic Software

Software	Basic Software (OS)	Remarks
Manager	Microsoft(R) Windows Server(R) 2008 Standard (x86, x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x86, x64)	The Server Core installation option is not supported.
	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	SP2 or later supported.

Software	Basic Software (OS)	Remarks
Agent [Windows/ Hyper-V] (*1)	Microsoft(R) Windows Server(R) 2008 Standard (x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x64)	The Server Core installation option is not supported.
Agent [Windows] (*1)	Microsoft(R) Windows Server(R) 2008 Standard (x86) Microsoft(R) Windows Server(R) 2008 Enterprise (x86)	The Server Core installation option is not supported.
	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	SP2 or later supported.
Agent [Linux]	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) 5.2 (for x86) Red Hat(R) Enterprise Linux(R) 5.2 (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 (for x86) Red Hat(R) Enterprise Linux(R) 5 (for Intel64) 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) 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 (4.6 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 (4.5 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 (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) SUSE Linux Enterprise Server 10 SP2 (for x86) (*2) SUSE Linux Enterprise Server 10 SP2 (for ADM64, Intel64) (*2)	In the event that there are required pieces of software, such as driver kits and update kits, prepare them. For information about required software, refer to the manual of the server or the Linux installation guide.
Agent [VMware] (*3)	VMware(R) Infrastructure 3 VMware vSphere(TM) 4	Install Resource Coordinator VE on the VMware ESX host. Use the VMware Service Console for installation.
HBA address rename setup service	Microsoft(R) Windows Server(R) 2008 Standard (x86, x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x86, x64)	The Server Core installation option is not supported.
	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	SP2 or later supported.

Software	Basic Software (OS)	Remarks
	Microsoft(R) Windows Vista(R) Business Microsoft(R) Windows Vista(R) Enterprise Microsoft(R) Windows Vista(R) Ultimate	-
	Microsoft(R) Windows(R) XP Professional operating system	SP2 or later supported.

*1: When using the following functions, you must have a volume license for the version of Windows to be installed on managed servers by Resource Coordinator VE.

・ Server switchover

・ Cloning

・ Restoration after server replacement

・ Server replacement in SAN boot environments

*2: Regarding SUSE Linux Enterprise Server

・ Resource Coordinator VE does not support cloning.

・ When using the backup and restore functions of Resource Coordinator VE, ensure that the file system is an ext3 file system.

・ When using the backup and restore method of Resource Coordinator VE for server switchover, configure the SCSI WWID of the source and target so they are the same.

・ Make the use of unique names of network devices unavailable.

*3: Regarding VMware vSphere 4

・ Use of the Resource Coordinator VE backup and restore functions and the backup and restore method for server switchover are not supported.

・ When upgrading from VMware Infrastructure 3, system images of VM hosts that were collected prior to the upgrade will be available after the upgrade is complete. However, even if server images from before the upgrade are used for server switchover using the backup and restore method, the VM hosts will not operate properly. Please be sure to release spare server settings for server switchover using the backup and restore method before performing upgrades. System images collected before the upgrade can be deleted when they are no longer necessary.

・ Management of VM guests with VMware Fault Tolerance enabled is not supported by Resource Coordinator VE.

・ With BIOS time settings, as only UTC (Coordinated Universal Time) can be set for VMware ESX 4 servers and local time set for Windows servers, operation with spare servers being shared between VMware ESX 4 servers and Windows servers is not possible because their settings cannot be coordinated.

It is not necessary to install Resource Coordinator VE on admin clients, but the following basic software is required.

Table 1.3 Required Basic Software: Admin Clients

Basic Software (OS)	Remarks
Microsoft(R) Windows Vista(R) Business Microsoft(R) Windows Vista(R) Enterprise Microsoft(R) Windows Vista(R) Ultimate	-
Microsoft(R) Windows(R) XP Professional operating system	SP2 or later supported.
Microsoft(R) Windows Server(R) 2008 Standard (x86, x64) Microsoft(R) Windows Server(R) 2008 Enterprise (x86, x64)	The Server Core installation option is not supported.
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	SP2 or later supported.

Table 1.4 Required Patches

Software	Basic Software (OS)	Patch ID/Bundle Update
Manager	None	-
Agent [Windows/ Hyper-V]	None	-
Agent [Linux]	Red Hat(R) Enterprise Linux(R) 5 (for x86)	Bundle Update U07121 (5.1 compatible) Bundle Update U08071 (5.2 compatible) Bundle Update U09031 (5.3 compatible)
	Red Hat(R) Enterprise Linux(R) 5 (for Intel64)	Bundle Update U07121 (5.1 compatible) Bundle Update U08071 (5.2 compatible) Bundle Update U09031 (5.3 compatible)
	Red Hat(R) Enterprise Linux(R) AS (v.4 for x86)	Bundle Update U06091 (Update 4 compatible) Bundle Update U07061 (4.5 compatible) Bundle Update U08011 (4.6 compatible) Bundle Update U08091 (4.7 compatible) Bundle Update U09061 (4.8 compatible)
	Red Hat(R) Enterprise Linux(R) ES (v.4 for x86)	Kernel Update kit (Update4/4.5/4.6/4.7/4.8 compatible)
	Red Hat(R) Enterprise Linux(R) AS (v.4 for EM64T)	Bundle Update U06091 (Update 4 compatible) Bundle Update U07071 (4.5 compatible) Bundle Update U08011 (4.6 compatible) Bundle Update U08091 (4.7 compatible) Bundle Update U09061 (4.8 compatible)
	Red Hat(R) Enterprise Linux(R) ES (v.4 for EM64T)	Kernel Update kit (Update4/4.5/4.6/4.7/4.8 compatible)
	SUSE Linux Enterprise Server 10 SP2 (for x86)	Kernel-2.6.16.60-0.23 or later
	SUSE Linux Enterprise Server 10 SP2 (for ADM64, Intel64)	Kernel-2.6.16.60-0.23 or later
Agent [VMware]	None	-
HBA address rename setup service	None	-

1.1.2.2 Required Software

The software listed below is required when using Resource Coordinator VE.

Table 1.5 Required Software

Software	Required Software	Version	Remarks
Manager	ServerView Operations Manager (*1) (previously ServerView Console for Windows)	V4.20.25 or later	Refer to "See Installation of Related ServerView Products".
	Microsoft(R) LAN Manager module	-	Necessary when using backup and restore, or cloning. Obtain it from the following Microsoft FTP site. URL: ftp://ftp.microsoft.com/bussys/ clients/msclient/dsk3-1.exe (As of August 2009)
	BACS or Intel PROSet or PRIMECLUSTER GLS for Windows	-	Necessary when performing redundancy of the admin LAN for admin servers.
	ServerView RAID (*1)	-	Necessary when a RAID is composed of local disks (*2).
	VMware vCenter Server (previously VMware VirtualCenter)	2.0, 2.5	Required when using migration of VM guests. Can be placed on the same admin server as the manager or on another server.
Agent [Windows/ Hyper-V]	ServerView Agent for Windows (*1)	V4.50.05 or later	-
	"setupcl.exe" module "sysprep.exe" module	-	Necessary when using backup and restore, or cloning. Please refer to the Microsoft website and obtain the latest module. (*3) With Windows Server 2008, these modules are configured by default so there is no need to obtain them.
	BACS or Intel PROSet or PRIMECLUSTER GLS for Windows (*1)	-	Necessary when performing redundancy of the admin LAN or public LAN for managed servers.
	ServerView RAID (*1)	-	Necessary when a RAID is composed of local disks (*2).
Agent [Linux]	ServerView Agent for Linux (*1)	V4.50.12 or later	-
	PRIMECLUSTER GLS (*1)	4.2A00 or later	Necessary when performing redundancy of the admin LAN or public LAN for managed servers. When performing cloning, Resource Coordinator VE can automatically perform settings for public LAN redundancy. For details, refer to "8.6 Network Parameter Auto-Configuration for Cloning Images" of the "ServerView

Software	Required Software	Version	Remarks
			Resource Coordinator VE Setup Guide".
	ServerView RAID (*1)	-	Necessary when a RAID is composed of local disks (*2).
Agent [VMware]	ServerView Agent for VMware (*1)	V4.30-20 or later	-
	ServerView RAID (*1)	-	Necessary when a RAID is composed of local disks (*2).
HBA address rename setup service	Microsoft(R) Internet Explorer	6 7 8	Necessary for displaying the online help.

*1: Necessary when using PRIMERGY series servers.

When installing managers in cluster environments, installation on both the primary and secondary nodes is necessary.

*2: Local disks include internal disks of servers and storage blades.

*3: The file to obtain varies depending on the CPU architecture (x86, x64) and OS version of the system installation is to be performed on. Please refer to the Microsoft website for the module to obtain.

Microsoft download website

```
URL(x86):
http://www.microsoft.com/downloads/details.aspx?familyid=93F20BB1-97AA-4356-8B43-9584B7E72556&displaylang=en
(As of August 2009)

URL(x64):
http://www.microsoft.com/downloads/details.aspx?familyid=C2684C95-6864-4091-BC9A-52AEC5491AF7&displaylang=en
(As of August 2009)
```

After obtaining the newest module, extract it in a work folder (such as C:\temp) of the system for installation.

Refer to "2.2.1.1 Software Preparation and Checks" for the extraction method.

After agent installation is complete, the module is no longer necessary.

The following software is necessary for admin clients.

Table 1.6 Required Software: Admin Clients

Required Software	Version	Remarks
Microsoft(R) Internet Explorer	6 7 8	-
Java(TM) 2 Runtime Environment Standard Edition	-	Necessary for displaying the management window of ServerView Operations Manager on admin clients. For necessary versions, refer to the ServerView Operations Manager manual.
VMware(R) Virtual Infrastructure Client	2.0 2.5	Necessary when using the function for coordinating with VMware on managed servers on admin clients. [VMware]
VMware vSphere(TM) Client	4.0	

 See

....

Installation of Related ServerView Products

"For advisory notes regarding the installation of the manager of "ServerView Operations Manager", refer to "ServerView Operations Manager Settings" in "2.1.1.1 Software Preparation and Checks".

1.1.2.3 Exclusive Software

Resource Coordinator VE cannot be used in combination with Resource Coordinator or the following products.

Systemwalker Resource Coordinator Virtual server Edition is the name of earlier versions of Resource Coordinator VE. Earlier versions cannot be used in combination with Resource Coordinator VE, but upgrading is possible. For upgrading, refer to "Chapter 4 Upgrading from Earlier Versions".

Table 1.7 Exclusive Software

Software	Product
Manager	ServerView Deployment Manager
	ServerStart (*1)
Agent [Windows/Hyper-V]	Server System Manager
	ServerView Deployment Manager
Agent [Linux]	Server System Manager
	ServerView Deployment Manager
Agent [VMware]	-
HBA address rename setup service	ServerView Deployment Manager

*1: As managers of this product include PXE server, use in combination with the PXE server required for remote installation of ServerStart is not possible.

Note

- Resource Coordinator VE managers contain some components of ServerView Deployment Manager. Deployment and operation in the same subnet as ServerView Deployment Manager is not possible.
  When ServerView Deployment Manager is deployed in the same subnet, caution is necessary regarding the following points:

    - Operate ScwPro and ScwLite using a simple DHCP server, in non-aggressive mode. Set the range of IP addresses for allocation to the simple DHCP so that it does not overlap the range used for Resource Coordinator VE managed servers.

    - Managed servers cannot be managed using Resource Coordinator VE and ScwPro or ScwLite at the same time.
      Do not register Resource Coordinator VE managed servers with ScwPro or ScwLite.

    - When operating multiple servers simultaneously, change the multicast IP address settings for ScwPro so they differ from those of the Resource Coordinator VE manager.

[Windows]

- Depending on the domain type, there may be cases in which backup and restoration, cloning, and server switchover using backup and restoration cannot be used, or additional operations on managed servers are necessary.

Table 1.8 Function Restrictions Based on Domain Type

Domain Type	Backup and Restore	Cloning	Server Switchover Using Backup and Restore
Domain controller	No	No	No
Member server (*1)	Yes (*2)	Yes (*2,*3)	Yes (*2,*4)
Workgroup	Yes	Yes	Yes

Yes: Use possible.
No: Use not possible.
*1: Member servers of Windows NT domains or Active Directory.

*2: After performing backup or restoration it is necessary to join Windows NT domains or Active Directory again.

*3: Before obtaining cloning images, make sure that the server is not a member of a Windows NT domain or Active Directory.

*4: When switchover has been performed using Auto-Recovery, join Windows NT domains or Active Directory again before starting operations.

・ The following services cannot be started in the same network as an admin LAN:

- The Windows Server 2003 "Remote Installation Service", and the Windows Server 2008/Windows Server 2003 "Windows Deployment Service"

- ADS (Automated Deployment Services) of Windows Server 2003

- Boot Information Negotiation Layer (BINLSVC)

・ Do not deploy DHCP servers or PXE servers on the admin LAN.

1.1.2.4 Static Disk Space

For new installations of Resource Coordinator VE, the following static disk space is required.
The amount of disk space may vary slightly depending on the environment in question.

Table 1.9 Static Disk Space

Software	Folder	Required Disk Space (Unit: MB)
Manager	*Installation_folder* (*1)	490
Agent [Windows/Hyper-V]	*Installation_folder* (*1)	80
Agent [Linux/VMware]	/opt	90
	/etc/opt	5
	/var/opt	5
HBA address rename setup service	*Installation_folder* (*1)	75

*1: The installation folder name specified when this software is installed.

The default when Windows has been installed in C:\ is as follows:

C:\Program Files\Resource Coordinator VE

1.1.2.5 Dynamic Disk Space

When using Resource Coordinator VE, the following dynamic disk space is required.
The following disk space is required for each folder, in addition to static disk space.

Table 1.10 Dynamic Disk Space

Software	Folder	Required Disk Space (Unit: MB)
Manager	*Installation_folder* (*1)	1028 + *Number_of_managed_servers* * 4
		Environmental Data Storage Area
	Image_file_storage_folder (*2)	*Image File Storage Area*
Agent [Windows/Hyper-V]	*Installation_folder* (*1)	60
Agent [Linux/VMware]	/etc	1
	/var/opt	1
HBA address rename setup service	*Installation_folder* (*1)	60

*1: The installation folder name specified when this software is installed.

The default when Windows has been installed in C:\ is as follows:

C:\Program Files\Resource Coordinator VE

*2: The name of the storage folder specified for image files when this software is installed.
The default when Windows has been installed in C:\ is as follows:

C:\Program Files\Resource Coordinator VE\ScwPro\depot

Environmental Data Storage Area

The environmental data storage area is the area necessary when using power monitoring.
The environmental data storage area is located in the installation folder of the admin server, and is used to store environmental data collected from power monitoring devices and aggregate data.
The amount of space that is necessary for the environmental data storage area can be determined from the number of registered power monitoring devices, the polling interval, and the period the environmental data is to be stored for.
For the setting values, refer to "3.4.1 Settings for the Power Monitoring Environment" of the "ServerView Resource Coordinator VE Setup Guide".
Estimate the necessary space using the following formula.

Necessary disk space (MB) = (*Detail_storage_period_(months)* * 6 / *polling_interval_(minutes)* + 10) * *number_of_devices*

Image File Storage Area

The image file storage area is necessary when performing backup and cloning.
The image file storage area is secured on an admin server as an area to store the image files (system images and cloning images) collected through the backup and cloning of managed servers.

🔰 Note

Create the image file storage area on the local disk of the admin server, or SAN storage. Folders on network drives and UNC format (*1) folders cannot be specified.

*1: Universal Naming Convention
Notational system for Windows networks (Microsoft networks) that enables specification of shared resources (folders, files, shared printers, shared directories, etc.).

📑 Example

\\hostname\dir_name

The space necessary for the image file storage area is the total amount of disk space necessary for the "system image storage area", the "cloning image storage area", and the "temporary work area".
Estimate the necessary space based on the disk space required for each storage area using the following formula.

Estimate the necessary space for the image file storage area using the following procedure.

1. **Calculate the size of image files.**

   Calculate the image file sizes as base data for estimating the required disk space for A, B, and C indicated above.
   The calculation method is given below.

   File size of image files = *Disk_space_per_managed_server* * *Compression_ratio*

Disk_space_per_managed_server

When system construction using the same software configuration has been performed before, use the consumed disk space of that system (the sum of the disk space for each partition when dividing one disk into multiple partitions).
Check the consumed disk space using the relevant OS function.
When system construction using the same software configuration has not been performed before, calculate the disk space from the required disk space indicated in the installation guide for each piece of software.
For the OS, refer to "Examples of Calculation".

Compression_ratio

The compression ratio involved when storing the consumed disk space of managed servers as an image file on the admin server.
Compression ratio is dependent on file content, and usually a compression ratio of around 50% can be expected. When there are many files that have already been compressed (installation media of software, image data, or other media), the overall compression ratio is lower.
For the OS, refer to "Examples of Calculation".

An example of the calculation of disk space and the compression ratio directly after OS installation is given below.

Example

Examples of Calculation

- For Windows Server 2003

   Used disk space: 1.9 GB => After compression: 0.9 GB Compression ratio: 0.9/1.9 = 47%

2. **Calculate the space required for the system image storage area.**

The system image storage area is the area necessary when performing backup. Secure space for each managed server for which backup system images are made.
This is not necessary when not performing backup.

Calculate the size of the system image storage area based on the image file size of step 1. Estimate the area for each managed server for which system images are backed up using the following formula, and use the total as the estimated size.

> Disk space required for the system image storage area = *File_size_of_image_files* * *Number_of_generations*

Number_of_generations

The number of generations of system images. By default, up to three generations of system images can be managed.

Point

By reducing the number of generations of system images saved it is possible to reduce the amount of disk space required for the system image storage area.
For details of how to change the number of system images saved, refer to "6.3.1.3 Changing the Maximum Number of System Image Versions" of the "ServerView Resource Coordinator VE Setup Guide".

The following is an example when three servers, A, B, and C are performing backup of system images, and the used disk space and compression ratios are expected to be the following values.

Example

Example of Estimation
Server A - *Image_file_size* : 3.0GB (Used disk space: 6.0GB, Compression ratio 50%)
Server B - *Image_file_size* : 1.6GB (Used disk space: 4.0GB, Compression ratio 40%)
Server C - *Image_file_size* : 1.6GB (Used disk space: 4.0GB, Compression ratio 40%)

(3.0 * 3) + (1.6 * 3) + (1.6 * 3) = 18.6 (GB)

3. **Calculate the space required for the cloning image storage area.**

The cloning image storage area is the area necessary when performing cloning. Secure space for each managed server for which cloning images are collected.
This is not necessary when not performing cloning.

Calculate the size of the cloning image storage area based on the image file size of step 1. Estimate the area for each managed server from which cloning images are collected using the following formula, then set the total as the estimated size.

> Disk space required for the cloning image storage area = *File_size_of_image_files* * *Number_of_generations*

Number_of_generations

  The number of generations of cloning images. By default, up to three generations of cloning images can be managed.

P Point

. . . .

By reducing the number of generations of cloning images saved it is possible to reduce the amount of disk space required for the cloning image storage area.
For details of how to change the number of cloning images saved, refer to "6.3.1.3 Changing the Maximum Number of System Image Versions" of the "ServerView Resource Coordinator VE Setup Guide".

. . . .

The following is an example when servers A and B are performing backup of cloning images, and the used disk space and compression ratios are expected to be the following values.

Example

. . . .

Example of Estimation
Server A - *Image_file_size* : 3.0GB (Used disk space: 6.0GB Compression ratio 50%)
Server B - *Image_file_size* : 1.6GB (Used disk space: 4.0GB Compression ratio 40%)

(3.0 * 3) + (1.6 * 3) = 13.8 (GB)

. . . .

4. **Calculate the space required for the temporary work area.**

When collecting system images or cloning images, the temporary work area is necessary to keep the former generation of images until collection of new system images or cloning images is completed.
This is not necessary when not performing backup or cloning.

Calculate the size of the temporary work area based on the image file size of step 1.
Estimate the largest size of the image files of all managed servers, and determine the necessary area using the following formula.

> Disk space required for the temporary work area = *Largest_image_file_size* * *Image_file_collection_multiplicity*

Estimate image file collection multiplicity using operational designs in which image file collection (system image backup and cloning image collection) is simultaneously performed at the limit of multiplicity for multiple managed servers under management of an admin server. However, as Resource Coordinator VE is designed not to exceed four multiplicities in order to reduce the load on the admin servers, the maximum multiplicity is 4.

The following is an example when three servers, A, B, and C are used to collect system images or cloning images, and the file size of each image file is as below. In this example the image file collection multiplicity is 3.

Example

. . . .

Example of Estimation
Server A - *Image_file_size* : 3.0GB (Used disk space: 6.0GB, Compression ratio 50%)
Server B - *Image_file_size* : 1.6GB (Used disk space: 4.0GB, Compression ratio 40%)
Server C - *Image_file_size* : 1.6GB (Used disk space: 4.0GB, Compression ratio 40%)

3.0 * 3 = 9.0 (GB)

. . . .

5. **Calculate the space necessary for the image file storage area based on the disk space calculated in steps 2. to 4.**

Calculate the total amount of required space for A, B, and C calculated in steps 2 to 4. (A: Disk area required for system image storage area, B: Disk area required for cloning image storage area, C: Disk area required for temporary work area).

1.1.2.6 Memory Capacity

When using this product, the following memory is required.

Table 1.11 Memory Capacity

Software	Required Memory Capacity (Unit: MB)	Remarks
Manager	1024	-
Agent [Windows/Hyper-V]	32	-
Agent [Linux]	32	-
Agent [VMware]	32	-
HBA address rename setup service	32	-

The following memory is necessary for admin clients.

Table 1.12 Memory Capacity: Admin Clients

Software	Required Memory Capacity (Unit: MB)	Remarks
Microsoft(R) Internet Explorer	512	-

1.2 Hardware Environment

The following hardware conditions must be met when using Resource Coordinator VE:
For supported models, refer to the ServerView Resource Coordinator VE home page.

Table 1.13 Required Hardware

Software	Hardware	Remarks
Manager	PRIMERGY RX series servers PRIMERGY BX series servers PRIMERGY TX series servers Other PC servers	The CPU must be a multi-core CPU. 2 GB or more of memory is necessary. Operate managers on Windows Server 2003 or Windows Server 2008.
Agent	PRIMERGY BX620 S4 PRIMERGY BX920 S1 PRIMERGY RX series PRIMERGY TX series Other PC servers	When using servers other than the PRIMERGY BX series, it is necessary to mount an IPMI-compatible(*1) server management unit (*2). When using HBA address rename, the "I/O Virtualization Option" of the blade server option is required. Other PC servers being used to operate VMware are not supported.
-	PRIMERGY SX650 PRIMERGY SX940	Registering a PRIMERGY BX series chassis displays it automatically. Installation of software is not necessary.
HBA address rename setup service	PRIMERGY RX series servers PRIMERGY BX series servers PRIMERGY TX series servers Other PC servers	-

*1: Supports IPMI2.0.
*2: This usually indicates a BMC (Baseboard Management Controller).

🖙 Note
· ·

The functions that agents can use differ depending on the hardware being used.

Function		PRIMERGY series		Other PC servers
		Blade Models	Rack-Mount/Tower Models	
Status monitoring		Yes	Yes	Yes (*1)
Power operations		Yes	Yes	Yes
Backup and Restore		Yes	Yes	Yes
Hardware maintenance		Yes	Yes (*2)	Yes (*2)
Server switchover	Backup and Restore	Yes	Yes (*3)	Yes (*3)
	HBA address rename (*4)	Yes	Yes (*3)	No
Cloning		Yes	Yes	Yes
HBA address rename (*4)		Yes	Yes	No
VLAN Settings		Yes	No	No
Pre-configuration		Yes	Yes	Yes

Yes: Use possible.
No: Use not possible.

*1: Server monitoring in coordination with server management software is not possible.
*2: Maintenance LEDs cannot be operated.
*3: Auto-Recovery cannot be used.
*4: When using HBA address rename, the mounted HBA must be compatible with HBA address rename.
· ·

The following hardware is required for admin clients:

Table 1.14 Required Hardware: Admin Clients

Operating Server	Hardware	Remarks
Admin client	PRIMERGY RX series servers PRIMERGY BX series servers PRIMERGY TX series servers Other PC servers	-

Chapter 2 Installation

This chapter explains the installation of ServerView Resource Coordinator VE.

2.1 Manager Installation

This section explains installation of managers.

2.1.1 Preparations

This section explains the preparations and checks required before commencing installation.

2.1.1.1 Software Preparation and Checks

Software preparation and checks are explained in the following sections.

Exclusive Software Checks

Before installing Resource Coordinator VE, check that the software listed in "1.1.2.3 Exclusive Software" and the manager of Resource Coordinator VE have not been installed on the system.
The method for checking is given below.

1. Open "Add or Remove Programs" from the Windows Control Panel, and check that none of the software listed in "1.1.2.3 Exclusive Software" or the following software are displayed.

   - "Systemwalker Resource Coordinator Virtual server Edition Manager"

   - "ServerView Resource Coordinator VE Manager"

2. When any of the exclusive software is displayed on the [Add or Remove Programs] window, uninstall it according to the procedure described in the relevant manual before installing this product.

If managers of an earlier version of Resource Coordinator VE have been installed, they can be upgraded. Refer to "4.2 Manager". When reinstalling a manager on a system on which of the same version of Resource Coordinator VE has been installed, perform uninstallation referring to "3.1 Manager Uninstallation" and then perform the re-installation.

Information
....
For Windows Server 2008, select "Programs and Features" from the Windows Control Panel.
....

Note
....
When uninstalling exclusive software, there are cases where other system administrators might have installed the software, so check that deleting the software causes no problems before actually doing so.
....

Required Software Preparation and Checks

Before installing Resource Coordinator VE, check that the required software given in "1.1.2.2 Required Software" has been installed. If it has not been installed, install it before continuing.

When operating managers in cluster environments, refer to "Appendix B Manager Cluster Operation Settings and Deletion" and "B.2.1 Preparations", and perform preparations and checks in advance.

 Note

· **ServerView Operations Manager Settings**

In order for Resource Coordinator VE to operate correctly, ensure that the following settings are made when installing ServerView Operations Manager.

- Do not select "IIS (MS Internet Information Server)" for Select Web Server.

- Do not check "Use SSL and Authentification" for WebServer Destination Path.

For the settings, refer to the ServerView Operations Manager manual.

· **Microsoft LAN Manager module**

Before starting installation, obtain the Microsoft LAN Manager module from the following FTP site, and place (*1) or extract it in a work folder (such as C:\temp) of the system where this product is to be installed.

URL: ftp://ftp.microsoft.com/bussys/clients/msclient/dsk3-1.exe (As of August 2009)

*1: The Microsoft LAN Manager module can be installed without extracting it in advance.

Use the following method to extract the compressed file (dsk3-1.exe).

 Example

When dsk3-1.exe was deployed on c:\temp

```
>cd /d c:\temp <RETURN>
>dsk3-1.exe <RETURN>
>Expand c:\temp\protman.do_ /r <RETURN>
>Expand c:\temp\protman.ex_ /r <RETURN>
```

Use the Windows 8.3 format (*2) for the folder name or the file name.
After manager installation is complete, the extracted Microsoft LAN Manager module is no longer necessary.

*2: File names are limited to 8 characters and extensions limited to 3 characters.

2.1.1.2 Collecting and Checking Required Information

Before installing Resource Coordinator VE, collect required information and check the system status, then determine the information to be specified on the installation window. The information that needs to be prepared is given below.

· Installation folder and available disk space

Decide the installation folder for Resource Coordinator VE. Check that the necessary disk space can be secured on the drive for installation.
For the amount of disk space necessary for Resource Coordinator VE, refer to "1.1.2.4 Static Disk Space" and "1.1.2.5 Dynamic Disk Space".

· Image file storage folder and available disk space

Decide the image file storage folder. Check that sufficient disk space can be secured on the drive where the storage folder will be created.
For the necessary disk space, refer to "1.1.2.5 Dynamic Disk Space".

· Port numbers

When Resource Coordinator VE is installed, the port numbers used by it will automatically be set in the services file of the system. So usually, there is no need to pay attention to port numbers.

If the port numbers used by Resource Coordinator VE are being used for other applications, a message indicating that the numbers are in use is displayed when the installer is started, and installation will stop.

In that case, describe the entries for the following seven port numbers used by Resource Coordinator VE in the services file using numbers not used by other software, and then start the installer.

📑 Example
....

```
# service name port number/
protocol name
nfdomain      23457/tcp
nfagent       23458/tcp
rcxmgr        23460/tcp
rcxweb        23461/tcp
rcxtask       23462/tcp
rcxmongrel1   23463/tcp
rcxmongrel2   23464/tcp
```

....

For details, refer to "6.3.1.2 Changing Port Numbers" of the "ServerView Resource Coordinator VE Setup Guide".

・ User account for administrative users of Resource Coordinator VE

Decide the user account name and password for administrative users of Resource Coordinator VE.
For details, refer to "Chapter 4 User Accounts" of the "ServerView Resource Coordinator VE Operation Guide".

・ Check the admin LAN of the admin server and the status of the NIC

Decide the network (IP addresses) to be used for the admin LAN of the admin server.
Check that the NIC used for communication with the admin LAN is enabled.
For admin LANs, refer to "3.2.2 IP Addresses (Admin LAN)" of the "ServerView Resource Coordinator VE Setup Guide".

2.1.2 Installation

The procedure for manager installation is given below.

The installation time for this software is around seven minutes.
Before installing this product, check that the preparations given in "2.1.1 Preparations" have been performed.
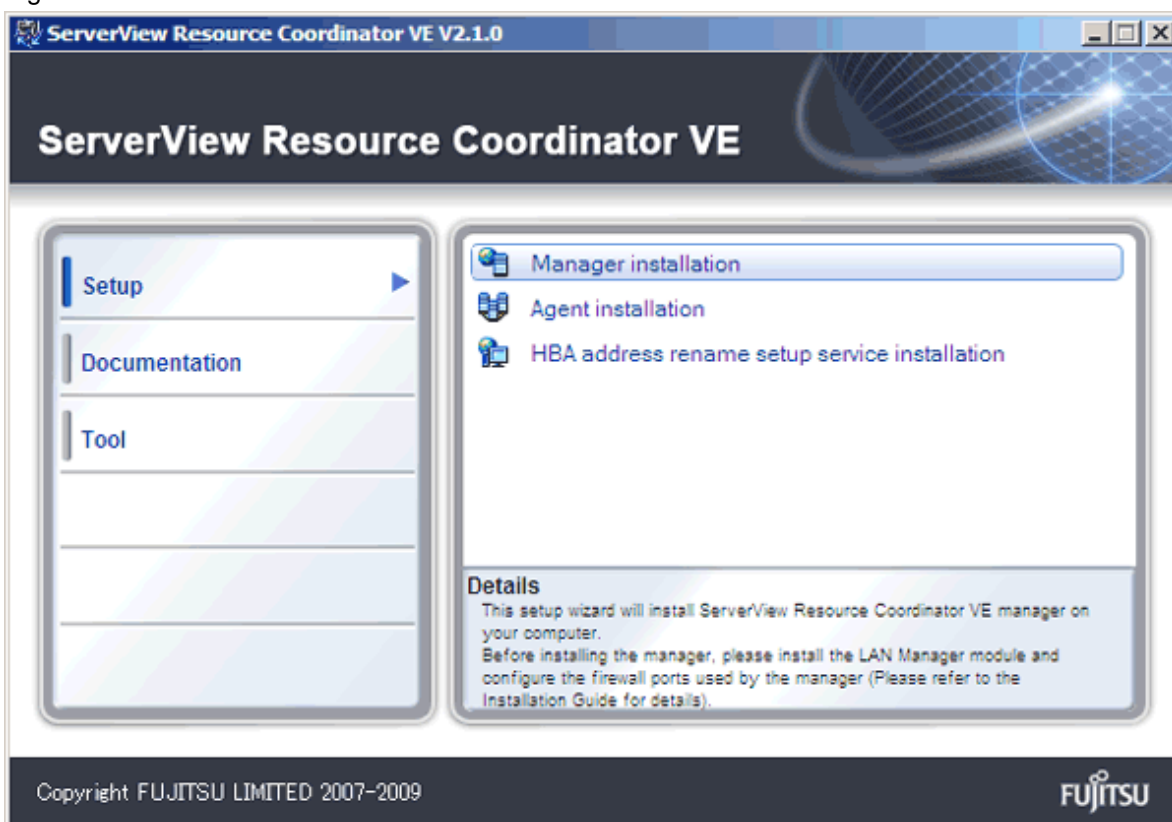
1. Log on to Windows as the administrator.

   Log on to the system on which the manager is to be installed. Log on as a user belonging to the local Administrators group.

2. Boot the installer from the following window displayed when the CD-ROM of this product is set.

   Click "Manager installation" which is displayed on the window.

Figure 2.1 Selection Window

📖 **Information**

. . . .

If the above window does not open, execute "RcSetup.exe" from the CD-ROM drive.

. . . .

3. The setup window of this product will be displayed.

   Check the contents of the license agreement window, etc. and then click <Yes>.

4. The [Select Installation Folder] window will be displayed.

   Specify the installation folder for Resource Coordinator VE and the image file storage folder for system images and cloning images obtained using Resource Coordinator VE.
   Click <Next>> to use the default Installation Folder and Image Folder. To change folders, click <Browse>, change folders, and click <Next>>.

🔶 **Note**

. . . .

When changing the folders, be careful about the following points.

   - Do not specify the installation folder of the system (such as C:\).

   - Enter the location using 100 characters or less. Do not use double-byte characters or the following symbols in the folder name.

     """, "|", ":", "*", "?", "/", ".", "<", ">", ",", "%", "&", "^", "=", "!", ";", "#", "'", "+", "[", "]", "{", "}"

   - When installing this product to Windows 2003 x64 Edition or Windows 2008 x64 Edition, the "%SystemRoot%\System32\" folder and the "Program Files" folder cannot be specified.

   - When installing in cluster environments, specify the same folders on the primary node and the secondary node for the installation folder and the image file storage folder.

. . . .

5. The [Administrative User Creation] window will be displayed.

Enter the information for creating the user account to be used as an administrative user of Resource Coordinator VE.
Specify the user account name and password designed in "User account for administrative users of Resource Coordinator VE" of "2.1.1.2 Collecting and Checking Required Information", and then click <Next>>.

User account name

> Enter the user account name of the administrative user. The name must start with an alphabetic character and can be up to 16 alphanumeric characters long (including underscores, "_", hyphens, "-", and periods, ".").
> Input is not case-sensitive.

Password

> Enter the password of the administrative user. The string must be composed of alphanumeric characters and symbols, and can be up to 16 characters long. Entry of the password cannot be omitted.

Confirm Password

> Enter the password again to confirm it.

Note

. . . .

When installing in cluster environments, specify the same character strings for the user account names and passwords of the primary node and the secondary node.

. . . .

6. The [Choose admin LAN] window will be displayed.

Select the network to be used as the admin LAN of the admin server and specify the location of the Microsoft LAN Manager module obtained in "2.1.1.1 Software Preparation and Checks", and then click <Next>>.

Note

. . . .

Ensure that the NIC for the network to be used is enabled.
When an admin server is connected to several networks, select the network that is available for direct communication with managed servers of the same subnet.

. . . .

7. The [Start Copying Files] window will be displayed.

Check that there are no mistakes in the contents displayed on the window, and then click <Install>>.

Copying of files will start.

To change the contents, click <<Back>.

8. The Resource Coordinator VE setup completion window will be displayed.

   a. When it is an initial installation, check the "Yes, I want to restart my computer now." checkbox, then click <Finish> and restart Windows.

   b. When installing to an environment where this product has been installed before, check the "No, I will restart my computer later." checkbox, then click <Finish> and restart Windows. After that, replace temporarily backed up certificates to their original location then restart Windows.
   For backing up certificates, refer to "3.1 Manager Uninstallation".

Note

. . . .

- **Corrective Action for Installation Failure**

  When installation is stopped due to errors (system errors, processing errors such as system failure, or errors due to execution conditions) or cancellation by users, remove the causes of any problems, and then take corrective action as follows.

- Open "Add or Remove Programs" from the Windows Control Panel, and when "ServerView Resource Coordinator VE Manager" is displayed, uninstall it and then install the manager again.
  For uninstallation, refer to "3.1 Manager Uninstallation".

  ### Information

  For Windows Server 2008, select "Programs and Features" from the Windows Control Panel.

- If the manager is not displayed, install it again.

・ **Nullifying firewall settings for ports to be used by Resource Coordinator VE**

When installing Resource Coordinator VE on systems with active firewalls, in order to enable the manager to communicate with agents correctly, disable the firewall settings for the port numbers to be used for communication.
For the port numbers used by Resource Coordinator VE and required software, refer to "Appendix C Port List" of the "ServerView Resource Coordinator VE Setup Guide".
However, when port numbers have been changed by editing the services file during installation of Resource Coordinator VE, replace the default port numbers listed in "Appendix C Port List" of the "ServerView Resource Coordinator VE Setup Guide" with the port numbers changed to during installation.

2.2 Agent Installation

This section explains the procedure for agent installation.

When deploying multiple new managed servers using Windows or Linux, cloning enables copying of the data installed on a server (OS, updates, Resource Coordinator VE agents, and common software installed on servers) to other servers.
For details, refer to "Chapter 8 Cloning [Windows/Linux]" of the "ServerView Resource Coordinator VE Setup Guide".

2.2.1 Preparations

This section explains the preparations and checks required before commencing installation.

2.2.1.1 Software Preparation and Checks

Software preparation and checks are explained in the following sections.

Exclusive Software Checks

Before installing Resource Coordinator VE, check that the software listed in "1.1.2.3 Exclusive Software" and a Resource Coordinator VE agent have not been installed on the system.
The method for checking is given below.

[Windows/Hyper-V]

1. Open "Add or Remove Programs" from the Windows Control Panel, and check that none of the software listed in "1.1.2.3 Exclusive Software" or the following software are displayed.

   - "Systemwalker Resource Coordinator Virtual server Edition Agent"

   - "ServerView Resource Coordinator VE Agent"

2. When any of the exclusive software is displayed on the [Add or Remove Programs] window, uninstall it according to the procedure described in the relevant manual before installing this product.

   If agents of an earlier version of Resource Coordinator VE have been installed, they can be upgraded. Refer to "4.3 Agent". When reinstalling an agent on a system on which an agent of the same version of Resource Coordinator VE has been installed, perform uninstallation referring to "3.2.1 Uninstallation [Windows/Hyper-V]" and then perform installation.

Information

....

For Windows Server 2008, select "Programs and Features" from the Windows Control Panel.

....

[Linux/VMware]

1. Insert the Resource Coordinator VE CD-ROM, and then execute the following command.

   ```
   # cd CD-ROM_mount_point/agent <RETURN>
   # ./rcxagtinstall.sh -check <RETURN>
   ```

2. When the following message is displayed, it is because Resource Coordinator VE or an earlier Resource Coordinator product has been installed on this machine. Uninstall it according to the procedure described in the relevant manual before proceeding.

   ```
   WARNING : This product is already installed.
   ```

   When the following message is displayed, uninstall the software displayed according to the procedure described in the relevant manual before proceeding.

   ```
   WARNING : Exclusive package software_name is installed.
   ```

Note

....

- When uninstalling exclusive software, there are cases where other system administrators might have installed the software, so check that deleting the software causes no problems before actually doing so.

- With the standard settings of Red Hat Enterprise Linux 5 or later, when CD-ROMs are mounted automatically, execution of programs on the CD-ROM cannot be performed. Release the automatic mount settings and perform mounting manually, or start installation after copying the contents of the CD-ROM to the hard disk.
  When copying the contents of the CD-ROM, replace "CD-ROM_mount_point" with the used directory in the following procedures.

....

Required Software Preparation and Checks

Before installing Resource Coordinator VE, check that the required software given in "" has been installed. If it has not been installed, install it before continuing.

Note

....

・ **ServerView Agent Settings**

To operate Resource Coordinator VE correctly on PRIMERGY series servers, perform the necessary settings for SNMP services during installation of ServerView Agent.
For how to perform SNMP service settings, refer to the ServerView Agent manual.

- For the SNMP community name, specify the same value as the SNMP community name set for the management blade.

- For the SNMP community name, set Read (reference) or Write (reference and updating) authority.

- For the host that receives SNMP packets, select "Accept SNMP packets from any host" or "Accept SNMP packets from these hosts" and set the admin LAN IP address of the admin server.

- For the SNMP trap target, set the IP address of the admin server.
  When an admin server with multiple NICs is set as the SNMP trap target, specify the IP address of the admin LAN used for communication with the managed server.

- **"setupcl.exe" and "sysprep.exe" modules**

  For Windows OS's other than Windows Server 2008, it is necessary to specify storage locations for the "setupcl.exe" and "sysprep.exe" modules during installation. Obtain the newest modules before starting installation of Resource Coordinator VE.

  For the method of obtaining the module, refer to "1.1.2.2 Required Software".

  Extract the obtained module using the following method:

  ### 📝 Example
  ....

  When WindowsServer2003-KB926028-v2-x86-JPN.exe has been placed in c:\temp

  ```
  >cd /d c:\temp <RETURN>
  >WindowsServer2003-KB926028-v2-x86-JPN.exe /x <RETURN>
  ```

  ....

  During installation specify the cabinet file "deploy.cab" in the extracted folder, or the "setupcl.exe" and "sysprep.exe" modules contained in "deploy.cab".
  After agent installation is complete, the extracted module is no longer necessary.
  ....

Configuration File Check

- When using Red Hat Enterprise Linux

  When using the following functions, check the configuration files of network interfaces before installing Resource Coordinator VE, and release any settings made to bind MAC addresses.

  - Server switchover

  - Cloning

  Only perform this when using Red Hat Enterprise Linux 4 AS/ES as the basic software of a server.

  Refer to the /etc/sysconfig/network-scripts/ifcfg-eth*X* file (eth*X* is an interface name such as eth0 or eth1), and check that there is no line starting with "HWADDR=" in the file.
  If there is a line starting with "HWADDR=", this is because the network interface is bound to a MAC address. In that case, comment out the line.

  ### 📝 Example
  ....

  When the Admin LAN interface is eth0

  ```
  DEVICE=eth0
  #HWADDR=xx:xx:xx:xx:xx:xx <- If this line exists, comment it out.
  ONBOOT=yes
  TYPE=Ethernet
  ```

  ....

- When using SUSE Linux Enterprise Server

  - When using server switchover, it is necessary to associate the name of the network settings file and name of the PCI bus number.

    Before changing
    /etc/sysconfig/network/ifcfg-eth-id-*MAC_address*

    After changing
    /etc/sysconfig/network/ifcfg-eth-id-*PCI_bus_number*

    1. Based on the results of ifconfig -a, determine the admin LAN I/F name to use.

    2. Execute the following command (ethtool -i *I/F_name*).

📋 **Example**

••

ethtool -i eth0
driver: tg3
version: 3.86b
firmware-version: 5715s-v3.29
bus-info: 0000:10:04.0

••

   3. Use the value in the section after "bus-info:" in the above results as the PCI bus number for the new name for the settings file.

- When using the backup and restore method for server switchover, during installation perform partition settings so that names of device paths are defined using the "Device Name" format (for example: /dev/sda1) in the /etc/fstab file.

  When installation is already complete, change the names of device paths defined in the boot configuration files /boot/efi/SuSE/ elilo.conf and /boot/grub/menu.lst, and the /etc/fstab file so they use the "Device Name" format (for example: /dev/sda1). For specific details about the mount definition, please refer to the following URL and search for the Document ID:3580082.

URL: http://www.novell.com/support/microsites/microsite.do (As of August 2009)

2.2.1.2 Collecting and Checking Required Information

Before installing Resource Coordinator VE, collect required information and check the system status, then determine the information to be specified on the installation window. The information that needs to be prepared is given below.

・ Installation folder and available disk space

Decide the installation folder for Resource Coordinator VE. Check that the necessary disk space can be secured on the drive for installation.
For the amount of disk space necessary for Resource Coordinator VE, refer to "1.1.2.4 Static Disk Space" and "1.1.2.5 Dynamic Disk Space".

・ Port numbers

When Resource Coordinator VE is installed, the port numbers used by it will automatically be set in the services file of the system. So usually, there is no need to pay attention to port numbers.
If the port numbers used by Resource Coordinator VE are being used for other applications, a message indicating that the numbers are in use is displayed when the installer is started, and installation will stop.
In that case, describe the entries for the port numbers used by Resource Coordinator VE in the services file using numbers not used by other software, and then start the installer.
For details, refer to "6.3.1.2 Changing Port Numbers" of the "ServerView Resource Coordinator VE Setup Guide".

・ Check the status of the admin LAN and NIC

Decide the network (IP addresses) to be used for the admin LAN.
Check that the NIC used for communication with the admin LAN is enabled.
For admin LANs, refer to "3.2.2 IP Addresses (Admin LAN)" of the "ServerView Resource Coordinator VE Setup Guide".

[Linux]
Make the numeral of the managed server's network interface name (eth*X*) one of a consecutive sequence starting from 0. For the settings, refer to the manual for the OS.

・ Check the target disk of image operations

For backup and restoration of system images to disks, refer to "8.1 Overview" of the "ServerView Resource Coordinator VE Operation Guide".
For cloning of disks, refer to "8.1 Overview" of the "ServerView Resource Coordinator VE Setup Guide".

・ Windows Volume License Information [Windows]

When using the following functions, you must have a volume license for the version of Windows to be installed on managed servers by Resource Coordinator VE.
Check whether the Windows license you have purchased is a volume license.

- Server switchover

- Cloning

- Restoration after server replacement

- Server replacement using HBA address rename

When using the cloning function, you must enter volume license information when installing Resource Coordinator VE.
Depending on the version of Windows being used, check the following information prior to installation.

- For Windows Server 2003

Check the product key.
Generally, the product key is provided with the CD-ROM of the Windows OS purchased.

- For Windows Server 2008

Check the information necessary for license authentication (activation).
The two activation methods are Key Management Service (KMS) and Multiple Activation Key (MAK). Check which method you will use.

Check the following information required for activation depending on the method you will use.

- Activation Information

Table 2.1 Activation Information Methods and Information to Check

Method	Information to Check
KMS (*1)	・ The KMS host name (FQDN) or the computer name or IP address ・ Port number (Default 1688) (*2)
MAK	The MAK key

*1: When using Domain Name Service (DNS) to automatically find the KMS host, checking is not necessary.
*2: When changing the port number from the default (1688), correct the definition file after installing agents. For details, refer to "8.2 Collecting a Cloning Image" of the "ServerView Resource Coordinator VE Setup Guide".

- Proxy Server Information

When using a proxy server to connect to the KMS host (KMS method) or the Volume Activation Management Tool (VAMT) to authenticate a proxy license (MAK method), check the host name or IP address, and the port number of the proxy server.

- Administrator's Password

Check the password as it is necessary for performing activation.

2.2.2 Installation [Windows/Hyper-V]

This section explains the procedure for agent installation.

The installation time for this software is around three minutes.
Before installing this product, check that the preparations given in "2.2.1 Preparations" have been performed.
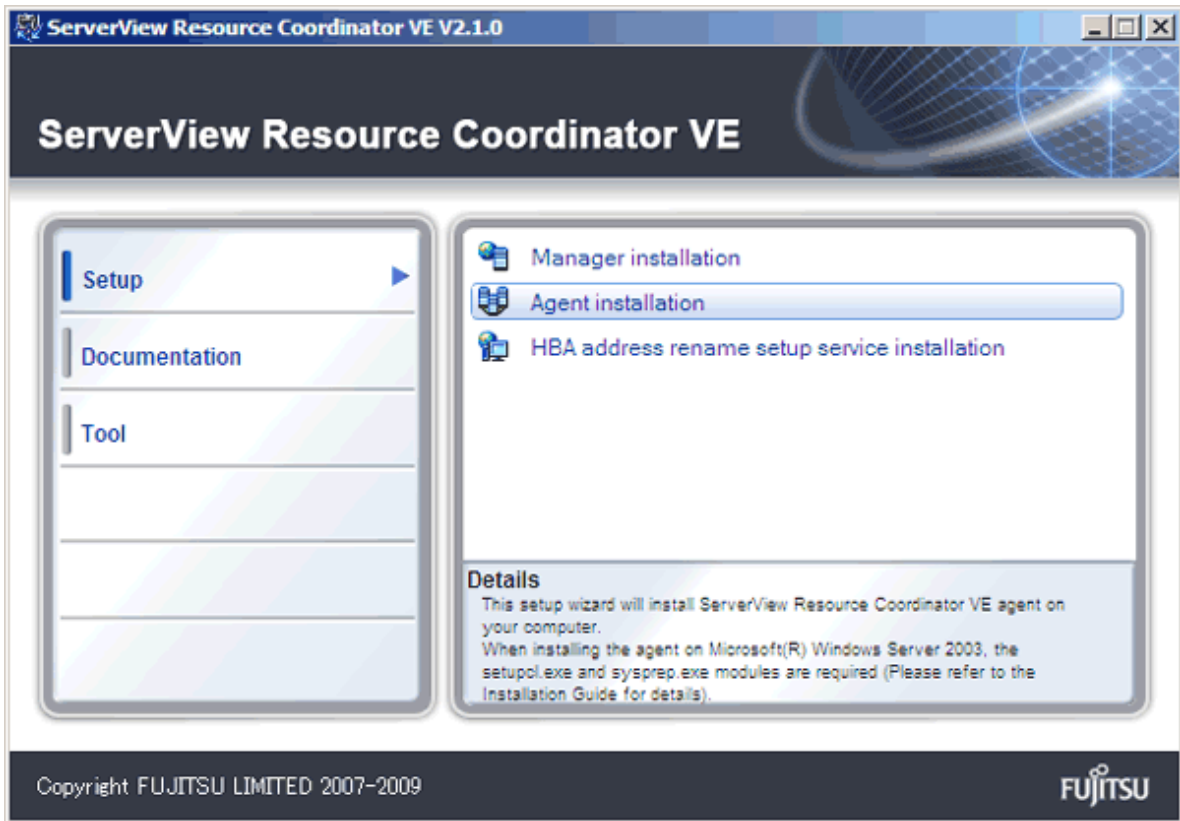
1. Log on to Windows as the administrator.

   Log on to the system on which the agent is to be installed. Log on as a user belonging to the local Administrators group.

2. Boot the installer from the following window displayed when the CD-ROM of this product is set.

   Click "Agent installation" which is displayed on the window.

Figure 2.2 Selection Window

📖**Information**
....
If the above window does not open, execute "RcSetup.exe" from the CD-ROM drive.
....

3. The setup window of this product will be displayed.

   Check the contents of the license agreement window, etc. and then click <Yes>.

4. The [Select Installation Folder] window will be displayed.

   Click <Next>> to use the default Installation Folder and Image Folder. To change folders, click <Browse>, change folders, and click <Next>>.

📄**Note**
....
When changing the folders, be careful about the following points.

   - Do not specify the installation folder of the system (such as C:\).

   - Enter the location using 100 characters or less. Do not use double-byte characters or the following symbols in the folder name.

     """, "|", ":", "*", "?", "/", ".", "<", ">", ",", "%", "&", "^", "=", "!", ";", "#", "'", "+", "[", "]", "{", "}"

   - When installing this product to Windows 2003 x64 Edition or Windows 2008 x64 Edition, the "%SystemRoot%\System32\" folder and the "Program Files" folder cannot be specified.
....

5. The [Admin Server Registration] window will be displayed.

   Specify the admin LAN IP address of the admin server, the folder containing the "setupcl.exe" and "sysprep.exe" modules, then click <Next>>.

Admin Server IP Address

Specify the IP address of the admin server. When the admin server has multiple IP addresses, specify the IP address used for communication with managed servers.

Folder Containing the setupcl.exe and sysprep.exe modules

Click <Refer> and specify "sysprep.exe" and "setupcl.exe" as prepared in "2.2.1.1 Software Preparation and Checks".

📖Information
. . . .

With Windows Server 2008, "setupcl.exe" and "sysprep.exe" are installed along with the OS so specification is not necessary(<Refer> will be disabled).
. . . .

6. The [License Authentication] window will be displayed.

Enter the license authentication information for the Windows volume license.
As license authentication information is not necessary if cloning will not be used, click <Next>> without selecting "Using the cloning feature of this product".

If the cloning function will be used, depending on the version of Windows being used, specify the following information collected in "Windows Volume License Information [Windows]" of "2.2.1.2 Collecting and Checking Required Information", and click <Next>>.

For Windows Server 2003

Product Key

Enter the Windows product key for the computer the agent is to be installed on.

Confirm Product Key

Enter the Windows product key again to confirm it.

For Windows Server 2008

License Authentication Method

Select the license authentication method from Key Management Service (KMS) and Multiple Activation Key (MAK).

- When Key Management Service (KMS) is selected

    Key Management Service host

        Enter the host name of the KMS host name, and the computer name or IP address.
        When using Domain Name Service (DNS) to automatically find the KMS host, this is not necessary.

- When Multiple Activation Key (MAK) is selected

    MAK key

        Enter the MAK key for the computer the agent is to be installed on.

    Confirm Multiple Activation Key

        Enter the MAK key again to confirm it.

Proxy server used for activation

Enter the host name or IP address of the proxy server.
When the proxy server has a port number, enter the port number.

Administrator's Password

Enter the administrator password for the computer the agent is to be installed on.

> **Note**
>
> ....
> If an incorrect value is entered for "Product Key", "KMS Host", "MAK Key", or "Proxy Server to Use for Activation" on the [License Authentication Information Entry] window, cloning will be unable to be used.
> Check that the correct values have been entered.
> ....

7. The [Start Copying Files] window will be displayed.

   Check that there are no mistakes in the contents displayed on the window, and then click <Next>>.

   Copying of files will start.

   To change the contents, click <<Back>.

8. The Resource Coordinator VE setup completion window will be displayed.

   When setup is completed the [Installshield Wizard Complete] window will be displayed.
   Click <Finish> and close the window.

> **Note**
>
> ....
> - **Corrective Action for Installation Failure**
>
>   When installation is stopped due to errors (system errors, processing errors such as system failure, or errors due to execution conditions) or cancellation by users, remove the causes of any problems, and then take corrective action as follows.
>
>   - Open "Add or Remove Programs" from the Windows Control Panel, and when "ServerView Resource Coordinator VE Agent" is displayed, uninstall it and then install the agent again.
>   For uninstallation, refer to "3.2 Agent Uninstallation".
>
>   > **Information**
>   >
>   > ....
>   > For Windows Server 2008, select "Programs and Features" from the Windows Control Panel.
>   > ....
>
>   - If the manager is not displayed, install it again.
>
> - **Nullifying firewall settings for ports to be used by Resource Coordinator VE**
>
>   When installing Resource Coordinator VE on systems with active firewalls, in order to enable the manager to communicate with agents correctly, disable the firewall settings for the port numbers to be used for communication.
>   For the port numbers used by Resource Coordinator VE and required software, refer to "Appendix C Port List" of the "ServerView Resource Coordinator VE Setup Guide".
>   However, when port numbers have been changed by editing the services file during installation of Resource Coordinator VE, replace the default port numbers listed in "Appendix C Port List" of the "ServerView Resource Coordinator VE Setup Guide" with the port numbers changed to during installation.
> ....

2.2.3 Installation [Linux/VMware]

Install agents using the following procedure.

The installation time for this software is around one minute.
Before installing this product, check that the preparations given in "2.2.1 Preparations" have been performed.

1. Log in to the system as the OS administrator (root).

   Boot the managed server that Resource Coordinator VE is to be installed on in multi-user mode, and then log in to the system using root.

2. Set the Resource Coordinator VE CD-ROM and execute the following command, then move to the directory where the installer is stored.

   ```
   # cd CD-ROM_mount_point/agent <RETURN>
   ```

3. Execute the agent installer (rcxagtinstall command).

```
# ./ rcxagtinstall <RETURN>
ServerView Resource Coordinator VE V2.1.0
Copyright FUJITSU LIMITED 2007-2009
This program will install "ServerView Resource Coordinator VE" Agent on your system.
```

4. The license agreement is displayed.

```
This program is protected by copyright law and international treaties. Unauthorized reproduction or
distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and
will be prosecuted to the maximum extent possible under law.

All Rights Reserved, Copyright(c) FUJITSU LIMITED 2007-2009

Do you accept the terms of the above License Agreement? [y,n,?,q]
```

Check the content of the agreement, and enter "y" if you agree or "n" if you do not agree.
If "n" or "q" are entered the installation is discontinued.
If "?" is entered, an explanation of the entry method will be displayed.

5. Entry of the IP address of the admin server is requested.

Specify the IP address of the admin server. When the admin server has multiple IP addresses, specify the IP address used for communication with managed servers.

Example

```
Please input the IP address of the admin server [0-9,.] 192.168.1.2 <RETURN>
```

In the event that the IP address format is not correct, a message requesting re-entry will be displayed.
Remove the cause of the error, and then enter the IP address again.

6. To continue the installation enter "y", to discontinue the installation enter "n" or "q".

```
Do you want to continue the installation of this package? [y,n,?,q]
```

If "?" is entered, an explanation of the entry method will be displayed.

7. Enter "y" and the installation will start.

Example

```
INFO : Starting Installation of "ServerView Resource Coordinator VE" Agent...
...
INFO : Package FJSVssagt was successfully installed.
...
INFO : Package FJSVrcvat was successfully installed.
...
```

8. When installation is completed successfully, the following message will be displayed.

```
INFO : "ServerView Resource Coordinator VE" Agent was installed successfully.
```

Note

・ **Corrective Action for Installation Failure**

Execute the following command and delete packages from the environment on which installation was not completed, and then perform installation again.

```
# cd CD-ROM_mount_point/agent <RETURN>
# ./ rcxagtuninstall <RETURN>
```

・ **Nullifying firewall settings for ports to be used by Resource Coordinator VE**

When installing Resource Coordinator VE on systems with active firewalls, in order to enable the manager to communicate with agents correctly, disable the firewall settings for the port numbers to be used for communication.

Example

[VMware]

```
# /usr/sbin/esxcfg-firewall -openPort 23458,tcp,in,"nfagent" <RETURN>
```

For the port numbers used by Resource Coordinator VE and required software, refer to "Appendix C Port List" of the "ServerView Resource Coordinator VE Setup Guide".
However, when port numbers have been changed by editing the services file during installation of Resource Coordinator VE, replace the default port numbers listed in "Appendix C Port List" of the "ServerView Resource Coordinator VE Setup Guide" with the port numbers changed to during installation.

2.3 HBA address rename setup service Installation

This section explains installation of the HBA address rename setup service.

The HBA address rename setup service is only necessary when using HBA address rename.
For details, refer to "1.3 System Configuration" of the "ServerView Resource Coordinator VE Setup Guide".

2.3.1 Preparations

This section explains the preparations and checks required before commencing installation.

2.3.1.1 Software Preparation and Checks

Software preparation and checks are explained in the following sections.

Exclusive Software Checks

Before installing Resource Coordinator VE, check that the software listed in "1.1.2.3 Exclusive Software" and the HBA address rename setup service of Resource Coordinator VE have not been installed on the system.
The method for checking is given below.

1. Open "Add or Remove Programs" from the Windows Control Panel, and check that none of the software listed in "1.1.2.3 Exclusive Software" or the following software are displayed.

   - "Systemwalker Resource Coordinator Virtual server Edition HBA address rename setup service"

   - "ServerView Resource Coordinator VE HBA address rename setup service"

2. When any of the exclusive software is displayed on the [Add or Remove Programs] window, uninstall it according to the procedure described in the relevant manual before installing this product.

2.3.1.2   Collecting and Checking Required Information

Before installing Resource Coordinator VE, collect required information and check the system status, then determine the information to be specified on the installation window. The information that needs to be prepared is given below.

- ・ Installation folder and available disk space

  Decide the installation folder for Resource Coordinator VE. Check that the necessary disk space can be secured on the drive for installation.
  For the amount of disk space necessary for Resource Coordinator VE, refer to "1.1.2.4 Static Disk Space" and "1.1.2.5 Dynamic Disk Space".

2.3.2   Installation

Install the HBA address rename setup service using the following procedure:

The installation time for this software is around one minute.
Before installing this product, check that the preparations given in "2.3.1 Preparations" have been performed.
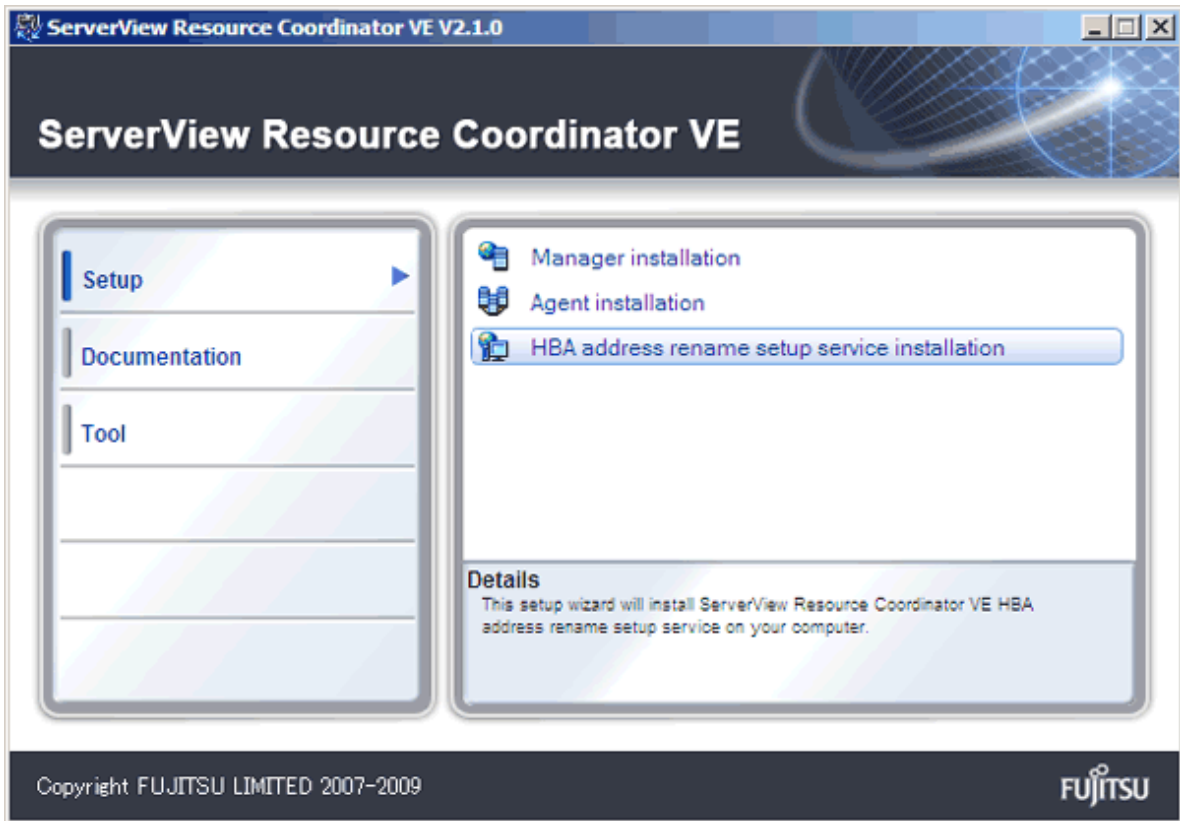
1. Log on to Windows as the administrator.

   Log on to the system on which the HBA address rename setup service is to be installed. Log on as a user belonging to the local Administrators group.

2. Boot the installer from the following window displayed when the CD-ROM of this product is set.

   Click "HBA address rename setup service installation" on the window.

Figure 2.3 Selection Window

Information

. . . .

If the above window does not open, execute "RcSetup.exe" from the CD-ROM drive.

. . . .

3. The setup window of this product will be displayed.

   Check the contents of the license agreement window, etc. and then click <Yes>.

4. The [Select Installation Folder] window will be displayed.

   Click <Next>> to use the default Installation Folder and Image Folder. To change folders, click <Browse>, change folders, and click <Next>>.

Note

. . . .

When changing the folders, be careful about the following points.

   - Do not specify the installation folder of the system (such as C:\).

   - Enter the location using 100 characters or less. Do not use double-byte characters or the following symbols in the folder name.

     """, "|", ":", "*", "?", "/", ".", "<", ">", ",", "%", "&", "^", "=", "!", ";", "#", "", "+", "[", "]", "{", "}"

   - When installing this product to Windows 2003 x64 Edition or Windows 2008 x64 Edition, the "%SystemRoot%\System32\" folder and the "Program Files" folder cannot be specified.

. . . .

5. The [Start Copying Files] window will be displayed.

   Check that there are no mistakes in the contents displayed on the window, and then click <Next>>.

   Copying of files will start.

   To change the contents, click <<Back>.

6. The Resource Coordinator VE setup completion window will be displayed.

When using the HBA address rename setup service immediately after configuration, check the "Yes, launch it now." checkbox.

Click <Finish> and close the window. If the checkbox was checked, the HBA address rename setup service will be started after the window is closed.
If the checkbox was not checked, start the HBA address rename setup service referring to the procedure in "6.2.2.1 Settings for the HBA address rename setup service" of the "ServerView Resource Coordinator VE Setup Guide".

📗 Note
....

· **Corrective Action for Installation Failure**

When installation is stopped due to errors (system errors, processing errors such as system failure, or errors due to execution conditions) or cancellation by users, remove the causes of any problems, and then take corrective action as follows.

- Open "Add or Remove Programs" from the Windows Control Panel, and if "ServerView Resource Coordinator VE HBA address rename setup service" is displayed, uninstall it and then install the service again.
  For uninstallation, refer to "3.3 HBA address rename setup service Uninstallation".

📘 Information
....
For Windows Server 2008 or Windows Vista, select "Programs and Features" from the Windows Control Panel.
....

- If the manager is not displayed, install it again.
....

Chapter 3 Uninstallation

This chapter explains the uninstallation of ServerView Resource Coordinator VE.

The uninstallation of managers, agents, and the HBA address rename setup service is performed in the following order:

1. Manager Uninstallation

   Refer to "3.1 Manager Uninstallation".

2. Agent Uninstallation

   Refer to "3.2 Agent Uninstallation".

3. HBA address rename setup service Uninstallation

   For uninstallation, refer to "3.3 HBA address rename setup service Uninstallation".

3.1 Manager Uninstallation

The uninstallation of managers is explained in the following sections.

3.1.1 Preparations

Pre-uninstallation Advisory Notes

- Checking system images and cloning images

  When the storage folder for system images and cloning images obtained using Resource Coordinator VE has not been changed from the default value, all obtained system images and cloning images will be deleted.

  If the images are necessary, before uninstalling Resource Coordinator VE back up (copy) the images to a folder other than the one given below.

  Installation_folder\ScwPro\depot

  When the storage folder for images has been changed from the default value, collected system images and cloning images will not be deleted and will remain in the specified image file storage folder.

  When they are not necessary, delete them manually after uninstalling Resource Coordinator VE.

- Checking HBA address rename

  When using HBA address rename, the manager sets the WWN for the HBA of each managed server.
  When uninstalling a manager be sure to do so in the following order:

  1. Delete servers (*1)

  2. Uninstall the manager

  *1: For the server deletion method, refer to "6.4.2 Deleting Managed Servers" of the "ServerView Resource Coordinator VE Setup Guide".

  Note

  When using HBA address rename, if the manager is uninstalled without servers being deleted, the WWNs of the servers are not reset to the factory default values.
  Ensure uninstallation of managers is performed only after servers are deleted.

  Also, when using managers in cluster environments, release cluster settings before uninstalling managers. For how to release cluster settings, refer to "Appendix B Manager Cluster Operation Settings and Deletion".

- Back up (copy) certificates

  When operating managers in cluster environments, back up (copy) certificates before performing uninstallation.

Manager certificates are stored in the following folders:

Drive_name:\RCoordinator\certificate

3.1.2 Uninstallation

The procedure for manager uninstallation is as follows:

Before uninstalling this product, check that the preparations given in "" have been performed.

1. Log on to Windows as the administrator.

   Log on to the system from which the manager is to be uninstalled. Log on as a user belonging to the local Administrators group.

2. Delete the manager using the following method.

   Open "Add or Remove Programs" from the Windows Control Panel, and select "ServerView Resource Coordinator VE Manager" and delete it from the [Add or Remove Programs] window.

Information
....
For Windows Server 2008, select "Programs and Features" from the Windows Control Panel.
....

3. The [Confirm Uninstall] dialog will be displayed, then click <OK>.

Information
....
The services of Resource Coordinator VE are automatically stopped and deleted.
....

4. When uninstallation is complete, the InstallShield Wizard window will be displayed, then click <Finish>.

・ The start-up account created during installation is not automatically deleted.

   When the account is not necessary, delete it. However, do not delete the account if it is also used for other purposes.

Information
....
Deletion Methods for Windows User Accounts
Open "Management" from "Administrative Tools" on the Windows Control Panel, then select [Local Users and Groups]-[User] on the [Management] window.
Right-click the user account to be deleted, and then select [Delete].
....

Note
....
・ Any updates that have been applied to Resource Coordinator VE will be deleted during uninstallation. There is no need to remove updates before performing uninstallation.

・ If a manager is uninstalled and then reinstalled without agents being deleted, it will not be able to communicate with agents used before uninstallation.
   In this case, the certificates to indicate that it is the same manager are necessary.

   After installation, manager certificates are stored in the following folder:

   - *Installation_folder*\Manager\etc\opt\FJSVssmgr\current\certificate

   - *Installation_folder*\Manager\etc\opt\FJSVrcxdm\certificate

   When uninstalling the manager, the certificates are backed up in the following folder. When reinstalling a manager and using the same certificates, copy the backed up certificates to the appropriate folders.

   - *Installation_folder*\back\site\certificate

   - *Installation_folder*\back\domain\certificate

If the certificates backed up on uninstallation are not necessary, delete them manually.

When operating managers in cluster environments, back up the certificates as indicated in the preparations for uninstallation.

When reinstalling a manager in a cluster environment and using the same certificates, copy the backed up certificates from the primary node to the above folders.

- After uninstallation the installation folder (Default: C:\Program Files\Resource Coordinator VE) will remain. If the remaining folder is not necessary, delete it manually.

- When uninstallation is stopped due to errors (system errors or processing errors such as system failure) or cancellation by users, remove the causes of any problems, and then attempt uninstallation again.
  If uninstallation fails even when repeated, the executable program to be uninstalled may have become damaged somehow.
  In this case, set the Resource Coordinator VE CD-ROM, open the command prompt and execute the following command:

> >"*CD-ROM_drive***manager\win\setup.exe**" **/z"UNINSTALL"** <RETURN>

Open "Add or Remove Programs" from the Windows Control Panel, and if "ServerView Resource Coordinator VE Manager" is not displayed on the [Add or Remove Programs] window, delete any remaining resources manually.

Information

For Windows Server 2008, select "Programs and Features" from the Windows Control Panel.

3.2 Agent Uninstallation

The uninstallation of agents is explained in the following sections.

3.2.1 Uninstallation [Windows/Hyper-V]

The procedure for agent uninstallation is as follows:

1. Log on to Windows as the administrator.

   Log on to the system from which the agent is to be uninstalled. Log on as a user belonging to the local Administrators group.

2. Delete the agent using the following method.

   Open "Add or Remove Programs" from the Windows Control Panel, and select "ServerView Resource Coordinator VE Agent" and delete it from the [Add or Remove Programs] window.

Information

For Windows Server 2008, select "Programs and Features" from the Windows Control Panel.

3. The [Confirm Uninstall] dialog will be displayed, then click <OK>.

Information

The services of Resource Coordinator VE are automatically stopped and deleted.

4. When uninstallation is complete, the InstallShield Wizard window will be displayed, then click <Finish>.

Note

- Any updates that have been applied to Resource Coordinator VE will be deleted during uninstallation. There is no need to remove updates before performing uninstallation.

・ After uninstallation the installation folder (Default: C:Program Files\Resource Coordinator VE) may remain. In that case, delete the folder manually.

・ When uninstallation is stopped due to errors (system errors or processing errors such as system failure) or cancellation by users, remove the causes of any problems, and then attempt uninstallation again.
If uninstallation fails even when repeated, the executable program to be uninstalled may have become damaged somehow.
In this case, set the Resource Coordinator VE CD-ROM, open the command prompt and execute the following command:

>"*CD-ROM_drive***agent\win\setup.exe**" **/z"UNINSTALL"** <RETURN>

Open "Add or Remove Programs" from the Windows Control Panel, and if "ServerView Resource Coordinator VE Agent" is not displayed on the [Add or Remove Programs] window, delete any remaining resources manually.

Information

For Windows Server 2008, select "Programs and Features" from the Windows Control Panel.

3.2.2 Uninstallation [Linux/VMware]

The procedure for agent uninstallation is as follows:

1. Log in to the system as the OS administrator (root).

   Log in to the managed server from which Resource Coordinator VE will be uninstalled, using root.

2. Execute the rcxagtuninstall command.

   Executing this command performs uninstallation, and automatically deletes the packages of Resource Coordinator VE.

   # **/opt/FJSVrcxat/bin/rcxagtuninstall** <RETURN>

   When uninstallation is completed successfully, the following message will be displayed.

   INFO : "ServerView Resource Coordinator VE" Agent was uninstalled successfully.

   If uninstallation fails, the following message will be displayed.

   ERROR : Uninstalling *package_name* was failed.

Information

When the uninstaller of this product is started, the daemons of this product are stopped.

3. If uninstallation fails, use the rpm command to remove the packages given in the message, and start the process from 1. again.

   # **rpm -e** *package_name* <RETURN>

Note

・ When updates have been applied to Resource Coordinator VE, return it to the state prior to application before performing uninstallation.

・ After uninstallation, the installation directories below may remain. In that case, delete any remaining directories manually.

   - /opt/systemcastwizard

   - /opt/FJSVnrmp

   - /opt/FJSVrcxat

- /opt/FJSVssagt

- /etc/opt/FJSVnrmp

- /etc/opt/FJSVrcxat

- /etc/opt/FJSVssagt

- /var/opt/FJSVnrmp

- /var/opt/FJSVrcxat

- /var/opt/FJSVssagt

- /var/opt/systemcastwizard

3.3 HBA address rename setup service Uninstallation

This section explains uninstallation of the HBA address rename setup service.

3.3.1 Uninstallation

The procedure for HBA address rename setup service uninstallation is as follows:

1. Log on to Windows as the administrator.

   Log on to the system from which the HBA address rename setup service is to be uninstalled. Log on as a user belonging to the local Administrators group.

2. Uninstall the HBA address rename setup service using the following procedure:

   Open "Add or Remove Programs" from the Windows Control Panel, and select "ServerView Resource Coordinator VE HBA address rename setup service" and delete it from the [Add or Remove Programs] window.

   ### Information

   For Windows Server 2008 or Windows Vista, select "Programs and Features" from the Windows Control Panel.

3. The [Confirm Uninstall] dialog will be displayed, then click <OK>.

   ### Information

   The services of Resource Coordinator VE are automatically stopped and deleted.

4. When uninstallation is complete, the InstallShield Wizard window will be displayed, then click <Finish>.

Note

・ Any updates that have been applied to Resource Coordinator VE will be deleted during uninstallation. There is no need to remove updates before performing uninstallation.

・ After uninstallation the installation folder (Default: C:Program Files\Resource Coordinator VE) may remain. In that case, delete the folder manually.

・ When uninstallation is stopped due to errors (system errors or processing errors such as system failure) or cancellation by users, remove the causes of any problems, and then attempt uninstallation again.
  If uninstallation fails even when repeated, the executable program to be uninstalled may have become damaged somehow.
  In this case, set the Resource Coordinator VE CD-ROM, open the command prompt and execute the following command:

  >"*CD-ROM_drive*\hbaar\win\setup.exe" /z"UNINSTALL" <RETURN>

Open "Add or Remove Programs" from the Windows Control Panel, and if "ServerView Resource Coordinator VE HBA address rename setup service" is not displayed on the [Add or Remove Programs] window, delete any remaining resources manually.

Information

For Windows Server 2008 or Windows Vista, select "Programs and Features" from the Windows Control Panel.

Chapter 4 Upgrading from Earlier Versions

This chapter explains how to upgrade environments configured using Systemwalker Resource Coordinator Virtual server Edition (hereinafter earlier version) to this version of ServerView Resource Coordinator VE (hereinafter this version) environments.

4.1 Overview

This section explains an overview of upgrading from earlier versions to this version.

Perform the upgrade in the following order:

1. Upgrade the manager

2. Upgrade the agents

3. Upgrade the clients and HBA address rename setup service

Note

. . . .

The combinations of managers and agents, clients, and HBA address rename setup service supported by Resource Coordinator VE are as shown below.

	Agent			Client			HBA address rename setup service		
Manager	V13.2.0	V13.3.0	V2.1.0	V13.2.0	V13.3.0	V2.1.0	V13.2.0	V13.3.0	V2.1.0
V2.1.0	Yes (*1)	Yes (*1)	Yes	No	No	Yes	No	No	Yes

Yes: Supported
No: Not supported

*1: When using managers of this version in combination with agents of an earlier version, use is limited to the functional range of the earlier version.

. . . .

4.2 Manager

This section explains the upgrading of managers.

Transferred Data

The following manager data is transferred:

- Resource Coordinator VE setting information (Setting information for the environment of the earlier version)

- Certificates

- System images and cloning images (Files in the image file storage folder)

Preparations

Perform the following checks before upgrading:

- Check that the environment is one in which managers of this version can be operated.
  For operating environments, refer to "Chapter 1 Operational Environment".

- To confirm that the upgrade is complete, if there are registered VM hosts on which there are VM guests, check from the RC console that all of the VM guests are displayed.

- When server switchover settings have been performed, it is not possible to upgrade when spare servers have been switched to. Restore any such servers before starting the upgrade.

For how to restore, refer to information about Server Switchover in the "Systemwalker Resource Coordinator Virtual server Edition Operation Guide".

- The following information is not transferred. It will need to be set again after the upgrade. Record the following information from the Resource Coordinator console of the earlier version.

    - User account information

    - The registration status of the agent of each managed server and maintenance mode settings

    - Spare server settings (when VM hosts have been set as spare servers)

- The following assets are not transferred.

    - Power consumption data

        When using power monitoring with V13.3.0, collected power consumption data is not transferred. If the power consumption data is necessary, save it in CSV format. For how to export it, refer to "11.2 Exporting Power Consumption Data" of the "Systemwalker Resource Coordinator Virtual server Edition Operation Guide".

Upgrading

Upgrading is performed by exporting and importing system configuration files for pre-configuration. Perform the upgrade using the following procedure:

See

For pre-configuration, refer to the following manuals:

- "Systemwalker Resource Coordinator Virtual server Edition Setup Guide" of the earlier version

- "Chapter 7 Pre-configuration" of the "ServerView Resource Coordinator VE Setup Guide"

- "Appendix D Format of System Configuration Files" of the "ServerView Resource Coordinator VE Setup Guide"

Note

- When upgrading from V13.2.0, do not uninstall V13.2.0 clients until step 2. has been completed.

- Do not change the hardware settings or configurations of managers, agents, or any other devices until upgrading is completed.

1. Set Maintenance Mode

    Use the Resource Coordinator console of the earlier version to set all managed servers to maintenance mode.

2. System Configuration File Export

    Use the pre-configuration function of the earlier version and export the system configuration file in CSV format. During the export, do not perform any other operations with Resource Coordinator VE.
    For the export method, refer to the "Systemwalker Resource Coordinator Virtual server Edition Setup Guide" of the earlier version.

3. Back up (copy) assets to transfer

    a. Perform backup (copying) of the certificates of the earlier version.

        Back up (copy) the following folders:

        Installation_folder\Site Manager\etc\opt\FJSVssmgr\current\certificate
        Installation_folder\Domain Manager\etc\opt\FJSVrcxdm\certificate

b. Back up (copy) the folder containing the system images and cloning images of the earlier version to a location other than the installation folder and image file storage folder.
When using the default image file storage folder, back up (copy) the following folder:

Installation_folder\ScwPro\depot\Cloneimg

When using a folder other than the default, back up (copy) the "Cloneimg" folder in the folder used.

Note

Before making a backup (copy) of system images and cloning images, check the available disk space.
For the disk space necessary for system images and cloning images, refer to the "Systemwalker Resource Coordinator Virtual server Edition Installation Guide" of the earlier version.
When there is no storage folder for system images and cloning images, this step is not necessary.

4. Uninstallation of Earlier Version Managers

Refer to the "Systemwalker Resource Coordinator Virtual server Edition Installation Guide" of the earlier version, and uninstall the managers of the earlier version using the procedure given.

Note

- Do not "Delete servers" as described in Preparations of the "Systemwalker Resource Coordinator Virtual server Edition Installation Guide" of the earlier version. When managed servers using HBA address rename have been deleted, it is necessary to reboot managed servers after upgrading of the manager is completed.

- User account information is deleted when managers are uninstalled. Refer to step 6. and perform reconfiguration from the RC console.

- In environments where there are V13.2.0 managers and clients, uninstall V13.2.0 clients only after uninstalling the manager of the earlier version.

5. Installation of Managers of This Version

Install managers of this version.
For installation, refer to "Manager Installation".

Note

When installing managers, specify the same admin LAN as used for the earlier version on the [Admin LAN Selection] window.

After installing managers, use the following procedure to restore the certificates and image file storage folder backed up (copied) in step 3.

a. Stop the manager.

b. Return the image file storage folder backup (copy) to the folder specified during installation.

When using the default image file storage folder, restore to the following folder:

Installation_folder\ScwPro\depot\Cloneimg

When using a folder other than the default, restore to the new folder.
When the image file storage folder was not backed up, this step is not necessary.

c. Restore the backed up (copied) certificates to the manager installation directory.
Restore to the following folder:

Installation_folder\Manager\etc\opt\FJSVssmgr\current\certificate
Installation_folder\Manager\etc\opt\FJSVrcxdm\certificate

    d. Start the manager.

       For the methods for starting and stopping managers, refer to "5.1 Manager" of the "ServerView Resource Coordinator VE Setup Guide".

6. User Account Settings

Using the information recorded during preparations, perform setting of user accounts using the RC console.
For details, refer to "Chapter 4 User Accounts" of the "ServerView Resource Coordinator VE Operation Guide".

7. Edit System Configuration Files

Based on the environment created for the earlier version, edit the system configuration file (CSV format) exported in step 2.
Change the operation column of all resources to "new".

When upgrading from V13.3.0, do not change the operation column of resources contained in the following sections to "new":

  - ServerAgent

  - ServerVMHost

  - Memo

For how to edit system configuration files (CVS format), refer to the "Systemwalker Resource Coordinator Virtual server Edition Setup Guide" of the earlier version.

🅖 Note
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When VM hosts have been configured as spare servers, set hyphens ("-") for all parameters ("Spare Server Name", "VLAN Switchover", and "Automatic Switch") of the Server Switchover Settings" of "(3) Server Blade Information".
··

8. Creating an Environment of This Version

Import the system configuration file and create an environment of this version.
Use the following procedure to configure an environment of this version.

    a. System Configuration File Import

       Import the edited system configuration file.
       For the import method, refer to "7.2 Importing the System Configuration File" of the "ServerView Resource Coordinator VE Setup Guide".

    b. Agent Registration

       Using the information recorded during preparations, perform agent registration using the RC console. Perform agent registration with the OS of the managed server booted.
       For agent registration, refer to "6.2.3 Software Installation and Agent Registration" of the "ServerView Resource Coordinator VE Setup Guide".

       After completing agent registration, use the RC console to check that all physical OSs and VM hosts are displayed. When there are VM hosts (with VM guests) registered, check that all VM guests are displayed.

    c. Setting spare server information (only when VM hosts have been set as spare servers)

       Using the information recorded during preparations, perform registration of spare server information using the RC console. For registration of spare server information, refer to "9.6 Server Switchover Settings" of the "ServerView Resource Coordinator VE Setup Guide".

    d. Registration of labels, comments, and contact information

       This procedure is not necessary when upgrading from V13.2.0.
       When label, comment, and contact information has been registered, change the contents of the operation column of the system configuration file (CSV format) that were changed to "new" in step 7. back to hyphens ("-"), and change the contents of the operation column of resources contained in the [Memo] section to "new".
       For how to edit system configuration files (CVS format), refer to the "Systemwalker Resource Coordinator Virtual server Edition Setup Guide" of the earlier version.
       Import the edited system configuration file.

For the import method, refer to "7.2 Importing the System Configuration File" of the "ServerView Resource Coordinator VE Setup Guide".

9. Set Maintenance Mode

Using the information recorded during preparation, set the managed servers set into maintenance mode into maintenance mode again.
For maintenance mode settings, refer to "Appendix F Maintenance Mode" of the "ServerView Resource Coordinator VE Setup Guide".

Note

When using backup system images or collecting cloning images without upgrading agents, either reboot managed servers after the manager upgrade is completed or restart the "Deployment service" described in "5.2 Agent" of the "ServerView Resource Coordinator VE Setup Guide".
For restarting agents, refer to "5.2 Agent" of the "ServerView Resource Coordinator VE Setup Guide".

4.3 Agent

This section explains the upgrading of agents.
Upgrading of agents is not mandatory even when managers have been upgraded to this version. Only perform upgrade when necessary.

Transferred Data

The following agent data is transferred:

- Definition files of the network parameter auto-configuration function (when the network parameter auto-configuration function is being used)

Preparations

Perform the following checks before upgrading:

- Check that the environment is one in which agents of this version can be operated.
  For operating environments, refer to "Chapter 1 Operational Environment".

Upgrading

Use the following procedure to upgrade agents of earlier versions to agents of this version on all of the managed servers that are being upgraded.

Note

- Do not perform any other operations with Resource Coordinator VE until the upgrade is completed.

- Perform upgrading of agents after upgrading of managers is completed.

- When using the network parameter auto-configuration function during deployment of cloning images, specify the same installation folder for agents of the earlier version and those of this version.

1. Set Maintenance Mode

When server switchover settings have been performed for managed servers, set them to maintenance mode.
When managed servers are set as spare servers, set the managed servers set as spare servers to maintenance mode.

2. Backing up (copying) of Network Parameter Auto-configuration Function Definition Files

    When using the network parameter auto-configuration function during deployment of cloning images, back up (copy) the following folders and files to a location other than the agent installation folder.

    [Windows]
    Installation_folder\Agent\etc\event_script folder
    Installation_folder\Agent\etc\ipaddr.conf file
    Installation_folder\Agent\etc\FJSVrcx.conf file

    [Linux]
    /etc/opt/FJSVrcxat/event_script directory
    /etc/opt/FJSVnrmp/lan/ipaddr.conf file
    /etc/FJSVrcx.conf file

3. Uninstallation of Earlier Version Agents

    Refer to "Systemwalker Resource Coordinator Virtual server Edition Installation Guide", and uninstall the agents.

4. Installation of Agents of This Version.

    Install agents of this version.
    For installation, refer to "Agent Installation".

5. Restoration of Network Parameter Auto-configuration Function Definition Files

    When using the network parameter auto-configuration function during deployment of cloning images, restore the definition file that was backed up (copied) in step 2. When step 2. was not performed this step is not necessary.

    a. Stop agents.

        For stopping agents, refer to "5.2 Agent" of the "ServerView Resource Coordinator VE Setup Guide".

    b. Restore the definition file.

        Restore the folders and files backed up (copied) in step 2. to the following locations in the installation folder of this version:

        [Windows]
        Installation_folder\Agent\etc\event_script folder
        Installation_folder\Agent\etc\ipaddr.conf file
        Installation_folder\Agent\etc\FJSVrcx.conf file

        [Linux]
        /etc/opt/FJSVrcxat/event_script directory
        /etc/opt/FJSVnrmp/lan/ipaddr.conf file
        /etc/FJSVrcx.conf file

    c. Start agents.

        For starting agents, refer to "5.2 Agent" of the "ServerView Resource Coordinator VE Setup Guide".

6. Release Maintenance Mode

    Release the maintenance mode of managed servers set to maintenance mode in step 1.

Note

・ After upgrading agents, use the RC console to check that the upgraded managed servers are being displayed correctly.

・ Updating of system images and cloning images is advised after agents have been upgraded.

4.4 Client

This section explains the upgrading of clients.

For upgrading from Systemwalker Resource Coordinator Virtual server Edition V13.2.0 (hereinafter V13.2.0), refer to "Transferring from V13.2.0"

Web browsers are used as clients of this version.

There is no data to transfer from V13.3.0.

When upgrading clients, it is necessary to clear the Web browser's cache (temporary internet files).

Use the following procedure to clear the Web browser's cache.

- ・ For Internet Explorer 6

    1. Select [Tools] - [Internet Options].

        The [Internet Options] dialog is displayed.

    2. Select the [General] tab on the [Internet Options] dialog.

    3. Click <Delete Files> in the "Temporary Internet files" area.

        The [Delete Files] dialog is displayed.

    4. Click <OK>.

        The Web browser's cache is cleared.

- ・ For Internet Explorer 7

    1. Select [Tools]-[Delete Browsing History] from the upper-right command bar.

        The [Delete Browsing History] dialog is displayed.

    2. Click <Delete files> in the "Temporary Internet files" area of the [Delete Browsing History] dialog.

        The [Delete Files] dialog is displayed.

    3. Click <Yes>.

        The Web browser's cache is cleared.

Transferring from V13.2.0

When upgrading from V13.2.0 to this version, refer to the "Systemwalker Resource Coordinator Virtual server Edition Installation Guide" V13.2.0 and uninstall the V13.2.0 clients.

Note

When upgrading from V13.2.0, V13.2.0 clients are used when upgrading managers.

Do not uninstall V13.2.0 clients until step 2. of "Upgrading" in "4.2 Manager" has been completed.

4.5 HBA address rename setup service

This section explains upgrading of the HBA address rename setup service.

There is no HBA address rename setup service data to transfer when upgrading from an earlier version to this version. After upgrading managers and uninstalling V13.2.0 clients and the V13.3.0 HBA address rename setup service, install the HBA address rename setup service of this version and perform settings again.

Information

- ・ The V13.2.0 HBA address rename setup service is deleted when V13.2.0 clients are uninstalled. For uninstallation of V13.2.0 clients , refer to the "Systemwalker Resource Coordinator Virtual server Edition Installation Guide" of V13.2.0.

- ・ For the installation method of the HBA address rename setup service, refer to "2.3 HBA address rename setup service Installation".

    For settings for the HBA address rename setup service, refer to "6.2.2.1 Settings for the HBA address rename setup service" of the "ServerView Resource Coordinator VE Setup Guide".

Appendix A Advisory Notes for Environments with Systemwalker Centric Manager or ETERNUS SF Storage Cruiser

This appendix explains advisory notes for use of Resource Coordinator VE in combination with Systemwalker Centric Manager or ETERNUS SF Storage Cruiser.

In environments where the following products have been installed, the SNMP Trap monitoring service and the SystemWalker MpWksttr service have already been installed.

- ・ Systemwalker Centric Manager (Operation management servers and section admin servers)
- ・ ETERNUS SF Storage Cruiser Manager

When the SystemWalker MpWksttr service has been installed, Resource Coordinator VE performs trouble management using the installed program.

When the following operations have been performed, the SystemWalker MpWksttr service will have been deleted, so perform "Installation and Setup".

- ・ Uninstallation of the software which installed the SystemWalker MpWksttr service, or Systemwalker Centric Manager (*1), in environments involving combination with Systemwalker Centric Manager or ETERNUS SF Storage Cruiser.

  *1: All Centric Manager operation environments, including those on which the SystemWalker MpWksttr service has not been installed, but excluding Operation management servers and section admin servers.

Installation and Setup

1. Open the command prompt.

   Only users with OS administrator authority can execute commands.

2. Move to the SystemWalker MpWksttr service folder.

   > **cd** "*Installation_folder***Manager\opt\FJSVswstt\mpwksttr\bin**" <RETURN>

3. Execute the installation command.

   > **nwtdsch -install** "*Installation_folder***Manager\opt\FJSVswstt**" <RETURN>

4. Move to the command folder of the SystemWalker MpWksttr service.

   > **cd** "*Installation_folder***Manager\opt\FJSVswstt\bin**" <RETURN>

5. Perform the setting for the SNMP trap service.

   > **mpmsts ON** <RETURN>

6. Reboot the system.

Appendix B Manager Cluster Operation Settings and Deletion

This section explains the settings necessary for operating Resource Coordinator VE in cluster systems and the procedures for deleting this product from cluster systems.

B.1 What are Cluster Systems

In cluster systems, two or more servers are operated as a single virtual server in order to enable high availability.

If a system is run with only one server, and the server or an application operating on it fails, all operations would stop until the server is rebooted.

In a cluster system where two or more servers are linked together, if one of the servers becomes unusable due to trouble with the server or an application being run, by restarting the applications on the other server it is possible to resume operations, shortening the length of time operations are stopped.
Switching from a failed server to another, operational server in this kind of situation is called failover.

In cluster systems, groups of two or more servers are called clusters, and the servers comprising a cluster are called nodes.

Clusters are classified into the following types:

- Standby clusters

  This type of cluster involves standby nodes that stand ready to take over from operating nodes. The mode can be one of the following modes:

  - 1:1 hot standby

    A cluster consisting of one operating node and one standby node. The operating node is operational and the standby node stands ready to take over if needed.

  - n:1 hot standby

    A cluster consisting of n operating nodes and one standby node. The n operating nodes run different operations and the standby node stands ready to take over from all of the operating nodes.

  - n:i hot standby

    A cluster consisting of n operating nodes and i standby nodes. The style is similar to n:1 hot standby, only there are i standby nodes standing ready to take over from all of the operating nodes.

  - Mutual standby

    A cluster consisting of two nodes with both operating and standby applications. The two nodes each run different operations and stand ready to take over from each other. If one node fails, the other node runs both of the operations.

  - Cascade

    A cluster consisting of three or more nodes. One of the nodes is the operating node and the others are the standby nodes.

- Scaleable class

  This is a cluster that allows multiple server machines to operate concurrently for performance improvement and reduced degrading during trouble. It differs from standby clusters as the nodes are not divided into operating and standby types. If one of the nodes in the cluster fails, the other servers take over the operations.

Resource Coordinator VE managers support failover clustering of Microsoft(R) Windows Server(R) 2008 Enterprise (x86, x64) in 1:1 hot standby.

Information

For details of failover clustering, refer to the Microsoft website.

B.2 Installation

This section explains installation of managers on cluster systems.

Perform installation only after configuration of the cluster system is complete.

⚠ Note
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In order to distinguish between the two physical nodes, one is referred to as the primary node and the other the secondary node. The primary node is the node that is active when the cluster service (cluster application) is started. The secondary node is the node that is in standby when the cluster service (cluster application) is started.

....

B.2.1 Preparations

This section explains the resources necessary before installation.

・ Client Access Point

An access point is necessary in order to enable communication between the RC console, managed servers, and managers. The IP addresses and network names used for access are allocated.

When the same access point will be used for access by the RC console and the admin LAN, prepare a single IP address and network name. When different access points will be used for access by the RC console and the admin LAN, prepare a pair of IP addresses and network names.

・ Shared Disk for Managers

Prepare at least one storage volume (LUN) to store data shared by the managers.

For the necessary disk space for the shared disk, total the values for "*Installation_folder*" and "*Image_file_storage_folder*" indicated for managers "Table 1.10 Dynamic Disk Space" in "1.1.2.5 Dynamic Disk Space", and secure the necessary amount of disk space.

・ Generic Scripts for Manager Services

Create the generic script files (for starting and stopping) the following manager services:

- Resource Coordinator Web Server(Apache)

- Resource Coordinator Sub Web Server(Mongrel)

- Resource Coordinator Sub Web Server(Mongrel2)

Create a script file with the following content for each of the services.

The name of the file is optional, but the file extension must be ".vbs".

```
Function Online()

    Dim objWmiProvider
    Dim objService
    Dim strServiceState

    ' Check to see if the service is running
    set objWmiProvider = GetObject("winmgmts:/root/cimv2")
    set objService = objWmiProvider.get("win32_service='service_name'")
    strServiceState = objService.state

    If ucase(strServiceState) = "RUNNING" Then
        Online = True
    Else

        ' If the service is not running, try to start it.
        response = objService.StartService()

        ' response = 0  or 10 indicates that the request to start was accepted
```

```
        If ( response <> 0 ) and ( response <> 10 ) Then
            Online = False
        Else
            Online = True
        End If
    End If
End Function

Function Offline()

    Dim objWmiProvider
    Dim objService
    Dim strServiceState

    ' Check to see if the service is running
    set objWmiProvider = GetObject("winmgmts:/root/cimv2")
    set objService = objWmiProvider.get("win32_service='service_name'")
    strServiceState = objService.state

    If ucase(strServiceState) = "RUNNING" Then

        response = objService.StopService()

        If ( response <> 0 ) and ( response <> 10 ) Then
            Offline = False
        Else
            Offline = True
        End If
    Else
            Offline = True
    End If
End Function

Function LooksAlive()

    Dim objWmiProvider
    Dim objService
    Dim strServiceState

    set objWmiProvider = GetObject("winmgmts:/root/cimv2")
    set objService = objWmiProvider.get("win32_service='service_name'")
    strServiceState = objService.state

    if ucase(strServiceState) = "RUNNING" Then
        LooksAlive = True
    Else
        LooksAlive = False
    End If
End Function

Function IsAlive()

    Dim objWmiProvider
    Dim objService
    Dim strServiceState

    set objWmiProvider = GetObject("winmgmts:/root/cimv2")
    set objService = objWmiProvider.get("win32_service='service_name'")
    strServiceState = objService.state

    if ucase(strServiceState) = "RUNNING" Then
        IsAlive= True
    Else
```

```
        IsAlive = False
    End If

End Function
```

Specify the following three service names for four occurrences of "*service_name*" in the script.

- ResourceCoordinatorWebServer(Apache)

- Resource Coordinator Sub Web Server(Mongrel)

- Resource Coordinator Sub Web Server(Mongrel2)

B.2.2　Installation

Install managers on both the primary and secondary nodes.

Refer to "2.1 Manager Installation" and perform installation.

🈁 Note
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- ・ Do not install on the shared disk for managers.

- ・ On the [Select Installation Folder] window, specify the same folders on the primary node and secondary node for the installation folders and the image file storage folders.

- ・ On the [Administrative User Creation] window, specify the same character strings for the user account names and passwords on the primary node and the secondary node.

- ・ On the [Admin LAN Selection] window of the installer, select the network with the same subnet for direct communication with managed servers.
. . . .

After installation, stop the services of the manager.

Stop the services using the stop subcommand of the rcxadm mgrctl command.

For details of the command, refer to "5.6 rcxadm mgrctl" of the "ServerView Resource Coordinator VE Command Reference".

After that, change the startup type of the following manager services to "Manual".

- ・ Resource Coordinator Task Manager

- ・ Resource Coordinator Web Server(Apache)

- ・ Resource Coordinator Sub Web Server(Mongrel)

- ・ Resource Coordinator Sub Web Server(Mongrel2)

- ・ Deployment Service

- ・ TFTP Service
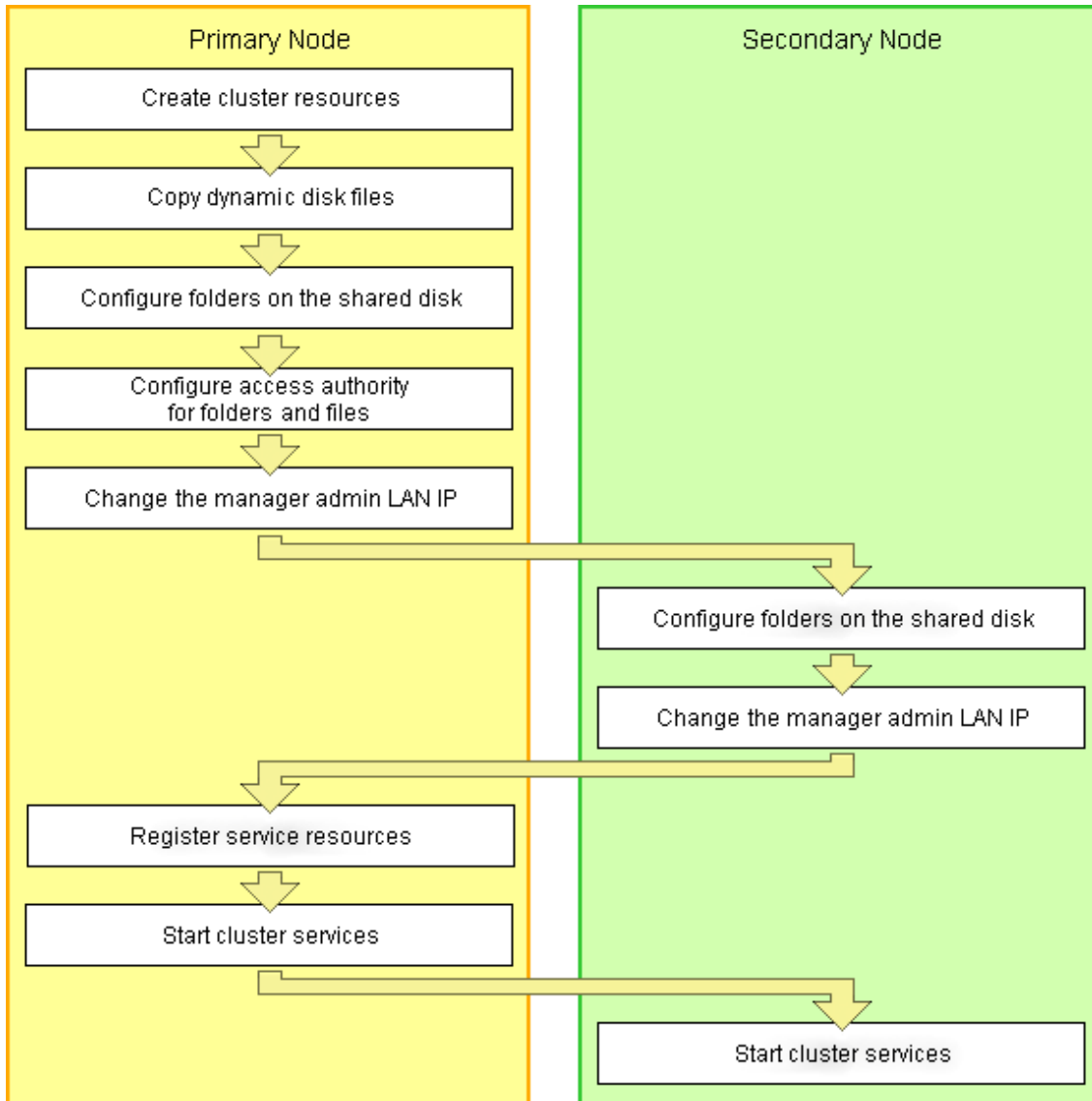
- ・ PXE Services

B.3　Configuration

This section explains the procedure for setting up managers as cluster services (cluster applications) in cluster systems.

Manager Service Setup Flow

Perform setup on the admin server.
The flow of setup is as shown below.

Figure B.1 Manager Service Setup Flow

Setup Procedure

Setup of managers as cluster services (cluster applications) is performed using the following procedure.
This explanation assumes that the shared disk for managers has been allocated to the primary node.

Cluster Resource Creation

1. Store the generic scripts.

   Store the generic scripts created in "B.2.1 Preparations" in the manager installation folders on the primary node and the second node.
   After storing the scripts, set the access rights for the script files.
   Use the command prompt to execute the following command on each script file.

   > **>cacls** *File_name* **/P "NT AUTHORITY\SYSTEM:F" "BUILTIN\Administrators:F"** <RETURN>

2. Open the [Failover Cluster Management] window and connect to the cluster system.

3. Configure a manager "service or application".

   a. Right click on [Services and applications] on the [Failover Cluster Management] tree, and select [More Actions]-[Create Empty Service or Application].

      [New Service or Application] will be created under [Services and Applications].

   b. Right-click [New Service or Application], and select [Properties] from the displayed menu.

      The [New Service or Application Properties] dialog is displayed.

   c. Change the "Name" on the [General] tab, select the resource name of the primary node from "Preferred owners", and click <Apply>.

   d. When the settings have been applied, click <OK>.

   From this point, this explanation assumes that the name of the "service or application" for Resource Coordinator VE has been configured as "RC-manager".

4. Allocate the shared disk to the manager "service or application".

   a. Right-click [Services and Applications] - [Rc-manager], and select [Add Storage] from the displayed menu.

      The [Add Storage] window will be displayed.

   b. From the "Available disks:", select the shared disk for managers and click <OK>.

5. Allocate the IP address to the manager "service or application".

   a. Right-click [Services and Applications] - [Rc-manager], select [Add Resource] - [Other Resources] - [4 - Add IP Address] from the displayed menu.

      "IP Address: <Not configured>" will be created in the "Other Resources" of the "Summary of RC-manager" displayed in the center of the window.

   b. "Right-click "IP Address: <Not configured>", and select [Properties] from the displayed menu.

      The [IP Address: <Not configured> Properties] window is displayed.

   c. Configure the following parameters on the [General] tab and then click <Apply>.

      Resource Name

         Set the network name prepared in "B.2.1 Preparations"

      Network

         Select the network to use from the pull-down menu.

      Static IP Address

         Set the IP address prepared in "B.2.1 Preparations"

   d. When the settings have been applied, click <OK>.

Note

When a network other than the admin LAN has been prepared for RC console access, repeat steps a. to d. of the process.

Copying Dynamic Disk Files

Copy the files from the dynamic disk of the manager on the primary node to the shared disk for managers.

1. Use explorer to create the "*Drive_name*:\RCoordinator\" folder on the shared disk.

2. Use explorer to copy the files and folders from the local disk of the primary node to the folder on the shared disk.

Local disk (Source)	Shared disk (Target)
Installation_folder\Manager\etc\opt\FJSVssmgr\current\certificate	*Drive_name*:\RCoordinator\certificate
Installation_folder\Manager\Rails\config\rcx_secret.key	*Drive_name*:\RCoordinator\rcx_secret.key

Local disk (Source)	Shared disk (Target)
Installation_folder\Manager\Rails\db	*Drive_name*:\RCoordinator\db
Installation_folder\Manager\Rails\log	*Drive_name*:\RCoordinator\log
Installation_folder\Manager\Rails\tmp	*Drive_name*:\RCoordinator\tmp
Installation_folder\Manager\sys\apache\conf	*Drive_name*:\RCoordinator\conf
Installation_folder\Manager\sys\apache\logs	*Drive_name*:\RCoordinator\logs
Installation_folder\Manager\var	*Drive_name*:\RCoordinator\var
Installation_folder\ScwPro\Bin\ipTable.dat	*Drive_name*:\RCoordinator\ipTable.dat
Installation_folder\ScwPro\scwdb	*Drive_name*:\RCoordinator\scwdb
Installation_folder\ScwPro\tftp\rcbootimg	*Drive_name*:\RCoordinator\rcbootimg
User_specified_folder\ScwPro\depot	*Drive_name*:\RCoordinator\depot

3. Release the sharing settings of the following folder:

   - *Installation_folder*\ScwPro\scwdb

     Execute the following command using the command prompt:

     > >**net share ScwDB$ /DELETE** <RETURN>

4. Use Explorer to change the names of the folders below that were copied.

   - *Installation_folder*\Manager\etc\opt\FJSVssmgr\current\certificate

   - *Installation_folder*\Manager\Rails\config\rcx_secret.key

   - *Installation_folder*\Manager\Rails\db

   - *Installation_folder*\Manager\Rails\log

   - *Installation_folder*\Manager\Rails\tmp

   - *Installation_folder*\Manager\sys\apache\conf

   - *Installation_folder*\Manager\sys\apache\logs

   - *Installation_folder*\Manager\var

   - *Installation_folder*\ScwPro\Bin\ipTable.dat

   - *Installation_folder*\ScwPro\scwdb

   - *Installation_folder*\ScwPro\tftp\rcbootimg

Note

When folders or files are in use by another program, attempts to change folder names and file names may fail.
If attempts to change names fail, change the names after rebooting the server.

5. Delete the following file from the shared disk:

   - *Drive_name*:\RCoordinator\db\rmc_key

Shared Disk Folder Link Settings (Primary Node)

1. On the primary node, configure symbolic links to the files and folders on the shared disk.

   Use the command prompt to configure a symbolic link from the files and folders on the local disk of the primary node to the files and folder on the shared disk.

   Execute the following command.

- Folder

```
>mklink /d Link_source Link_target <RETURN>
```

- File

```
>mklink Link_source Link_target <RETURN>
```

Specify the folders or files copied in "Copying Dynamic Disk Files" for *Link_source*.

Specify the folders or files copied in "Copying Dynamic Disk Files" for *Link_target*.

The folders and files to specify are as given below:

Table B.1 Folders to Specify

Local disk (Link source)	Shared disk (Link target)
Installation_folder\Manager\etc\opt\FJSVssmgr\current\certificate	*Drive_name*:\RCoordinator\certificate
Installation_folder\Manager\Rails\db	*Drive_name*:\RCoordinator\db
Installation_folder\Manager\Rails\log	*Drive_name*:\RCoordinator\log
Installation_folder\Manager\Rails\tmp	*Drive_name*:\RCoordinator\tmp
Installation_folder\Manager\sys\apache\conf	*Drive_name*:\RCoordinator\conf
Installation_folder\Manager\sys\apache\logs	*Drive_name*:\RCoordinator\logs
Installation_folder\Manager\var	*Drive_name*:\RCoordinator\var
Installation_folder\ScwPro\scwdb	*Drive_name*:\RCoordinator\scwdb
Installation_folder\ScwPro\tftp\rcbootimg	*Drive_name*:\RCoordinator\rcbootimg

Table B.2 Files to Specify

Local disk (Link source)	Shared disk (Link target)
Installation_folder\Manager\Rails\config\rcx_secret.key	*Drive_name*:\RCoordinator\rcx_secret.key
Installation_folder\ScwPro\Bin\ipTable.dat	*Drive_name*:\RCoordinator\ipTable.dat

Note

. . . .

Before executing the above command, move to a folder one level higher than the link source folder.

Example

. . . .

When specifying a link from "*Installation_folder*\Manager\sys\apache\logs" on the local disk to "*Drive_name*:\RCoordinator\logs"

```
>cd Installation_folder\Manager\sys\apache <RETURN>
>mklink /d logs Drive_name:\RCoordinator\logs <RETURN>
```

. . . .
. . . .

2. Change the registry of the primary node.

   a. Backup the registry to be changed.

      Execute the following command.

      - x64

```
>reg save HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Fujitsu
\SystemcastWizard scw.reg <RETURN>
```

- x86

```
>reg save HKEY_LOCAL_MACHINE\SOFTWARE\Fujitsu\SystemcastWizard scw.reg
<RETURN>
```

b. Change the registry.

Execute the following command.

- x64

```
>reg add HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Fujitsu\SystemcastWizard
\ResourceDepot /v BasePath /d Drive_name:\RCoordinator\depot\ /f <RETURN>

>reg add HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Fujitsu\SystemcastWizard
\DatabaseBroker\Default /v LocalPath /d Drive_name:\RCoordinator\scwdb /f <RETURN>

>reg add HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Fujitsu\SystemcastWizard
\DHCP /v IPtableFilePath /d Drive_name:\RCoordinator /f <RETURN>
```

- x86

```
>reg add HKEY_LOCAL_MACHINE\SOFTWARE\Fujitsu\SystemcastWizard\ResourceDepot /v
BasePath /d Drive_name:\RCoordinator\depot\ /f <RETURN>

>reg add HKEY_LOCAL_MACHINE\SOFTWARE\Fujitsu\SystemcastWizard\DatabaseBroker
\Default /v LocalPath /d Drive_name:\RCoordinator\scwdb /f <RETURN>

>reg add HKEY_LOCAL_MACHINE\SOFTWARE\Fujitsu\SystemcastWizard\DHCP /v
IPtableFilePath /d Drive_name:\RCoordinator /f <RETURN>
```

Change *Drive_name* based on your actual environment.

c. If changing the registry fails, restore the registry.

Execute the following command.

- x64

```
>reg restore HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Fujitsu
\SystemcastWizard scw.reg <RETURN>
```

- x86

```
>reg restore HKEY_LOCAL_MACHINE\SOFTWARE\Fujitsu\SystemcastWizard scw.reg
<RETURN>
```

 Note

. . . .

Do not use the backup registry file created using this procedure for any other purposes.

. . . .

Setting Access Authority for Folders and Files

・ Set the access authority for the folders and files copied to the shared disk.

Use the command prompt to set the access authority for the folders and files on the shared disk.

The folders and files to specify are as given below:

- Folder

  Drive_name:\RCoordinator\certificate

  Drive_name:\RCoordinator\conf\ssl.key

  Drive_name:\RCoordinator\var\log

- File

  Drive_name:\RCoordinator\db\production.sqlite3

  Drive_name:\RCoordinator\rcx_secret.key

Execute the following command.

- Folder

> **>cacls** *Folder_name* **/T /P "NT AUTHORITY\SYSTEM:F" "BUILTIN\Administrators:F"** <RETURN>

- File

> **>cacls** *File_name* **/P "NT AUTHORITY\SYSTEM:F" "BUILTIN\Administrators:F"** <RETURN>

Changing the Manager Admin LAN IP (Primary Node)

Change the admin LAN IP address of the manager.

Specify the admin LAN IP address set in step 5. of "Cluster Resource Creation".

1. Bring the admin LAN IP address for the manager "service or application" online.

2. Execute the following command using the command prompt of the primary node:

> >*Installation_folder***Manager\bin\rcxadm mgrctl modify -ip** *IP_address* <RETURN>

3. Allocate the shared disk to the secondary node.

   Right-click [Services and applications]-[RC-manager] on the Failover Cluster Manager tree, and select [Move this service or application to another node]-[1- Move to node *node_name*] from the displayed menu.

   The name of the secondary node is displayed for *node_name*.

Shared Disk Folder Link Settings (Secondary Node)

・On the secondary node, configure symbolic links to the folders on the shared disk.

  a. Use Explorer to change the names of the folders and files below.

    - *Installation_folder*\Manager\etc\opt\FJSVssmgr\current\certificate

    - *Installation_folder*\Manager\Rails\config\rcx_secret.key

    - *Installation_folder*\Manager\Rails\db

    - *Installation_folder*\Manager\Rails\log

    - *Installation_folder*\Manager\Rails\tmp

    - *Installation_folder*\Manager\sys\apache\conf

    - *Installation_folder*\Manager\sys\apache\logs

    - *Installation_folder*\Manager\var

    - *Installation_folder*\ScwPro\Bin\ipTable.dat

    - *Installation_folder*\ScwPro\scwdb

- *Installation_folder*\ScwPro\tftp\rcbootimg

📄 **Note**

. . . .

When folders or files are in use by another program, attempts to change folder names and file names may fail.

If attempts to change names fail, change the names after rebooting the server.

. . . .

b. Release the sharing settings of the following folder:

- *Installation_folder*\ScwPro\scwdb

  Execute the following command using the command prompt:

  > **net share ScwDB$ /DELETE** <RETURN>

c. Use the command prompt to configure a symbolic link from the folder on the local disk of the secondary node to the folder on the shared disk.

  Execute the following command.

  - Folder

    > **mklink /d** *Link_source Link_target* <RETURN>

  - File

    > **mklink** *Link_source Link_target* <RETURN>

  Specify a file or folder on the local disk of the secondary node for *Link_source*.

  Specify a file or folder on the shared disk of the secondary node for *Link_target*.

The folders to specify are as given below:

Table B.3 Folders to Specify

Local disk (Link source)	Shared disk (Link target)
Installation_folder\Manager\etc\opt\FJSVssmgr\current\certificate	*Drive_name*:\RCoordinator\certificate
Installation_folder\Manager\Rails\db	*Drive_name*:\RCoordinator\db
Installation_folder\Manager\Rails\log	*Drive_name*:\RCoordinator\log
Installation_folder\Manager\Rails\tmp	*Drive_name*:\RCoordinator\tmp
Installation_folder\Manager\sys\apache\conf	*Drive_name*:\RCoordinator\conf
Installation_folder\Manager\sys\apache\logs	*Drive_name*:\RCoordinator\logs
Installation_folder\Manager\var	*Drive_name*:\RCoordinator\var
Installation_folder\ScwPro\scwdb	*Drive_name*:\RCoordinator\scwdb
Installation_folder\ScwPro\tftp\rcbootimg	*Drive_name*:\RCoordinator\rcbootimg

Table B.4 Files to Specify

Local disk (Link source)	Shared disk (Link target)
Installation_folder\Manager\Rails\config\rcx_secret.key	*Drive_name*:\RCoordinator\rcx_secret.key
Installation_folder\ScwPro\Bin\ipTable.dat	*Drive_name*:\RCoordinator\ipTable.dat

📄 **Note**

. . . .

Before executing the above command, move to a folder one level higher than the link source folder.

Example

When specifying a link from "*Installation_folder*\Manager\sys\apache\logs" on the local disk to "*Drive_name*:\RCoordinator\logs"

```
>cd Installation_folder\Manager\sys\apache <RETURN>
>mklink /d logs Drive_name:\RCoordinator\logs <RETURN>
```

Changing the Manager Admin LAN IP (Secondary Node)

Change the admin LAN IP address of the manager.

Specify the admin LAN IP address set in step 5. of "Cluster Resource Creation".

1. Execute the following command using the command prompt of the secondary node:

```
>Installation_folder\Manager\bin\rcxadm mgrctl modify -ip IP_address <RETURN>
```

2. Allocate the shared disk to the primary node.

   Right-click [Services and Applications]-[RC-manager] on the Failover Cluster Management tree, and select [Move this service or application to another node]-[1- Move to node *node_name*] from the displayed menu. The name of the primary node is displayed for *node_name*.

Registering Service Resources

1. Add the manager service to the manager "service or application".
   Add the following five services.

   - Resource Coordinator Manager

   - Resource Coordinator Task Manager

   - Deployment Service

   - TFTP Service

   - PXE Services

   Perform the following procedure for each of the above services:

   a. Right-click [Services and Applications]-[RC-manager] on the Failover Cluster Management tree, and select [Add a resource]-[4 - Generic Service] from the displayed menu.

      The [New Resource Wizard] window will be displayed.

   b. Select the above services on "Select Service" and click <Next>.

      "Confirmation" will be displayed.

   c. Check the information displayed for "Confirmation" and click <Next>.

      If configuration is successful, the "Summary" window will be displayed.

   d. Click <Finish>.

      After completing the configuration of all of the services, check that the added services are displayed in "Other Resources" of the "Summary of RC-manager" displayed in the center of the window.

2. Configure registry replication as a service in the manager "service or application".

   Configure the registry replication of resources based on the following table.

- x64

Resource for Configuration	Registry Key
Deployment Service	[HKEY_LOCAL_MACHINE\]SOFTWARE\Wow6432Node\Fujitsu\SystemcastWizard\ResourceDepot
	[HKEY_LOCAL_MACHINE\]SOFTWARE\Wow6432Node\Fujitsu\SystemcastWizard\DatabaseBroker\Default
PXE Services	[HKEY_LOCAL_MACHINE\]SOFTWARE\Wow6432Node\Fujitsu\SystemcastWizard\DHCP
	[HKEY_LOCAL_MACHINE\]SOFTWARE\Wow6432Node\Fujitsu\SystemcastWizard\PXE\ClientBoot\

- x86

Resource for Configuration	Registry Key
Deployment Service	[HKEY_LOCAL_MACHINE\]SOFTWARE\Fujitsu\SystemcastWizard\ResourceDepot
	[HKEY_LOCAL_MACHINE\]SOFTWARE\Fujitsu\SystemcastWizard\DatabaseBroker\Default
PXE Services	[HKEY_LOCAL_MACHINE\]SOFTWARE\Fujitsu\SystemcastWizard\DHCP
	[HKEY_LOCAL_MACHINE\]SOFTWARE\Fujitsu\SystemcastWizard\PXE\ClientBoot\

During configuration, enter the section of the registry keys after the brackets ([ ]).

Perform the following procedure for each of the above resources:

a. Right-click the target resource on "Other Resources" on the "Summary of RC-manager" on the [Failover Cluster Manager] window, and select [Properties] from the displayed menu.

The [*target_resource* Properties] window will be displayed.

b. Click <Add> on the [Registry Replication] tab.

The [Registry Key] window will be displayed.

c. Configure the above registry keys on "Registry Keys" and click <OK>.

When configuring the second registry key, repeat steps b. and c.

d. After configuration of the registry keys is complete, click <Apply>.

e. When the settings have been applied, click <OK> and close the dialog.

3. Add the generic scripts to the manager "service or application".

Add the three generic scripts from the script files that were created in step 1. of "Cluster Resource Creation". Perform the following procedure for each generic script.

a. Right-click [Services and Applications]-[RC-manager] on the Failover Cluster Management tree, and select [Add a resource]-[3 - Generic Script] from the displayed menu.

The [New Resource Wizard] window will be displayed.

b. Set the script files created in step 1. in the "Script File Path" of the "Generic Script Info", and click <Next>>.

"Confirmation" will be displayed.

c. Check the information displayed for "Confirmation" and click <Next>>.

If configuration is successful, the "Summary" will be displayed.

d. Click <Finish>.

   After completing the configuration of all of the generic scripts, check that the added generic scripts are displayed in "Other Resources" of the "Summary of RC-manager" displayed in the center of the window.

4. Configure the dependencies of the resources of the manager "service or application".

   Configure the dependencies of resources based on the following table.

Table B.5 Configuring Resource Dependencies

Resource for Configuration	Dependent Resource
Resource Coordinator Manager	Shared Disks
Resource Coordinator Task Manager	Shared Disks
Resource Coordinator Sub Web Server (Mongrel) Script	Resource Coordinator Task Manager
Resource Coordinator Sub Web Server (Mongrel2) Script	Resource Coordinator Task Manager
Resource Coordinator Web Server (Apache) Script	Shared Disks
Deployment Service	PXE Services
TFTP Service	Deployment Service
PXE Services	Admin LAN IP Address

Perform the following procedure for each of the above resources:

a. Right-click the target resource on "Other Resources" on the "Summary of RC-manager" on the [Failover Cluster Manager] window, and select [Properties] from the displayed menu.

   The [*target_resource* Properties] window will be displayed.

b. In the [Resource] of the [Dependencies] tab select the name of the "Dependent Resource" from "Table B.5 Configuring Resource Dependencies" and click <Apply>.

c. When the settings have been applied, click <OK>.

Starting Cluster Services

1. Right-click [Services and Applications]-[RC-manager] on the Failover Cluster Management tree, and select [Bring this service or application online] from the displayed menu.

   Confirm that all resources have been brought online.

2. Switch the manager "service or application" to the secondary node.

   Confirm that all resources of the secondary node have been brought online.
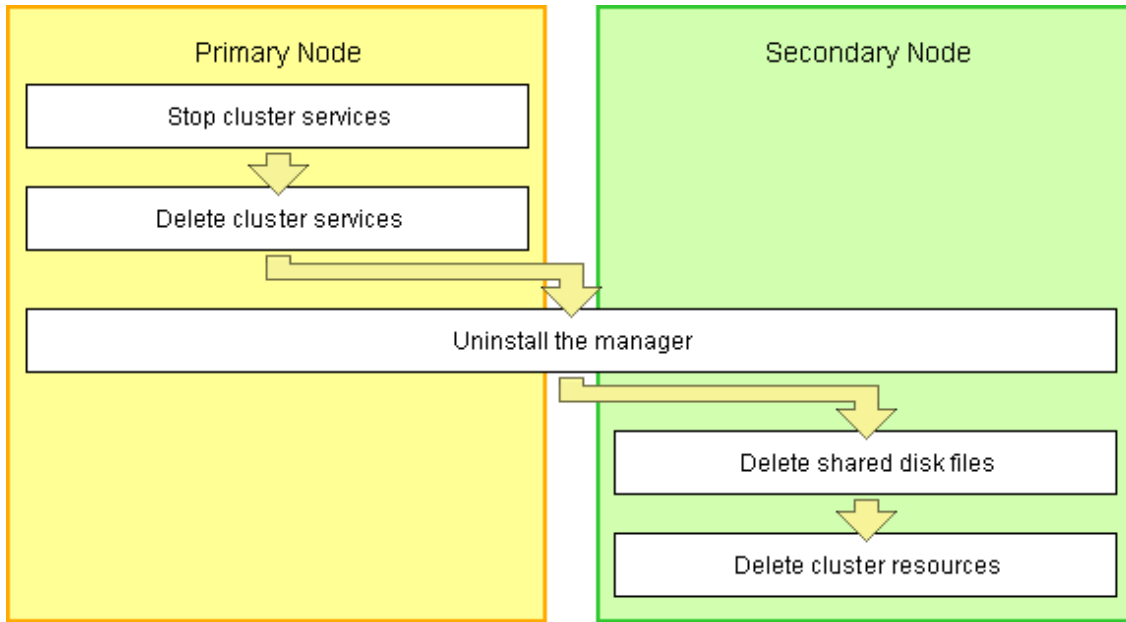
B.4   Releasing Configuration

This section explains how to delete the cluster services of managers being operated on cluster systems.

Releasing Manager Service Settings

The flow of deleting cluster services of managers is as indicated below.

Figure B.2 Flow of Deleting Manager Service Settings

Setting Deletion Procedure

Delete settings for manager cluster services using the following procedure.
This explanation assumes that the manager is operating on the primary node.

Stopping Cluster Services

1. Open the [Failover Cluster Management] window and connect to the cluster system.

2. Take the manager "service or application" offline.

   Right-click [Services and Applications]-[RC-manager] on the Failover Cluster Management tree, and select [Take this service or application offline] from the displayed menu.

3. Bring the shared disk for the manager "service or application" online.

   Right-click the shared drive on [Disk Drives] on the [Summary of RC-manager] displayed in the middle of the [Failover Cluster Manager] window, and select [Bring this resource online] from the displayed menu.

Deleting Cluster Services

Delete the services, scripts, and IP address of the manager "service or application".
Using the following procedure, delete all the "Other Resources".

1. Click [Services and Applications] - [RC-manager] on the Failover Cluster Management tree.

2. Right-click the resources on "Other Resources" on the "Summary of RC-manager" on the [Failover Cluster Manager] window, and select [Delete] from the displayed menu.

Uninstalling the Manager

1. Refer to "3.1.2 Uninstallation", and uninstall the manager on the primary node.

2. Allocate the shared disk to the secondary node.

   Right-click [Services and Applications]-[RC-manager] on the Failover Cluster Management tree, and select [Move this service or application to another node]-[1- Move to node *node_name*] from the displayed menu. The name of the secondary node is displayed for *node_name*.

3. Uninstall the manager of the secondary node.

Deleting Shared Disk Files

Use explorer to delete the "*Drive_name*:\RCoordinator\" folder on the shared disk.

Deleting Cluster Resources

Delete the manager "service or application".
Right-click [Services and Applications]-[RC-manager] on the Failover Cluster Management tree, and select [Delete] from the displayed menu.

B.5   Advisory Notes

This section explains advisory notes regarding the settings for managers in cluster operations, and their deletion.

Switching Cluster Services (Cluster Applications)

Events that occur when switching cluster services (cluster applications) cannot be displayed.
Also, "Message Number 65529" may be displayed on the RC console.
Perform login again.

Troubleshooting Information

Collect troubleshooting information referring to the instructions in "15.1 Types of Troubleshooting Data" of the "ServerView Resource Coordinator VE Operation Guide". At that time, execute the commands from the primary node of the admin server, and collect information from the primary node and managed servers.

Commands

Do not use the start or stop subcommands of the rcxadm mgrctl to start or stop the manager.
Right-click the manager "service or application" on the Failover Cluster Manager, and select [Bring this service or application online] or [Take this service or application offline] from the displayed menu.
Other commands can be executed as they are in normal cluster operation.

RC Console

The registration state of server resources on the resource tree when an admin server is included in a chassis is as indicated below.

- The server resources being operated by the manager on the cluster node are displayed as "[Admin Server]".

- The server resources not being operated by the manager on the cluster node are displayed as "[Unregistered]".

Do not register the server resources of the cluster node that are displayed as "[Unregistered]".

Glossary

access path

A logical path configured to enable access to storage volumes from servers.

active mode

The state where a managed server is performing operations.
Managed servers must be in active mode in order to use Auto-Recovery.
Move managed servers to maintenance mode in order to perform backup or restoration of system images, or collection or deployment of cloning images.

active server

A physical server that is currently operating.

admin client

A terminal (PC) connected to an admin server, which is used to operate the GUI.

admin LAN

A LAN used to manage resources from admin servers.
It connects managed servers, storage and networks devices.

admin server

A server used to operate the manager software of Resource Coordinator VE.

affinity group

A grouping of the storage volumes allocated to servers. A function of ETERNUS.

Equivalent to the LUN mapping of EMC.

agent

The section (program) of Resource Coordinator VE that operates on managed servers.

Auto-Recovery

A function which continues operations by automatically switching over the system image of a failed server to a spare server and restarting it in the event of server failure.
This function can be used when managed servers are in a local boot configuration or a SAN boot configuration.
When using a local boot configuration, the system is recovered by restoring a backup of the system image of the failed server onto a spare server.
When using a SAN boot configuration, the system is recovered by a spare server inheriting the system image of the failed server over the SAN.
Also, when a VLAN is set for the public LAN of a managed server, the VLAN settings of adjacent LAN switches are automatically switched to those of the spare server.

BACS (Broadcom Advanced Control Suite)

An integrated GUI application (comprised from applications such as BASP) that creates teams from multiple NICs, and provides functions such as load balancing.

BASP (Broadcom Advanced Server Program)

LAN redundancy software that creates teams of multiple NICs, and provides functions such as load balancing and failover.

blade server

A compact server device with a thin chassis that can contain multiple server blades, and has low power consumption.
As well as server blades, LAN switch blades, management blades, and other components used by multiple server blades can be mounted inside the chassis.

BladeViewer

A GUI that displays the status of blade servers in a style similar to a physical view and enables intuitive operation.
BladeViewer can also be used for state monitoring and operation of resources.

BMC (Baseboard Management Controller)

A Remote Management Controller used for remote operation of servers.

CA (Channel Adapter)

An adapter card that is used as the interface for server HBAs and fibre channel switches, and is mounted on storage devices.

chassis

A chassis used to house server blades.
Sometimes referred to as an enclosure.

cloning

Creation of a copy of a system disk.

cloning image

A backup of a system disk, which does not contain server-specific information (system node name, IP address, etc.), made during cloning.
When deploying a cloning image to the system disk of another server, Resource Coordinator VE automatically changes server-specific information to that of the target server.

environmental data

Measured data regarding the external environments of servers managed using Resource Coordinator VE.
Measured data includes power data collected from Power monitoring devices.

FC switch (Fibre Channel Switch)

A switch that connects Fibre Channel interfaces and storage devices.

fibre channel switch blade

A fibre channel switch mounted in the chassis of a blade server.

GLS (Global Link Services)

Fujitsu network control software that enables high-availability networks through the redundancy of network transmission channels.

GUI (Graphical User Interface)

A user interface that displays pictures and icons (pictographic characters), enabling intuitive and easily understandable operation.

HA (High Availability)

The concept of using redundant resources to prevent suspension of system operations due to single problems.

HBA (Host Bus Adapter)

An adapter for connecting servers and peripheral devices.
Mainly used to refer to the FC HBAs used for connecting storage devices using Fibre Channel technology.

HBA address rename setup service

The service that starts managed servers that use HBA address rename in the event of failure of the admin server.

HBAAR (HBA address rename)

I/O virtualization technology that enables changing of the actual WWN possessed by an HBA.

host affinity

A definition of the server HBA that is set for the CA port of the storage device and the accessible area of storage.
It is a function for association of the Logical Volume inside the storage which is shown to the host (HBA), that also functions as security internal to the storage device.

Hyper-V

Virtualization software from Microsoft Corporation.

Provides a virtualized infrastructure on PC servers, enabling flexible management of operations.

image file

A system image or a cloning image. Also a collective term for them both.

I/O virtualization option

An optional product that is necessary to provide I/O virtualization.
The WWNN address provided is guaranteed by Fujitsu to be unique.
Necessary when using HBA address rename.

IPMI (Intelligent Platform Management Interface)

IPMI is a set of common interfaces for the hardware that is used to monitor the physical conditions of servers, such as temperature, power voltage, cooling fans, power supply, and chassis.
These functions provide information that enables system management, recovery, and asset management which in turn leads to reduction of overall TCO.

iRMC (integrated Remote Management Controller)

The name of Fujitsu's Remote Management Controller.

LAN switch blade

A LAN switch that is mounted in the chassis of a blade server.

link aggregation

Function used to multiplex multiple ports and use them as a single virtual port.
With this function, if one of the multiplexed ports fails its load can be divided among the other ports, and the overall redundancy of ports improved.

logical volume

A logical disk that has been divided into multiple partitions.

maintenance mode

The state where operations on managed servers are stopped in order to perform maintenance work.
In this state, the backup and restoration of system images and the collection and deployment of cloning images can be performed.
However, when using Auto-Recovery it is necessary to change from this mode to active mode. When in maintenance mode it is not possible to switch over to a spare server if a server fails.

managed server

A collective term referring to a server that is managed as a component of a system.

management blade

A server management unit that has a dedicated CPU and LAN interface, and manages blade servers.
Used for gathering server blade data, failure notification, power control, etc.

manager

The section (program) of Resource Coordinator VE that operates on admin servers.
It manages and controls resources registered with Resource Coordinator VE.

NAS (Network Attached Storage)

A collective term for storage that is directly connected to a LAN.

network map

A GUI function for graphically displaying the connection relationships of the servers and LAN switches that compose a network.

network view

A window that displays the connection relationships and status of the wiring of a network map.

NIC (Network Interface Card)

An interface used to connect a server to a network.

OS

The OS used by an operating server (a physical OS or VM guest).

PDU (Power Distribution Unit)

A device for distributing power (such as a power strip).
Resource Coordinator VE uses PDUs with current value display functions as Power monitoring devices.

physical OS

An OS that operates directly on a physical server without the use of server virtualization software.

physical server

The same as a "server". Used when it is necessary to distinguish actual servers from virtual servers.

port VLAN

A VLAN in which the ports of a LAN switch are grouped, and each LAN group is treated as a separate LAN.

port zoning

The division of ports of fibre channel switches into zones, and setting of access restrictions between different zones.

power monitoring devices

Devices used by Resource Coordinator VE to monitor the amount of power consumed.
PDUs and UPSs with current value display functions fit into this category.

pre-configuration

Performing environment configuration for Resource Coordinator VE on another separate system.

primary server

The physical server that is switched from when performing server switchover.

public LAN

A LAN used for operations by managed servers.
Public LANs are established separately from Admin LANs.

rack

A case designed to accommodate equipment such as servers.

rack mount server

A server designed to be mounted in a rack.

RAID (Redundant Arrays of Inexpensive Disks)

Technology that realizes high-speed and highly-reliable storage systems using multiple hard disks.

RAID management tool

Software that monitors disk arrays mounted on PRIMERGY servers.
The RAID management tool differs depending on the model or the OS of PRIMERGY servers.

RC console

The GUI that enables operation of all functions of Resource Coordinator VE.

Remote Management Controller

A unit used for managing servers.
Used for gathering server data, failure notification, power control, etc.
An iRMC2 in the case of Fujitsu PRIMERGY servers, an iLO2 (integrated Lights-Out) in the case of HP servers, and a BMC (Baseboard Management Controller) in the case of Dell/IBM servers.

resource

Collective term or concept that refers to the physical resources (hardware) and logical resources (software) from which a system is composed.

resource tree

A tree that displays the relationships between the hardware of a server and the OS operating on it using hierarchies.

SAN (Storage Area Network)

A specialized network for connecting servers and storage.

server

A computer (operated with one operating system).

server blade

A server blade has the functions of a server integrated into one board.
They are mounted in blade servers.

server management unit

A unit used for managing servers.
A management blade is used for blade servers, and a Remote Management Controller is used for other servers.

server name

The name allocated to a server.

ServerView Operations Manager

Software that monitors a server's (PRIMERGY) hardware state, and notifies of errors by way of the network.

ServerView RAID

One of the RAID management tools for PRIMERGY.

server virtualization software

Basic software which is operated on a server to enable use of virtual machines. Used to indicate the basic software that operates on a PC server.

SNMP (Simple Network Management Protocol)

A communications protocol to manage (monitor and control) the equipment that is attached to a network.

spare server

A server which is used to replace a failed server when server switchover is performed.

storage blade

A blade-style storage device that can be mounted in the chassis of a blade server.

storage unit

Used to indicate the entire secondary storage as one product.

switchover state

The state in which switchover has been performed on a managed server, but neither failback nor continuation have been performed.

system disk

The disk on which the programs (such as OS) and files necessary for the basic functions of servers (including booting) are installed.

system image

A copy of the contents of a system disk made as a backup.
Different from a cloning image as changes are not made to the server-specific information contained on system disks.

tower server

A stand-alone server with a vertical chassis.

UPS (Uninterruptible Power Supply)

A device containing rechargeable batteries that temporarily provides power to computers and peripheral devices in the event of power failures.
Resource Coordinator VE uses UPSs with current value display functions as Power monitoring devices.

URL (Uniform Resource Locator)

URL (Uniform Resource Locator)

The notational method used for indicating the location of information on the Internet.

Virtual I/O

Technology that virtualizes the relationship of servers and I/O devices (mainly storage and network) thereby simplifying the allocation of and modifications to I/O resources to servers, and server maintenance.
For Resource Coordinator VE it is used to indicate HBA address rename.

Virtual Machine

A virtual computer that operates on a VM host.

virtual server

A virtual server that is operated on a VM host using a virtual machine.

virtual switch

A function provided by server virtualization software to manage networks of VM guests as virtual LAN switches.
The relationships between the virtual NICs of VM guests and the NICs of the physical servers used to operate VM hosts can be managed using operations similar to those of the wiring of normal LAN switches.

VLAN (Virtual LAN)

A splitting function, which enables the creation of virtual LANs (seen as differing logically by software) by grouping ports on a LAN switch.
Through the use of a Virtual LAN, network configuration can be performed freely without the need for modification of the physical network configuration.

VLAN ID

A number (between 1 and 4,095) used to identify VLANs.
Null values are reserved for priority tagged frames, and 4,096 (FFF in hexadecimal) is reserved for mounting.

VM guest

A virtual server that operates on a VM host, or an OS that is operated on a virtual machine.

VM host

A server on which server virtualization software is operated, or the server virtualization software itself.

VM maintenance mode

One of the settings of server virtualization software, that enables maintenance of VM hosts.
For example, when using high availability functions (such as VMware HA) of server virtualization software, by setting VM maintenance mode it is possible to prevent the moving of VM guests on VM hosts undergoing maintenance.
For details, refer to the manuals of the server virtualization software being used.

VM Management Software

Software for managing multiple VM hosts and the VM guests that operate on them.
Provides value adding functions such as movement between the servers of VM guests (migration).

VMware

Virtualization software from VMware Inc.
Provides a virtualized infrastructure on PC servers, enabling flexible management of operations.

Web browser

A software application that is used to view Web pages.

WWN (World Wide Name)

A 64-bit address allocated to an HBA.
Refers to a WWNN or a WWPN.

WWNN (World Wide Node Name)

The WWN set for a node.
The Resource Coordinator VE HBA address rename sets the same WWNN for the fibre channel port of the HBA.

WWPN (World Wide Port Name)

The WWN set for a port.

The Resource Coordinator VE HBA address rename sets a WWPN for each fibre channel port of the HBA.

WWPN zoning

The division of ports into zones based on their WWPN, and setting of access restrictions between different zones.

zoning

A function that provides security for Fibre Channels by grouping the Fibre Channel ports of a Fibre Channel switch into zones, and only allowing access to ports inside the same zone.