Express 5800





NEC Express Server Express5800 Series

Express5800/R120d-1M, R120d-2M

EXP291, EXP292

Installation Guide (Windows)

Model Number: R120d-1M N8100-1794F R120d-2M N8100-1793F

Chapter 1 Installing Windows

Chapter 2 Installing the Bundled Software

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Documents Provided with This Product

Documents for this product are provided as accompanying booklets (\square) and as electronic manuals (\blacksquare) stored within EXPRESSBUILDER DVD (O).

Precautions for Use	Describes points of caution to ensure the safe use of this server. Read these cautions before using this server.
Getting Started	Describes how to use this server, from unpacking to operations. Refer to this guide as you begin for an overview of this server.

\bigcirc	EXPRESSBUILDER	
	User's Guide	
	Chapter 1: General Description	Overviews, names, and functions of the server's parts
	Chapter 2: Preparations	Installation of additional options, connection of peripheral devices, and ideal location for this server
	Chapter 3: Setting Up Your Server	System BIOS configurations and summary of EXPRESSBUILDER
	Chapter 4: Appendix	Specifications and other information
	Installation Guide (Windows)	
	Chapter 1: Installing Windows	Installation of Windows and drivers, and important information for installation
	Chapter 2: Installing the Bundled Software	Installation of bundled software, such as NEC ESMPRO and Universal RAID Utility
	Maintenance Guide	
	Chapter 1: Maintenance	Server maintenance and troubleshooting
	Chapter 2: Convenient Features	Useful features and the detail of system BIOS settings, RAID Configuration Utility, and EXPRESSBUILDER
	Chapter 3: Appendix	Error messages and Windows Event Logs
(E	Other documents Provides the detail of NEC ESMP	RO, Universal RAID Utility, and the other features.

Contents

Documents Provided with This Product		
Content	s	3
Notation No Op Ha Re At	ns Used in This Document otations used in the text otical disk drives ard disk drives emovable media obreviations of Operating Systems (Windows)	6 6 6 6 7
Tradem	arks	8
Regulat	ory Notices	9
Warning La	gs and Additions to This Document test editions	10 10
Installin	g Windows	11
I. Be I. I. I. I.	fore Starting Setup I Starting EXPRESSBUILDER 2 Supported Windows OS 3 Service Pack Support 4 Mass Storage Controllers Supported by EXPRESSBUILDER 5 When Using a Mass Storage Controller Not Supported by EXPRESSBUILDER	12 12 13 14 15 16
2. Se	etting Up the Operating System	17
3. S€ 3. 3. 3.	 etting Up Windows Server 2008 R2 I Before Starting Setup	18 18 22 22 23 26 27
З.	3.3.2 Requirements for Setup 3.3.3 Setup procedure 4 Setup with OS Standard Installer 3.4.1 Setup flow 3.4.2 Requirements for Setup 3.4.3 Setup procedure	29 41 42 43 44
3.	 Installing Starter Pack 3.5.1 When using EXPRESSBUILDER DVD. 3.5.2 When using Internal Flash Memory 	57 57 59
З.	 6 Setting Up Device Drivers	65 65 66 67 78 79 79 79 79 79 80
3. 3. 3.	 <i>8</i> License Authentication	81 83 84

4.	Setting	g Up Windows Server 2008	86
	4.1	Before Starting Setup	86
	4.2	Setup with EXPRESSBUILDER	90
		4.2.1 Setup flow	91
		4.2.2 Requirements for Setup	92
		4.2.3 Setup procedure	93
	4.3	Setup with OS Standard Installer	105
		4.3.1 Setup flow	106
		4.3.2 Requirements for Setup	107
		4.3.3 Setup procedure	108
	4.4	Installing Starter Pack	121
		4.4.1 When using EXPRESSBUILDER DVD	121
		4.4.2 When using Internal Flash Memory	123
	4.5	Setting Up Device Drivers	129
		4.5.1 Installing the LAN and BACS (teaming) drivers	129
		4.5.2 Setting up LAN drivers	130
		4.5.3 Setting up team/LiveLink	131
		4.5.4 Graphics accelerator driver	143
		4.5.5 When using a SAS controller (No105-107)	144
		4.5.0 When using a SAS controller (No103-104A/142)	144
		4.5.7 When using a RAID Controller (No103-100)	144
	A B	4.5.6 When using a Fibre Channel Controller (No 190-155/154)	144
	4.0	Installing the Bundled Software	145
	4.1 1 R		1/7
	4.U 1 9	Annlying Service Pack	150
	4.9	Installation When Multiple Logical Drives Exist	151
	4.10		101
5.	Setting	a Up Windows Server 2003 R2 x64 Edition	153
	5 .1	Before Starting Setup	153
	5.2	Setup with OS Standard Installer	156
	0.2	5.2.1 Setup flow	157
		5.2.2 Requirements for Setup	158
		5.2.3 Setup procedure	159
	5.3	Installing Starter Pack	169
		5.3.1 Procedures for applying Starter Pack and Windows x64 hotfix (KB) 921411	170
		5.3.2 Recovery process	181
	5.4	Setting Up Device Drivers	182
		5.4.1 Installing the LAN and BACS (teaming) drivers	182
		5.4.2 Setting up LAN drivers	184
		5.4.3 Setting up team/LiveLink	185
		5.4.4 When using a SCSI controller (N8103-107)	196
		5.4.5 When using a SAS controller (N8103-104A/142)	196
		5.4.6 When using a RAID Controller (N8103-160)	196
		5.4.7 Graphics accelerator driver	197
	5.5	Installing the Bundled Software	197
	5.6	License Authentication	198
	5.7	Installation When Multiple Logical Drives Exist	199
6.	Setting	g Up Windows Server 2003	200
	6.1	Before Starting Setup	200
	6.2	Setup with EXPRESSBUILDER	203
		6.2.1 Setup flow	204
		6.2.2 Requirements for Setup	205
		6.2.3 Setup procedure	206
	6.3	Setup with OS Standard Installer	218
		6.3.1 Setup flow	219
		6.3.2 Requirements for Setup	220
	a -	6.3.3 Setup procedure	221
	6.4	Installing Starter Pack	231
		6.4.1 Procedure to apply Windows Server 2003 hottix: KB921411	232
	a =	0.4.2 Recovery process	243
	<i>6.5</i>	Setting up Device Drivers	244
		0.5.1 INStalling the LAN and BAUS (teaming) drivers	244
			240

		6.5.3	Setting up team/LiveLink	247
		6.5.4	Graphics accelerator driver	259
		6.5.5	When using a SCSI controller (N8103-107)	259
		6.5.6	When using a SAS controller (N8103-104A/142)	259
		6.5.7	When using a RAID Controller (N8103-160)	259
	6.6	Specify	ng PAE Option	
	6.7	Installin	g the Bundled Software	261
	6.8	License	Authentication	
	6.9	Reinsta	Ilation When Multiple Logical Drives Exist	
7.	Setup	for Solvi	ng Problems	
	7.1	Specifyi	ng Memory Dump Settings (Debug Information)	
		7.1.1	For Windows Server 2008 R2	
		7.1.2	For Windows Server 2008	
		7.1.3	For Windows Server 2003	
	7.2	How to	Create a User-mode Process Dump File	271
		7.2.1	For Windows Server 2008 R2 and Windows Server 2008	271
		7.2.2	For Windows Server 2003 (setting up Dr. Watson)	272
	7.3	Installin	g Network Monitor	273
		7.3.1	For Windows Server 2008 R2 and Windows Server 2008	273
		7.3.2	For Windows Server 2003	274
8.	Windo	ows OS F	Parameter File	
8.	Windo <i>8.1</i>	ows OS F Creating	varameter File g Windows OS Parameter File	275 275
8.	Windo <i>8.1</i>	ows OS F Creating 8.1.1	Parameter File g Windows OS Parameter File How to create a parameter file	275 275 276
<i>8.</i> Insta	Windo <i>8.1</i> Illing th	ows OS F Creating 8.1.1 e Bundle	Parameter File g Windows OS Parameter File How to create a parameter file d Software	
8. Insta	Windo <i>8.1</i> Illing th	ows OS F Creating 8.1.1 e Bundle	Parameter File g Windows OS Parameter File How to create a parameter file d Software	
8. Insta 1.	Windo <i>8.1</i> Illing th Bundle	ows OS F Creating 8.1.1 e Bundle ed Softwo	Parameter File g Windows OS Parameter File How to create a parameter file d Software are for the Server	
8. Insta 1.	Windo <i>8.1</i> Alling th Bundle <i>1.1</i>	ows OS F Creating 8.1.1 e Bundle ed Softwo NEC ES	Parameter File g Windows OS Parameter File How to create a parameter file d Software are for the Server	275 275 276 276 285 286 286 286
8. Insta 1.	Windo <i>8.1</i> alling th Bundla <i>1.1</i>	ows OS F Creating 8.1.1 e Bundle ed Softw NEC ES	Parameter File g Windows OS Parameter File How to create a parameter file d Software are for the Server SMPRO Agent (for Windows) SMPRO Agent Extension	275 275 276 285 286 286 286 286
8. Insta 1.	Windo 8.1 alling th Bundle 1.1 1.2 1.3	ed Software NEC ES BMC CE	Parameter File g Windows OS Parameter File How to create a parameter file d Software are for the Server SMPRO Agent (for Windows) SMPRO Agent Extension ponfiguration	275 275 276 285 286 286 286 287 287
8. Insta 1.	Windo 8.1 alling th Bundle 1.1 1.2 1.3 1.4 1.5	ed Software NEC ES BMC Ca NEC ES BMC Ca NEC ES	Parameter File g Windows OS Parameter File How to create a parameter file d Software are for the Server	275 275 276 285 286 286 286 287 287 287 287
8. Insta 1.	Windc 8.1 Bundle 1.1 1.2 1.3 1.4 1.5	ed Software NEC ES BMC Ca NEC ES BMC Ca NEC ES BMC Ca NEC ES DIVISION	Parameter File g Windows OS Parameter File How to create a parameter file d Software are for the Server	275 275 276 285 286 286 286 287 287 287 287 287 287
8. Insta 1.	Windc 8.1 Bundle 1.1 1.2 1.3 1.4 1.5	ed Softwa NEC ES NEC ES NEC ES BMC Ca NEC ES BMC Ca NEC ES 1.5.1	Parameter File g Windows OS Parameter File How to create a parameter file d Software are for the Server	275 275 276 285 286 286 286 287 287 287 287 287 288 288 288
8. Insta 1.	Windc 8.1 Illing th Bundle 1.1 1.2 1.3 1.4 1.5	ed Softwa NEC ES BMC CO NEC ES BMC CO NEC ES I.5.1 1.5.2 NEC ES Univers	Parameter File g Windows OS Parameter File How to create a parameter file d Software	275 275 276 285 286 286 286 287 287 287 287 287 287 288 288 288 288
8. Insta 1.	Windc 8.1 Illing th Bundle 1.1 1.2 1.3 1.4 1.5	ws OS F Creating 8.1.1 e Bundle ed Softwa NEC ES BMC Ca NEC ES BMC Ca NEC ES 1.5.1 1.5.2 NEC Pr 1.6.1	Parameter File g Windows OS Parameter File How to create a parameter file d Software	275 275 276 285 286 286 286 287 287 287 287 287 287 287 288 288 289 290 290
8. Insta 1.	Windc 8.1 alling th Bundle 1.1 1.2 1.3 1.4 1.5	ws OS F Creating 8.1.1 e Bundle ed Softw NEC ES BMC CO NEC ES BMC CO NEC ES Univers 1.5.1 1.5.2 NEC Pr 1.6.1	Parameter File g Windows OS Parameter File How to create a parameter file d Software are for the Server	275 275 276 285 286 286 286 287 287 287 287 287 287 287 287 288 288
8. Insta 1.	Windc 8.1 Bundlu 1.1 1.2 1.3 1.4 1.5	ws OS F Creating 8.1.1 e Bundle ed Softwa NEC ES BMC Ca NEC ES I.5.1 1.5.2 NEC Pr 1.6.1 1.6.2	Parameter File g Windows OS Parameter File How to create a parameter file d Software SMPRO Agent (for Windows) SMPRO Agent Extension onfiguration cpressUpdate Agent al RAID Utility Setup of Universal RAID Utility Management by NEC ESMPRO Manager oduct Info Collection Utility Installation Uninstallation	275 275 276 285 286 286 286 287 287 287 287 287 287 288 288 289 290 290 290
8. Insta 1.	Windc 8.1 alling th Bundle 1.1 1.2 1.3 1.4 1.5	ed Software NEC ES NEC ES	Parameter File g Windows OS Parameter File How to create a parameter file d Software	275 275 276 285 286 286 286 287 287 287 287 287 287 287 287 288 288

Notations Used in This Document

Notations used in the text

In addition to safety-related symbols urging caution, 3 other types of notations are used in this document. These notations have the following meanings.

Important	Indicates critical items that must be followed when handling the server or operating software. If the procedures described are not followed, server failure, data loss, and other serious malfunctions could occur .
Note	Indicates items that must be confirmed when handling the server or operating software.
Tips	Indicates information that is helpful to keep in mind when using this server.

Optical disk drives

This server is equipped with one of the following drives, depending on the order at the time of purchase. These drives are referred to as *optical disk drives* in this document.

- DVD-ROM drive
- DVD Super MULTI drive

Hard disk drives

Unless otherwise stated, hard disk drives (HDD) described in this document refers to the following.

- Hard disk drives (HDD)
- Solid state drive (SSD)

Removable media

Unless otherwise stated, removable media described in this document refer to the following.

- USB memory
- Flash FDD

Abbreviations of Operating Systems (Windows)

Windows Operating Systems are referred to as follows.

Refer to Chapter 1 (1.2 Supported Windows OS) for detailed information.

Notations in this document		Official names of Windows
		Windows Server 2008 R2 Standard
Windows Server 2008 R2		Windows Server 2008 R2 Enterprise
	*1	Windows Server 2008 Standard
Windows Server 2008		Windows Server 2008 Enterprise
		Windows Server 2003 R2 Standard x64 Edition
Windows Server 2003 R2 x64 Edition		Windows Server 2003 R2 Enterprise x64 Edition
	*2	Windows Server 2003 R2 Standard
Windows Server 2003 R2		Windows Server 2003 R2 Enterprise
	*0	Windows Server 2003 Standard
Windows Server 2003	*2	Windows Server 2003 Enterprise
		Windows 7 Professional 64-bit(x64) Edition
Windows 7		Windows 7 Professional 32-bit(x86) Edition
Windows Vista		Windows Vista Business 64-bit(x64) Edition
		Windows Vista Business 32-bit(x86) Edition
		Windows XP Professional x64 Edition
Windows XP		Windows XP Professional
Windows PE	*3	Windows Preinstallation Environment

*1: Includes 64-bit and 32-bit Editions unless otherwise stated. The following appears on EXPRESSBUILDER.

- Windows Server 2008 64-bit Edition: Windows Server 2008 x64
- Windows Server 2008 32-bit Edition: Windows Server 2008 x86
- *2: Unless otherwise stated, Windows Server 2003 R2 and Windows Server 2003 are collectively referred to as Windows Server 2003.

*3: Used as an installation platform only.

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BSMI Statement

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The most recent version of User's Guide, as well as other related documents, is also available for download from the following website.

http://www.nec.com/



NEC Express5800 Series Express5800/R120d-1M, R120d-2M

Installing Windows

This chapter describes how to install Windows. Read through this chapter to set up the system correctly.

- Before Starting Setup
 Describes the Service Packs and mass storage controllers that support EXPRESSBUILDER supplied with
 this product.
- 2. Setting Up the Operating System Describes the flow chart of setting up the operating system.
- Setting Up Windows Server 2008 R2
 Describes how to set up Windows Server 2008 R2.
- 4. Setting Up Windows Server 2008 Describes how to set up Windows Server 2008.
- 5. Setting Up Windows Server 2003 R2 x64 Edition Describes how to set up Windows Server 2003 R2 x64 Edition.
- Setting Up Windows Server 2003
 Describes how to set up Windows Server 2003.
- 7. Setting Up for Solving Problems Describes the features that must be set up in advance so that the server can recover from any trouble immediately and precisely.
- 8. Windows OS Parameter File Describes how to set up the operating system by using the parameter file.

1. Before Starting Setup

This section describes the points of using EXPRESSBUILDER (contained in this product) to set up Windows operating systems.



1.1 Starting EXPRESSBUILDER

Use the attached EXPRESSBUILDER to reconfigure the RAID System or re-install the OS.

Start EXPRESSBUILDER by either of the following two ways according to the media in which the EXPRESSBUILDER is stored. Refer to *Chapter 2* (5. *Details of EXPRESSBUILDER*) in the Maintenance Guide for more information.

With the pre-installation model, you do not need to start the EXPRESSBUILDER.

EXPRESSBUILDER DVD

Insert the DVD to the optical disk drive of the server, and then reboot by turning off and on the server or by pressing <Ctrl> + <Alt> + <Delete> keys.

Internal Flash Memory (optional)

Press <F3> key when the following message appears on POST screen. At this time, **be sure to remove a bootable disc from the optical disk drive**.

Press <F2> SETUP, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network

1.2 Supported Windows OS

EXPRESSBUILDER supports the following editions of Windows operating systems: See the next section (*1.3 Service Pack Support*) for Service Pack.

Name of Windows OS		Supported
Windows Server 2008 R2	Windows Server 2008 R2 Standard	~
	Windows Server 2008 R2 Enterprise	~
Windows Server 2008	Windows Server 2008 Standard	~
	Windows Server 2008 Enterprise	~
Windows Server 2003 R2 x64 Edition	Windows Server 2003 R2 Standard x64 Edition	~
	Windows Server 2003 R2 Enterprise x64 Edition	~
Windows Server 2003 R2	Windows Server 2003 R2 Standard	~
	Windows Server 2003 R2 Enterprise	~
Windows Server 2003	Windows Server 2003 Standard	-
	Windows Server 2003 Enterprise	-

✓ : Supported

- : Not Supported

1.3 Service Pack Support

The following combination of operating system installation media and Service Packs are supported by EXPRESSBUILDER.

Service Pack	Windows Server 2008 R2
Service Pack 1 Included	\checkmark
NO Service Pack + Service Pack 1	\checkmark
NO Service Pack	\checkmark

Service Pack	Windows Server 2008
Service Pack 2 Included	\checkmark
NO Service Pack + Service Pack 2	\checkmark
NO Service Pack	✓

Service Pack	Windows Server 2003 R2 x64 Edition
Service Pack 2 Included	\checkmark
NO Service Pack + Service Pack 2	✓
NO Service Pack	_

Service Pack	Windows Server 2003 R2
Service Pack 2 Included	\checkmark
NO Service Pack +Service Pack 2	✓
NO Service Pack	_

✓ : Supported

- : Not Supported

Note

You can install the Service Pack on the server. When the Service Pack is not attached to your system, prepare it by yourself.

1.4 Mass Storage Controllers Supported by EXPRESSBUILDER

The table below lists the controllers for this server, supported by the supplied EXPRESSBUILDER.

If an optional board not mentioned below is connected, set it up while referring to the instructions supplied with the board and *Chapter 1 (1.5 When Using a Mass Storage Controller Not Supported by EXPRESSBUILDER*).

OS	Windows Server 2008 R2Windows Server 2008		Windows Server 2003 R2 x64 Edition	Windows Server 2003					
RAID Controllers supporting EXPRESSBUILDER OS installation									
N8103-149 RAID Controller (512MB, RAID 0/1)	\checkmark	\checkmark	\checkmark	\checkmark					
N8103-150 RAID Controller (512 MB RAID 0/1/5/6)	\checkmark	\checkmark	\checkmark	\checkmark					
N8103-151 RAID Controller (1GB, RAID 0/1/5/6)	\checkmark	\checkmark	\checkmark	\checkmark					
Other options									
N8103-107 SCSI controller	\checkmark	\checkmark	\checkmark	\checkmark					
N8103-104A SAS controller	\checkmark	\checkmark	\checkmark	\checkmark					
N8103-142 SAS controller	\checkmark	\checkmark	\checkmark	\checkmark					
N8103-160 RAID controller (1GB, RAID 0/1/5/6)	\checkmark	\checkmark	\checkmark	\checkmark					
N8190-153 Fibre Channel controller (1 ch)	\checkmark	\checkmark	*	*					
N8190-154 Fibre Channel controller (2 ch)	~	~	*	*					

✓: Supported by EXPRESSBUILDER

*: Supported by accessory of optional board

1.5 When Using a Mass Storage Controller Not Supported by EXPRESSBUILDER

To install the Windows when using a mass storage controller not supported by EXPRESSBUILDER (such as the newest RAID controller), follow the steps below.

You do not need to perform the following instructions usually.

1. Have the instructions for the mass storage controller ready.

Note

If the contents of this document differ from that of the mass storage controller, prioritize the contents of the controller's document.

- 2. If you use a RAID Controller, follow the controller instructions to configure the RAID System.
- 3. If you want to set up by using EXPRESSBUILDER, go to Step 4.

Refer to (setup with OS standard installer) section of each OS and click [Skip] in RAID settings.

- 4. Boot from EXPRESSBUILDER.
- Select Configure EXPRESSBUILDER settings from Top Menu, and then select Load a driver into EXPRESSBUILDER from the menu. Next, click [Next].
 Insert the media in which the driver for the mass storage controller is copied, select the destination, and then click [Perform].

Tips

By selecting this option, the driver supplied by the CD-ROM or removable media is loaded, and you can proceed with the EXPRESSBUILDER setup.

- 6. Setup the RAID System according to "Setup with EXPRESSBUILDER" for each OS.
 - Click [Skip] in RAID settings.
 - Confirm that Apply drivers for mass storage controller appears under Selected applications in Application settings.

2. Setting Up the Operating System

See the figure below to find a section appropriate to your OS installation.



3. Setting Up Windows Server 2008 R2

Set up Windows Server 2008 R2.

3.1 Before Starting Setup

Read through the cautions explained here before starting setup.



: Setting up of Pre-installed model



: Confirm during Setup with EXPRESSBUILDER

: Confirm during Setup with OS standard installer

				(1/4)
	Setup			Items to confirm
вто	EB	OS	Windows family	 The following editions of the Windows Server 2008 R2 family may be installed. Windows Server 2008 R2 Standard Windows Server 2008 R2 Enterprise Inquiries about installing other editions may be made at your sales representative. For information about Service Packs, refer to <i>Chapter 1 (1.2 Service Pack Support</i>).
			Hardware	The following hardware configurations require special procedures.
_	EB	OS	Configuration	 Reinstalling to a mirrored volume Disable the mirroring and reset to the basic disk. After installation, enable the mirroring again. Use [Computer Management] – [Disk Management] to create, disable, or remove the mirrored volume.
_	EB	OS		• Peripheral devices such as RDX/MO Remove an MO device before installing an OS. Some peripheral devices need to be halted before installation. Refer to the manual provided with the peripheral devices for how to set a device appropriate to installation.
_	EB	OS		 DAT, LTO, and similar media Do not set media that is unnecessary to installation during setup.
	EB	08		• Reinstalling to hard disk drives that have been upgraded to dynamic disks If the hard disk drive has been upgraded to a dynamic disk, the operating system cannot be reinstalled to it with the existing partitions. Set up the operating system with the OS standard installer.
_	EB	OS		• Connecting to multiple hard disk drives (logical drives) For details on installing operating systems to a system in which multiple logical drives exist, refer to <i>Chapter 1</i> (3.8 Installation When Multiple Logical Drives Exist).

(2/4)

	Setup			Items to confirm		
_	EB	OS	System	The system partition size can be calculated by using the following formula.		
			partition size	Size required to install the OS + paging file size + dump file size + application size		
				Full installations		
				Size required to install the OS = 15,600 MB		
				(Windows Server 2008 R2 + Service Pack 1) = 8,400 MB		
				(Windows Server 2008 R2 with Service Pack 1) = 8,000 MB		
				(Windows Server 2008 R2)		
				Dump file size (recommended) = installed memory size + 300 MB		
				Application size = as required by the application		
				Server Core installations		
				Size required to install the OS = 11.100 MB		
				(Windows Server 2008 R2 + Service Pack 1) = 3,700 MB		
				(Windows Server 2008 R2 with Service Pack 1) = 3,500 MB		
				(Windows Server 2008 R2)		
				Paging file size (recommended) = installed memory size × 1.5		
				Dump file size = installed memory size + 300 MB		
				Application size = as required by the application		
				For example, if the installed memory size is 1 GB (1,024 MB) and Full installation is selected, the partition size is calculated as follows:		
				8,000 MB + (1,024 MB \times 1.5) + 1,024 MB + 300 MB + application size = 10,860 MB + application size		
				The above mentioned partition size is the minimum partition size required for system installation. Ensure that the partition size is sufficient for system operations. The following partition sizes are recommended. Full installations : 32,768 MB (32 GB) or more Server Core installations : 10,240MB (10 GB) or more		
				*1 GB = 1,024 MB		
				 Note The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the Windows partition paging file must be large enough to store dump files. Make sure you set a sufficient paging file size. If the paging file is insufficient, there will be a virtual memory shortage that may result in an inability to collect correct debug information. Regardless of the sizes of internal memory and write debug information, the maximum size of the dump file is "size of internal memory + 300 MB". When installing other applications or other items, add the amount of space needed by the application to the partition. 		

(3/4)

	Setup Items to confirm						
	EB	08	System partition size	If the partition size for installing the system is smaller than the size required for installation + paging file size, expand the partition size or add another disk. If your system does not have a sufficient dump file size, divide the required file space into multiple disks by performing the following steps. 1. Set the system partition size to a size sufficient to install the OS and paging file. 2. Write the debug information of the dump file onto another disk by referring to 7. Setup for Solving Problems. If there is not enough disk space to write the debug information, set the partition size to a size sufficient to install the OS and paging file, and then add another disk for the dump file. Tips When creating a new partition, Windows OS assigns an initial boot partition of 100 MB. For example, when making a partition of 40,960 MB (40 GB), usable space will be 40,960 MB – 100 MB = 40,860 MB. Free space System Partition (40,860 MB) Boot Partition (100 MB) The boot partition is not recognized from the operating system.			
	EB	05	Using BitLocker	If using BitLocker, note the following. • Be sure to keep the recovery password secure. Do not keep it near a server running BitLocker. • To reinstall the operating system into a partition that is encrypted with BitLocker, delete the BitLocker-encrypted partition prior to reinstallation. • Microsoft releases software updates for BitLocker encryption. If using BitLocker, it is important that you read through the information provided by Microsoft. Also read through the checklist published by Microsoft. For details, visit http://support.microsoft.com/kb/975496/en-us . Important If the recovery password is not entered, the OS cannot be started, and the content of the partition encrypted by BitLocker cannot be referenced any more. The recovery password might be required at startup of the OS after the following: Replacement of motherboard Initialization of trusted platform module (TPM) Change of BIOS setting 			
вто	EB	08	Installing Service Pack	 If the OS installation media contains Service Pack 1, you need not apply the service pack again. You can install the Service Pack on the server. When the Service Pack is not attached to your system, prepare it by yourself. 			

(4/4)

Setup				Items to confirm					
_	EB	08	License authentication	License Window For deta Note	 e authentication might be required, depending on the installation of /s. ails, refer to 3.7 License Authentication. Activate within 30 days following installation. A virtual product key is used when installing in a virtual environment. It is not used when directly installing an operating system to a physical server. 				

3.2 Setting Up of Pre-installed Model

If you specify "pre-installation" in BTO (Build to Order), your server will be shipped with partitions created, operating system and all the necessary software installed.

This section describes how to setup your server of pre-installed model when power of the server is turned on for the first time. For re-set up, use EXPRESSBUILDER or OS standard installer.

 Note
 The Scalable Networking Pack (SNP) feature is set to "Disabled" on pre-installed model.

 The setting of SNP function may affect the system performance.
 Contact your sales representative for details.

3.2.1 Before Starting Setup (Status at purchase)

Confirm the following before starting setup.

The hardware configuration of the server (including partition size of hard disk drive) and software installed in hard disk drive depends on your order made before purchase (BTO).

The figure below shows structure of the partition created in hard disk drive.



Boot Partition (100 MB) The boot partition is not recognized from the operating system.

3.2.2 Setup Procedure

Follow the steps below to setup your server.

- Power on peripheral devices then the server to run Windows.
 After a while, Setup Windows screen appears.
 - (1) When the following window appears, select a language, and then click [Next].

set Up Windo	JWS
🅞 👌 Set	Up Windows
	Windows Server: 2008 P2
	Standard
	Eigene Sprache: Deutsch Lingua dell'utente: italiano
	Ma langue est ∶français Mildioma es español Mv language is English
	NEC
_	
S	
	Next

(2) When the following window appears, select a language, enter information for the other items,

and then click [Next].
Set Up Windows
🕞 👸 Set Up Windows
Windows Server ⁻ 2008 R2 Standard
Country or region: United States
Ime and currency: English (United States)
Keyboard layout: US
NEC
Copyright © 2009 Microsoft Corporation. All rights reserved.
Next

(3) On Agree Software License Agreement screen, read the license terms carefully. If you agree,

select [l accept the license terms], and then click [Start].

(4) If you prompted to change password upon completion of setup of Windows Server 2008 R2, click



(5) Enter your new password, and click 😜

	8	
	Administrator Ner passed Confern passed Cate a sensed for at dil.	
14		
6	Windows Server 2008 😰	

Tips

- Password must satisfy the following conditions:
- Password must have at least 6 characters.
- Password must contain at least three of the following categories : numeric characters, upper-case alphabetic characters, lower-case alphabetic characters, or symbols.
- (6) Click [OK] on the screen shown below.



(7) After logon the system, set the user information on Initial Configuration Tasks screen.

Pe	erform the following tasks to configure thi	s server			Windows Server 2 Standard
0	Provide Computer Information			2	Specifying computer information
	🐴 Activate Windows	Product ID:	Not activated		
	Set time zone	Time Zone:	(UTC-08.00) Pacific Time (US & Canada)		
	Scorfigure networking	Local Area Connection:	Not connected		
	Provide computer name and domain	Full Computer Name: Workgroup:	WIN-Q1SKAJAVAF5 WORKGROUP		
0	Update This Server			?	Updating your Windows server
	Enable automatic updating and feedback	Updates: Feedback:	Not configured Windows Error Reporting off Not participating in Customer Experience	Improv	vement Program
	Pownicad and install updates	Checked for Updates: Installed Updates:	Never Never		
0	Customize This Server			2	Customizing your server
	Add roles	Roles:	None		
	Add features	Features:	None		
	Suble Renote Desidop	Remote Desktop:	Disabled		
	Conference Mandaura Estaval	Firewalk	Public: On		

- 2. Specify the details of network driver according to Chapter 1 (3.6 Setting Up Device Drivers).
- Install optional device drivers as needed according to the Instruction Manual provided with the optional device.
- Provide settings for bundled software and verify them.
 The bundled software listed below have been installed on your server.
 - NEC ESMPRO Agent
 - Universal RAID Utility
 - Microsoft Visual C++ 2005 SP1 Redistributable Package (x86) *
 - (Use the x86 package whatever the CPU architecture may be.)

Refer to Chapter 2 (Installing Bundled Software).

- * This component has already been installed when you install Universal RAID Utility.
- 5. Apply Service Pack as needed according to Chapter 1 (3.9 Applying Service Pack).
- 6. Provide setup according to the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup for pre-installed model is now complete.

3.3 Setup with EXPRESSBUILDER

This section describes how to install Windows with EXPRESSBUILDER.

This feature automatically recognizes the RAID Controller connected to the server and configures the RAID System, so you must complete the hardware installation of the server by following " *User's Guide* ".

Important	 Setup with EXPRESSBUILDER may delete all data of the hard disk drive depending on the settings. Pay attention to input parameters. You must be especially careful when configuring the following: RAID settings wizard Partition Settings in the Windows Setup wizard Backing up user data, as needed, is recommended. Before starting setup, be sure to disconnect hard disk drives from the
	RAID Controller that is not to be setup. Install those hard disk drives after setup has completed. Conducting setup with hard disk drives being connected with RAID Controller may cause existing data to be erased unintentionally. It is recommended to make backup copy of user data before starting setup.
Note	The Scalable Networking Pack (SNP) function is disabled on systems that have been installed by using EXPRESSBUILDER
	The setting of SNP function may affect the system performance. Contact your sales representative for details.
Tips	 Setup with EXPRESSBUILDER allows you to use a pre-specified parameter file or save the parameters specified in setup as a parameter file on a removable media or Internal Flash Memory (if purchased optionally).
	 For details on creating a parameter file, refer to 8 Windows OS Parameter File.

3.3.1 Setup flow





3.3.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- > Either of the following OS installation media
 - NEC operating system installation media (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation media (hereafter referred to as Windows Server 2008 R2 DVD-ROM)
- > First Steps Guide
- Either of the following EXPRESSBUILDER
 - EXPRESSBUILDER DVD
 - Internal Flash Memory
 (If "Internal Flash Memory" is installed)
- Prepare if needed:
 - Removable media for Windows OS parameter file
 - Service Pack

(If the OS installation media contains Service Pack 1, you need not apply the service pack again.)

Tips

- EXPRESSBUILDER may be distributed in Internal Flash Memory.
 EXPRESSBUILDER can be run from Internal Flash Memory if it is installed in the server.
- If you are using a server with Internal Flash Memory installed, you can install the OS without using EXPRESSBUILDER DVD. .

3.3.3 Setup procedure

During Setup with EXPRESSBUILDER, parameters are specified through the wizard. You can also save the parameters as one file (a parameter file) to removable media.

• Read through the items in *Chapter 1* (3.1 Before Starting Setup) prior to installing Windows.

- If modifying or adding network adapters or other drivers, refer to Chapter 1 (3.6 Setting Up Device Drivers).
- 1. Turn peripheral device power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select **Os installation** *** **default** ***. You will automatically advance to step 4, with no need for further input.

Boot selection - Ds installation *** default *** Tool Menu (Normal Mode) Tool Menu (Redirection Mode)	
Automatic select	at 10 seconds

4. Select English on the language selection window, and then click [OK].

?	Quest	tion							
	EXPRESSBUILDERで使用する言語を選択してください。								
	Selec	t a language t	o use for the	e EXPRESSBUI	LDER.				
	(日本語	۲	English					
	0	⊃ França	is o	Italiano					
	(Deutsc	¦h ⊂	Español					
ОК									

5. When the Windows PE software license agreement window appears, click [Yes].

(?) Question	
Confirm the following End-User License Agreement.	
To use this software, agree this license.	
	-
END-USER LICENSE AGREEMENT FOR MICROSOFT® WINDOWS® PREINSTALLATION ENVIRONMENT	
IMPORTANT-READ CAREFULLY:	
This End-Liser License Arreement ("FLILA") is a legal arreement between you (either an individual or a single	
entity) and the manufacturer ("Manufacturer2) of the special nurrose computing device or software ("SYSTEM")	
you acquired which includes certain Microsoft software product(s) installed on or for use with the SYSTEM	
("SOFTWARE").	
The SOFTWARE includes computer software, and may include associated media, printed materials, and "online"	
or electronic documentation.	
Any software provided along with the SOFTWARE that is associated with a separate end-user license agreement	
or separate terms of use is licensed to you under the terms of that license agreement or terms of use rather	
than this EULA.	
By installing, copying, downloading, accessing or otherwise using the SOFTWARE, you agree to be bound by the	
terms of this EULA.	
If you do not agree to the terms of this EULA, Manufacturer and Microsoft Licensing, GP ("MS") are unwilling to	
license the SOFTWARE to you.	
	·
Yes No	
	1
Note Unless you agree these ter	ms. vou cannot use EXPRESSBUILDER.
	.,,,

6. Select Set up this computer from Top Menu of EXPRESSBUILDER, and then click [Next].

NEC	EXPRESSBUILDER Version 6.xx-xxx.xx (xxx)
To invoke each function, select a radio button, and then click [Next]. If [Remove] is clicked, you can remove USB devices inserted into this comput	er safely.
Set up this computer Invoke various utilities	
C Configure EXPRESSBUILDER settings	
C Exit EXPRESSBUILDER	
→ _{Next}	USB Remove

7. Set parameters on this menu according to your requirement.
When not using parameter file: Go to Step 8.
When using a parameter file: Go to Step 9.

Note When setting up again, parameter input via the wizard can be omitted by loading the saved parameter file.

 If you do not use a parameter file, select an OS from the pull-down menu in [Install Windows], and click [Next].

On this dialog, select "Windows Server 2008 R2" from the pull-down menu. \rightarrow Go to Step 10.

ind then click [Next]. R only configures RAID system without puter according to the parameter file.	OS installation.
Windows Server 2008 R2	
1	
	Ind then dick [Next]. Conv configures RAD system without suter according to the parameter file. [Windows Server 2008 R2

9. If you use a parameter file, select **Load a parameter file** and click [Next]. Load a parameter file according to displayed instructions.

NEC	C C	EXPR	ESSBUILDER
To install an op If [Configure R/ If [Load a para	ierating system, select an item in the listb AID system only] is selected, EXPRESSBU meter file] is selected, you can set up the	iox, and then click [Next]. ILDER only configures RAID system withou computer according to the parameter file.	t OS installation.
	C Install Windows	Windows Server 2008 R2	¥
	C Configure RAID system only		
	Back		USB Remove

Confirm settings on Parameter Setup Menu as needed, then click [Next]. \rightarrow Go to Step 13.

NEC			E	XPRESS Version	BUILDER
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. I can change the parameter In save the parameter to a l cannot proceed to the next	s of the category. file. t step. Click [Setting	gs] to set the pa	irameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition	(40GB)	0	Default values Default Settings Skip
		-			
Windows settings	User information User settings	Network settin Default settin	igs Wind	ows Components efault settings	Default Settings
		-			
Application settings	Applications installation Default settings	-			Default Settings
	Back	→ Next		Save	Remove

10. Set parameters required for setup.

Click [Settings] of the relevant category to change parameters.

NEC			EXPRESS Version	BUILDER
Set parameters for the se If [Settings] is clicked, yo If [Save] is clicked, you co *** If "!" is displayed, you	tup. u can change the parameter an save the parameter to a u cannot proceed to the nex	rs of the category. file. t step. Click [Settings] to s	et the parameters.	
RAID settings Skip	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settings Skip
Windows settings	User information Default settings	Network settings	Windows Components Default settings	Default Settings
Application settings	Applications installation Default settings	•		Default Settings
	Back	Next	Save	Remove

Click [Default] to restore the default values. You can see the default values by clicking [Default values].

EXPR	Version 6. XX - XXX (XXX)
) set the parameter	s
	🕜 Default values

10-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically. Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRES: Version	SBUILDER 1 6. xx - xxx . xx (xxx)
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca **** If "!" is displayed, you	tup. J can change the parameter In save the parameter to a cannot proceed to the next	s of the category. file. : step. Click [Settings] to s	et the parameters.	
RAID settings	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40GB)		Default Default Settings Skip
		+		
Windows settings	User information	Network settings Default settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	Save	Remove

When creating new logical drives

- (1) Click [Settings] in RAID settings.
- (2) Use the wizard to set up logical drives.

Important If you proceed with wizard, the existing RAID system is destructed and the contents of hard disk drive will be erased.

When skipping the creation of new logical drives

Click [Skip] in RAID settings.

When the RAID settings wizard is terminated, Parameter Setup Menu appears again.

10-2 Windows settings

Set up Windows by using the Windows settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	6.xx-xxx.xx(xxx)
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. u can change the parameter in save the parameter to a u cannot proceed to the next	s of the category. file. : step. Click [Settings] to s	et the parameters.	
RAID settings	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settings Skip
		+		
Windows settings	User information Default settings	Network settings Default settings	Windows Components Default sittings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	Save	Remove

- (1) Click [Settings] in Windows settings.
- (2) Click [Next] in the Windows settings wizard.

🕜 Wizard	
Follow the steps below to set the parameters necessary for W If [Use OS standard installer] is selected, you need to input pa standard installer.	indows setup. rameters step by step without this wizard by using the
Start ↓ Set Windows preferences ↓ Set partition preferences ↓ Set user preferences ↓ Set network preferences ↓ Set component preference ↓ Check/Exit	Use OS atandard installer
Next	Cancel

(3) Specify the Windows basic settings.

Change settings for "Edition" and "Time Zone" as needed, and click [Next].

sic information——	
Operating System	: Windows Server 2008 R2
C Use OS standa	rd installer
🔳 Сору ОЕМ	drivers into a removable media
┌ [●] Setup with EXF	RESSBUILDER
Edition	: Standard(Full Installation)
Language	English
Time Topo	(UTC=09:00) Passilia Time (US & Canada)

(4) Set up the partitions.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

😮 Wizard
Set parameters about the partition of Windows installation.
Windows can be installed into the first hard disk drive or logical drive. The partition size can be set within 2TB.(The
area where 2TB is exceeded cannot be used.)
If there are any partitions in the destination disk, below red-framed area is deleted.
Current partitions(the red-framed area is deleted) :
Data partition
(40.0GB) (108.1GB)
Partitioning
 Ose the existing partition
© Create a new partition
C Specify the maximum amount
© Enter a value : 40 (GB) *1TB=1024GB
(17GB - 148GB)
3 / 8 Page
Back Next Cancel

Important • Partition size

- Specify a partition size larger than the minimum required for installing the operating system. (Refer to *Chapter 1 (3.1 Before Starting Setup*).)
- The maximum partition size is 2,097,152 MB.
- If you select *Create a new partition* under *Partitioning*, the entire contents of the hard disk drive will be deleted.
- If you select Use the existing partition under Partitioning, data in the boot partition (if it exists) and system partition is formatted and deleted. Data in other partitions will be kept.

The figure below shows in which partitions data will be deleted.

	Boot partition	system partition	User data partition			
	Deleted	Deleted	Retained			
You cannot reinstall to an existing partition that has been upgraded to						

(5) Enter user information.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Use the existing partition under Partitioning.

Wizard				
Set parameters about user information. Input Computer name within 15 characters. Administrator password requires more than 6 characters, and must contain characters from three of the following categories(numbers / uppercase / lowercase / signs).				
User information				
Computer name	: 1-1766-0123456 (Required) 🗹 Auto			
User name	: Administrator			
Administrator password	: (Required)			
Confirm Administrator password	: (Required)			
	4 / 8 Page			
Back Next	Cancel			

Note	For Windows Server 2008 R2, you must enter a computer name and administrator
	password that satisfies the following conditions:
	 Contains 6 or more characters
	- Contains characters from at least three of the following categories: numbers,
	uppercase letters, lowercase letters, and symbols.
Tips	• The Computer name has been assigned by automatic assignment function. If
	you need to assign another computer name, remove the checkmark from
	"Auto", and enter the desired computer name.
	• If a parameter file is used for setup or if you return to a previous screen, ••••••
	is displayed in the Administrator password and Confirm Administrator
	password text boxes even if no value has been entered.

(6) Set up the network.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Wizard	
Set parameters about network protocol.	
If you input IP address, select [Custom settings], and then click [Advanced].	
Network protocols	
 Standard setting 	
C Custom settings	
Standard adapter - Internet Protocol (Pv4)	anced
	5 / 8 Page
Dust. Novi	0l
Dack Next	Gancel

Note	Even when an optional network board is connected, Custom setting list only				
	shows standard network boards.				
	After finishing Setup with EXPRESSBUILDER, specify the optional network settings again.				
Tips	The order of entry in Custom settings may differ from the numbering of LAN ports.				

(7) Enter the domain or workgroup name to be used.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Workgroup name : [CRKSR0UP] Join a domain	Join a workgroup		
Join a domain Domain name Continuation Password Confirm password	Workgroup name	: WORKGROUP	
Domain name : Account name : Password : Confirm password :	Join a domain		
Account name : Password : Confirm password :	Domain name	:	
Password : Confirm password :	Account name	:	
Confirm password :	Password	:	
	Confirm password	:	

(8) Select the Windows components for installation.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Wizard	
Set parameters about Windows components. Select Windows features and Server roles to be enabled.	
┌ Server roles	
Web server(IIS)	
DHCP server	
DNS server	
File services	
Print and Document services	
Windows features	
SNMP service	Advanced
Simple TCP/IP services	
WINS server	
	7 / 8 Page
Back Next	Cancel

(9) Confirm settings.

Confirm settings on the dialog shown below, and click [Finish].

Wizard			
Parameter se To finish this	etting is completed. wizard, click [Finish].		
Install	ed OS	: Windows Server 2008 R2	_
(Setup	with EXPRESSBUILDER)		
Editio	ı	: Standard(Full Installation)	
Langu	age	: English	
Time :	Time zone : (UTC-08:00) Pacific Time (US & Can		
Partiti	on	: Create a new partition(40GB)	.
		8 / 8 Pa	age
Bac	k	Finish	

When the Windows settings wizard is terminated, Parameter Setup Menu appears again.

10-3 Application settings

Set up applications using the Application settings wizard in Parameter Setup Menu.

NEC			EXPRESS Version	
Set the parameters for the If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	e setup. u can change the paramete n save the parameter to a cannot proceed to the nex	rs of the category. file. t step. Click [Settings] to se	t the parameters.	
RAID settings	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settlings Skip
	1	+		·
Windows settings	User information Default settings	Network settings Default settings	Components settings Default settings	Default Settings
Application polyings		+		
OK	Applications installation Default settings			Default Settings
	Back	→ _{Next}	Save	VSB Remove

(1) Click [Setting] in Application settings.
(2) Confirm settings on the dialog shown below, change them as needed, and click [Finish].

Wizard					
Select applications to install.					
For more information on each application, refer	For more information on each application, refer to [Description of Application] column.				
List of applications	Selected applications				
Apply drivers for mass storage controller	NEC ESMPRO Agent				
	Add >> Universal RAID Utility Microsoft Visual C++ 2005 SP1 Redistributable F				
	<< Delete				
- Description of Application					
beschption of http:///					
	Ein ink				
	1 man				

11. Save parameters on Parameter Setup Menu.

Click [Save], and save the parameter file according to displayed instructions.

If you do not need to save parameters, go to Step 12.

12. Click [Next] on Parameter Setup Menu.

NEC			EXPRES: Version	BUILDER		
Set the parameters for th If [Settings] is clicked, you If [Save] is clicked, you co *** If "!" is displayed, you	Set the parameters for the setup. If [Settings] is clicked, you can change the parameters of the category. If [Save] is clicked, you can are the parameter to a file. *** If " is displayed, you cannot proved to the next tesp. Click [Settings] to set the parameters.					
RAID settings	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40G	B)	Default values Default Settings Skip		
		+				
Windows settings	User information Default settings	Network settings Default settings	Components settings Default settings	Default Settings		
Application settings	Applications installation Default settings			Default Settings		
	Back	Next	Save	Remove		

13. Confirm the summary of setup on the screen below, and click [Perform].

NEC	EXPRESSBUILDER Version 6. xx - xxx . xxx (xxx)
Ready to set up the computer. To start the setup, click [Perform].	
Steps	Summary of setup
Configuring RAID system	RAID configuration
 Partitioning 	* All data is deleted.
 Copying files 	Partition Create a new partition
 Changing a media 	Installed OS
 Installing OS and applications 	Windows Server 2008 R2 Standard(Full Installation)
	Installed application NEC ESMPRO Agent
	Universal RAID Utility
	Package(x86)
Back	Perform (Perform)

14. Install the additional applications.

If Installing the OS and applications is selected, the following message will appear.

?	Question	
		Insert the media including the additional applications.
	?	
		[Message ID : H2001]
		OK Cancel

Insert the CD-ROM or removable media that contains the necessary applications, and install them according to displayed messages.

15. Remove the removable media or DVD(EXPRESSBUILDER) from the server.

1 Informati	on
	Remove the CD/DVD and other removable media.
1	
	[Message ID : H1002]
	OK

16. Insert the Windows Server 2008 R2 DVD-ROM into the optical disk drive, and then click [OK].

?	Question	
		Insert Backup OS disk into the drive.
	?	
		[Message ID : H2003]
		OK Cancel

Windows Server 2008 R2 and selected applications will be installed automatically and restart several times.

17. When the software license agreement window appears, select I accept the license terms, and then click

[Start] (Full installation only).

lease read the licens	e terms
MICROSOFT SOFTW	ARE LICENSE TERMS
MICROSOFT WINDO	WS SERVER 2008 R2 STANDARD
These license terms ; where you live, one c software named abov terms also apply to a	are an agreement between Microsoft Corporation (or based on if its affiliates) and you. Please read them. They apply to the e.g. which includes the media on which you received it, if any. The ny Microsoft
updates,	
supplements,	
Internet-based se	ervices, and
sunnort services	
I accept the license ten	ms

18. When the following message appears, press <Ctrl> + <Alt> + keys.



19. Follow displayed instructions to log on to the system.

Full installations:

When the following screen appears, enter your password into the text box, and then click 😜.



Server Core installations:

When the following screen appears, enter your password into the text box, and then click 😜.



- 20. Click [OK] in the Setup Complete window.
- 21. Follow the instructions described in Chapter 1 (3.6 Setting Up Device Drivers) to set up the device drivers.
- 22. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 23. Apply Service Pack as needed according to Chapter 1 (3.9 Applying Service Pack).
- 24. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with EXPRESSBUILDER is now complete.

3.4 Setup with OS Standard Installer

This section describes how to install Windows with OS Standard Installer.

This feature automatically recognizes the RAID Controller connected to the server and configures the RAID System, so you must complete the hardware installation of the server by following "*User's Guide*".

Important	Setup with OS standard Installer may delete all data of the hard disk drive				
	depending on the settings. Pay attention to input parameters. You must be				
	especially careful when configuring the following:				
	–RAID settings wizard				
	Backing up user data, as needed, is recommended.				
Tips	Setup with OS Standard Installer allows you to use a pre-specified parameter file				
	or save the parameters specified in setup as a parameter file on a removable				
	media or Internal Flash Memory (if purchased optionally).				
	 For details on creating a parameter file, refer to 8 Windows OS Parameter File. 				

3.4.1 Setup flow



3.4.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- > Either of the following OS installation media
 - NEC operating system installation media (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation media (hereafter referred to as Windows Server 2008 R2 DVD-ROM)
- > First Steps Guide
- Either of the following EXPRESSBUILDER
 - EXPRESSBUILDER DVD
 - Internal Flash Memory (If "Internal Flash Memory " is installed)
- Prepare if needed:
 - Removable media for Windows OS parameter file
 - Service Pack

(If the OS installation media contains Service Pack 1, you need not apply the service pack again.)

Tips

- EXPRESSBUILDER may be distributed in Internal Flash Memory.
 EXPRESSBUILDER can be run from Internal Flash Memory if it is installed in the server.
- If you are using a server with Internal Flash Memory installed, you can install the OS without using EXPRESSBUILDER DVD.

3.4.3 Setup procedure

This section describes the procedure for installing Windows Server 2008 R2 with OS standard installer.

Note

Read through the items in *Chapter 1* (*3.1 Before Starting Setup*) prior to installing Windows.

- 1. Turn peripheral device power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select **Os installation** *** **default** ***. You will automatically advance to step 4, with no need for further input.



4. Select English on the language selection window, and then click [OK].

?	Qu	estior	ı				
	E	XPRE	SSBUILDERで	使用する言	語を選択してく	ださい。	
••••	Se	elect a	language to	use for the	EXPRESSBUI	LDER.	•••••
		0	日本語	o	English		
		0	Français	0	Italiano		
		0	Deutsch	0	Español		
			_		1		
				OK			

5. When the Windows PE software license agreement window appears, click [Yes].

Confirm the following End-User	License Agreement.			
To use this software, agree this	s license.			
END-USEK LICENSE AGREEME	NT FOR MICROSOFT® WINDOWS® PREINSTALLATION ENVIRONMENT			
INFORTANT-READ CAREFULL				
This End-User License Agreen	nent ("EULA") is a legal agreement between you (either an individual or a single			
entity) and the manufacturer ("Manufacturer2) of the special purpose computing device or software ("SYSTEM")			
you acquired which includes ce	rtain Microsoft software product(s) installed on or for use with the SYSTEM			
("SOFTWARE").				
The SOFTWARE includes computer software, and may include associated media, printed materials, and "online"				
or electronic documentation.	and a second secon			
Any software provided along w	nth the SOFI WARE that is associated with a separate end-user license agreement			
than this ELILA	ansed to you under the terms of that license agreement or terms of use rather			
By installing, conving, downloa	ading, accessing or otherwise using the SOFTWARE, you agree to be bound by the			
terms of this EULA.				
If you do not agree to the tern	ns of this EULA, Manufacturer and Microsoft Licensing, GP ("MS") are unwilling to			
license the SOFTWARE to you.				
	Max			
	Yes No			

Note

Unless you agree these terms, you cannot use EXPRESSBUILDER.

6. Select Set up this computer from Top Menu of EXPRESSBUILDER, and then click [Next].

NE	c	EXPRESSBUILDER Version 6. xx- xxx .xx (xxx)
To invoke ead	h function, select a radio button, and then click [Next].	
If [Remove] i	s clicked, you can remove USB devices inserted into this computer s	afely.
ſ		
C	O Invoke various utilities	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ Next	USB FRemove

7. Set parameters on this menu according to your requirement.
Uhen not using parameter file: Go to Step 8.
Uhen using a parameter file: Go to Step 9.

Note

When setting up again, parameter input via the wizard can be omitted by loading the saved parameter file.

If you do not use a parameter file, select an OS from the pull-down menu in [Install Windows], and click [Next]. On this dialog, select "Windows Server 2008 R2" from the pull-down menu.
 → Go to Step 10.

NEC		EXPRESSB Version 6.7					
To install an opera If [Configure RAIE If [Load a parame	To install an operating system, select an item in the listbox, and then click [Next]. If [Configure RAID system only] is selected, EXPRESSBUILDER only configures RAID system without OS installation. If [Load a parameter file] is selected, you can set up the computer according to the parameter file.						
	Install Windows	Windows Server 2008 R2					
[C Configure RAID system only	,					
	C Load a parameter file						
	Back	→ Next	Remove				

9. If you use a parameter file, select [Load a parameter file] and click [Next]. Load a parameter file according to displayed instructions.

NEC	EXP	RESSBUILDER Version 6. xx - xxx . xx (xxx)
To install an operating system, select an item in If [Configure RAID system only] is selected, EXP If [Load a parameter file] is selected, you can se	the listbox, and then click [Next]. RESSBUILDER only configures RAID system will at up the computer according to the parameter	:hout OS installation. file.
C Install Windows	Windows Server 2008 R2	×
C Courfe on Barb on the		
Back ←	→ Next	USB Remove

Confirm settings on Parameter Setup Menu as needed, then click [Next]. \rightarrow Go to Step16.



10. Set parameters required for setup.

Click [Settings] of the relevant category to change parameters.

NEC			EXPRESS Version	BUILDER 6. xx - xxx . xx (xxx)
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "(" is displayed, you	tup. u can change the parameter in save the parameter to a cannot proceed to the next	s of the category. file. : step. Click [Settings] to se	et the parameters.	
			0	Default values
RAID settings Skip	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40GB)		Default Settings Skip
		-		
Windows settings	User information Default settings	Network settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	Save	Remove

Click [Default] to restore the default values.

You can see the default values by clicking [Default values].

EXF	PRESSBUILDER Version 6. xx- xxx .xx (xxx)
) set the parame	
	🕜 Default values
	Default

10-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically. Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRES: Version	BUILDER
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. u can change the parameter an save the parameter to a u cannot proceed to the next	rs of the category. file. t step. Click [Settings] to se	t the parameters.	
RAID settings	Disk array1 RAIDO(1disk) Logical drive1 (148GB) :	System Partition (40GB)		Default Default Settings Skip
Windows settings	User information	Network settings	Windows Components	Default Settings
Application settings	Applications installation		Deruur actunga	Default
OK	Default settings	→ Next	Save	Settings

When creating new logical drives

- (1) Click [Settings] in RAID settings.
- (2) Use the wizard to set up logical drives.

Important If you proceed with wizard, the existing RAID system is destructed and the contents of hard disk drive will be erased.

When skipping the creation of a new logical drives

Click [Skip] in RAID settings.

11. Click [Settings] in Windows settings.

NEC			EXPRES Versid	SBUILDER
Set parameters for the se If [Settings] is clicked, yo If [Save] is clicked, you ca If "I" is displayed, you	tup. u can change the parameter in save the parameter to a u cannot proceed to the next	s of the category. file. : step. Click [Settings] to s	et the parameters.	
RAID settings Skip	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40GB)		Default values Default Settings Skip
Windows settings	User information Default settings	Network settings	Windows Componints	s Default Settings
Application settings	Applications installation Default settings	+		Default Settings
	Back	→ Next	Save	Remove

12. Click [Next] in the Windows settings wizard.

Wizard			
Follow the steps below If [Use OS standard in standard installer.	to set the parameters necessary for Windo staller] is selected, you need to input param	ws setup. eters step by	step without this wizard by using the
	Start Set Windows preferences Set variation preferences Set user preferences Set user preferences Set component preferences Check/Exit	Use OS star 	ndard installer 1 / 8 Page
	Next		Cancel

- 13. Specify the Windows basic settings.
 - The basic information window appears. Select Use OS standard installer, and then click [Next].

Wizard		
If [Use OS standard installer] is so media, and applications such as E If [Setup with EXPRESSBUILDER]	elected, Windows is installed by using the standard in SMPRO must be installed separately after Windows ir is selected, both Windows and applications can be in:	staller contained in the OS istallation. stalled easily.
Basic information Operating System	: Windows Server 2008 R2	
 Use OS standard Use OS standard 	installer	
C Setup with EXPRE	SSBUILDER	
Edition	Standard(Full Installation)	
Language	English	
Time zone	: (UTC-08:00) Pacific Time (US & Canada)	v
		2 / 8 Page
Back Ne	ext	Cancel

14. Confirm settings on the confirmation window, and click [Finish].

ameter setting is completed. finish this wizard, click [Finish].		
Installed OS	: Windows Server 200	8 R2
(Use OS standard installer)		
Copy OEM drivers	: Not act	
		8 / 8 Page
Back		Finish

15. Click [Next] on Parameter Setup Menu.



16. Confirm the summary of setup on the screen below, and click [Perform].

NEC	EXPRESSBUILDER Version 6.xx-xxx .xx (xxx)
Ready to set up the computer. To start the setup, click [Perform].	
Steps	Summary of setup
 Configuring RAID system 	RAID configuration Configure
 Changing a media 	* All data is deleted.
 Installing OS 	Installed OS Windows Server 2008 R2
	Copy OEM drivers Not act
	·
Back	Perform (USB) Remove

17. Continue setup according to displayed message. When the following message appears, set OS installation media, and click [OK].

?	Question	
		Insert the Backup OS disk into the drive.
	?	
		[Message ID :2XXX]
		OK Cance I

18. Reboot the server automatically.

If you use Internal Flash Memory, press <F3> key when the following message appears during POST.

 Press <F2> Setup, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network

 Note
 Since the OS installation media is set in the optical disk drive in Step 17, boot the system from the optical disk drive having higher boot priority, not from Internal Flash Memory.

19. Run from the OS installation media.

If a bootable operating system is already installed on the hard disk drive, press <Enter> key while the message "Press any key to boot from CD or DVD..." is displayed on the top of the screen.

When the boot sequence proceeds, the message "Windows is loading files..." appears.

Note If "Windows is loading files..." message does not appear, <Enter> key was not pressed correctly. Reboot and retry again.

This step is unnecessary if no bootable operating system exists.

20. When the following window appears, select a language, enter information for the other items, and then click [Next].



 When the following message appears, click [Install Now ⁽¹⁾]. Windows Server 2008 R2 installation starts.



22. When the following window appears, select the Windows edition you have purchased and your preferred installation method.



Tips

- The Windows versions that appear on the screen differ depending on the OS installation media used.
- 23. When the following window appears, confirm the content of the license agreement. If you agree, select **I accept the license terms** and then click [Next].



24. When the following message appears, select the installation type. Select **Custom (advanced)** in this case.



25. The "Where do you want to install Windows?" window appears.

```
Note Go to Step 29 if RAID Controller is not used.
```

Click Load Driver.

If the following message appears, replace the OS installation media and EXPRESSBUILDER DVD in the optical disk drive, and then click [Browse]. Next, go to step 26.

```
Load Driver

To install the driver needed to access your hard drive, insert

the installation media containing the driver files, and then click

OK.

Note: The installation media can be a floppy disk, CD, DVD, or

USB flash drive.

[Browse] [OK] [Cancel]
```

- Tips
 If using Internal Flash Memory, you do not need to remove the OS installation media.
 At this time, a message "The Installation media can be a floppy disk, CD, DVD, or USB flash drive." Appears on the screen, you must use the supplied EXPRESSBUILDER DVD or Internal Flash Memory.
- 26. Specify the following locations, and then click [OK].

When using EXPRESSBUILDER, select the optical disk drive. When using Internal Flash Memory, select the volume of INTER-FLASH.

N8103-149/150/151 RAID Controller :

```
\021\win\winnt\oemfd\ws2008r2\megasas2
```

- Select the necessary driver from the driver list shown, and then click [Next]. When using the N8103-149/150/151 RAID Controller [LSI MegaRAID SAS 9267-8i]
- 28. If you used EXPRESSBUILDER DVD, remove it and then insert the OS installation media.

 Tips
 If you have not replaced the OS installation media after loading the driver, the following message may appear.

 If it appears, replace the OS installation media, and then click [Refresh].

29. When the following window appears, select the disk in which the partition will be created, and then click **Drive options (advanced)**.

If a partition has already been created, go to step 32.

Name		Total Size	Free Space Type	
Disk 0 Unall	ocated Space	74.5 GB	74.5 GB	
€ Befresh	Delete	✓ Eormat	<mark>⊯</mark> Ne <u>w</u>	
Ca Load Univer	<u>a</u> L <u>a</u> tend			Next

30. Click [New], enter the partition size into the size input box, and then click [Apply].

Note	When installing the OS to a disk of over 2,097,152 MB (2 TB), the partition size can only be set to 2,097,152 MB or less.
Tips	When creating a new partition and installing the OS, a 100 MB boot partition is created. When the following window appears, click [OK].
	Install Windows To ensure that all Windows features work correctly, Windows might create additional partitions for system files. OK Cancel

- 31. Select the partition created in step 30, and then click [Format].
- 32. In the window below, select the created partition, and then click [Next].

Where do you	want to install Wind	lows?			Ш							
Name		Total Size	Free Space	Туре								
🗇 Disk 0 Pa	rtition 1: System Reserved	100.0 MB	86.0 MB	System								
Disk 0 Pz	rtition 2	39.9 GB	39.9 GB	Primary								
€ <u>a</u> <u>R</u> efresh	X Delete	✓ Eormat	∦ Ngw									
scting information 2	Installing Windows			Next								
	Tip	s	The	number	of	partitions	displayed	differs	depending	on	the	hard

When the following message appears, Windows installation starts automatically.



33. After a Full installation of Windows Server 2008 R2 is completed, the following window appears, prompting you to change your password before logging on. Click [OK].



34. Change your password, and then click the [] button.

Full installations:



Server Core installations:



Tips

- Passwords must fulfill the following requirements in Windows Server 2008 R2.
 Contains 6 or more characters
 Contains characters from at least three of the following categories: numbers, uppercase letters, lowercase letters, and symbols.
- 35. When the following message appears, click [OK].



36. Confirm the following according to the settings selected (displayed) in Step 22.

Full installations:

When the Initial Configuration Tasks window appears after you log on, enter the user information.

Perform the following tasks to configure the	s server		Windows Serve Standard
Provide Computer Information			Specifying computer information
📉 Activate Windows	Product ID:	Not activated	
💣 Set time zone	Time Zone:	(UTC-08.00) Pacific Time (US & Canada)	
Scortigure networking	Local Area Connection:	Not connected	
Novide computer name and domain	Full Computer Name: Workgroup:	WIN-Q1SKAJAVAF8 WORKGROUP	
2 Update This Server			Updating your Windows server
Enable automatic updating and feedback	Updates: Feedback	Not configured Windows Error Reporting off Not participating in Customer Experience	Inprovement Program
and install updates	Checked for Updates: Installed Updates:	Never Never	
Customize This Server			Customizing your server
Add roles	Roles:	None	
🛃 Add features	Features:	None	
San Enable Remote Desidop	Remote Desktop:	Disabled	
Mr Configure Windows Frewall	Firewalk	Public: On	
Do not above this window at lowers			One

Server Core installations:

The command prompt will appear. Set the user information.





For detailed setup procedures, refer to the Microsoft "Step by Step Guide".

- 37. Install Starter Pack by referring to Chapter 1 (3.4 Installing Starter Pack).
- 38. Install drivers and specify detailed settings by referring to Chapter 1 (3.5 Setting Up Device Drivers).
- 39. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 40. Apply Service Pack as needed according to Chapter 1 (3.9 Applying Service Pack).
- 41. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with OS standard installer is now complete.

3.5 Installing Starter Pack

Starter Pack contains drivers customized for this server. Be sure to apply Starter Pack before running the system.

Important	Also install Starter Pack in the following cases.
	 The system configurations have changed (when internal option devices have been added or removed)
	If a dialog box prompting you to restart appears after changing system configurations, click [No] and then install Starter Pack.
	– If the system was restored using a restore process
	– If a system has been restored using the backup tool
Note	The Scalable Networking Pack (SNP) function is disabled upon Starter Pack installation is complete.
	The setting of SNP function may affect the system performance.
Tips	If the OS is installed by using EXPRESSBUILDER, Starter Pack is already applied. If the configuration is not changed, you do not need to apply Starter Pack again.

3.5.1 When using EXPRESSBUILDER DVD

- 1. Log on to the system with the built-in administrator, which has administrative privileges.
- 2. Insert EXPRESSBUILDER DVD into the optical disk drive.
- 3. Proceed application step according to the installation type.

Full installations

When Autorun Menu appears, click **Set up Windows** to open the short-cut menu and then select **Install Starter Pack**.

EXPRESSBUILDER	×
NEC	EXPRESSBUILDER
Menu items	
🕞 Read documen	ts
Set up Window	S
Cature active	Create a parameter file for Windows OS
Set up softwar	Install .NET Framework Ver2.0 Redistributable Package(x86) Install .NET Framework Ver2.0 Redistributable Package(x64) Install Microsoft Visual C++ 2005 SP1 Redistributable Package(x86)
	Install Starter Pack
	🛞 Close Menu
	Version 6.xx-xxx .xx (xxx)

Server Core installations

(1) From the command prompt, type the following command. (for example, D drive.)

Cd /d D:\021\win\winnt\bin

C:\Users\administrator>cd /d D:\021\win\winnt\bin

(2) Enter the following, and then press <Enter> key.

Pkgsetup.vbs	
D:\021\win\winnt\bin>pkgsetup.vbs	

4. The setup message appears.

Starter Pa	ıck		×								
?	Setup is going to install Star If you install it, dick [OK], If you wish to cancel it, did This process disables Scalat If you use SNP function, en	ter Pack. [Cance]. de Networking Pack(SNP) function. able it after the reboot.									
		Cancel									
	Tips	Although it may take sev window to appear withou	eral m tatter	minı empt	utes fo ting an	r the at y furthe	oove w r oper	indow ation.	to appe	ar, wait	for

Read the message that appears, and then click [OK].

Starter Pack installation starts.

Starter Pack is	being installed. Wait a moment until the update is complete.	
	Starter Pack	
	Installing Starter Pack.	
	Please wait for a while	
	Checking the OS information. >> Updating drivers. Performing the end process of Starter Pack.	

5. When the following message appears, Starter Pack installation is complete. Follow the instructions in the message, and remove EXPRESSBUILDER DVD.



6. Click [OK] and then restart the system.

Installation of Starter Pack is now complete.

3.5.2 When using Internal Flash Memory

(Optional "Internal Flash Memory " is required)

- 1. After installing the operating system, the system will restart.
- Use Internal Flash Memory to run EXPRESSBUILDER. When "Press <F2> Setup, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network" appears during POST, press <F3> key.



 When the following message appears, select Os installation *** default ***. You will automatically advance to the next window, with no need for further input.



4. Select English on the language selection window, and then click [OK].



5. When the Windows PE software license agreement window appears, click [Yes].

Question	7
Confirm the following End-User License Agreement. To use this software, agree this license.	
END-USER LICENSE AGREEMENT FOR MICROSOFT® WINDOWS® PREINSTALLATION ENVIRONMENT IMPORTANT-READ CAREFULLY: This End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and the manufacturer ("Manufacturer") of the special purpose computing device or software ("SYSTEM") you acquired which includes certain Microsoft software product(s) installed on or for use with the SYSTEM ("SOFTWARE"). The SOFTWARE includes computer software, and may include associated media, printed materials, and "online" ary software provided along with the SOFTWARE that is associated with a separate end-user license agreement or separate terms of use is licensed to you under the terms of that license agreement or terms of use rather than this EULA. By Installing, copying, downloading, accessing or otherwise using the SOFTWARE, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, Manufacturer and Microsoft Licensing, GP ("MS") are unwilling to license the SGFTWARE have the terms of the SUARE to be the soft of the SOFTWARE.	
Yes No	
Note Unless you agree these	terms, you cannot use EXPRESSBUILDER

- 6. Select Invoke various utilities from Top Menu of EXPRESSBUILDER, and then click [Next].

NEC	2	EXPRESSBUILDER Version 6. xx - xxx . xx (xxx)
To invoke each	function, select the radio button, and then click [Next].	
If [Remove] is	licked, you can remove USB devices inserted into this computer s	afely.
	6 .	
_	C Setup this computer	
[Invoke various utilities	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ Next	USB Remove

7. Select Install Starter Pack to installed Windows and then click [Next].

NEC	EXPRESSBUILDER Version 6. xx - xxx . xx (xxx)
Various utilities can be individually invoked from this menu. Select a utility, and then click [Next].	
Install Starter Pack to installed Winde C Compared to Date C Compared to Date	ws
C Run a file directly	
	ext USB Remove

8. Select the installed Windows from the drop-down list, and then click [Perform].

NEC		EXPRESSE Version 6.	BUILDER
Install Starter P Select an operat	ack stored in Internal Flash M ing system, and then click [Pi	iemory to the installed Windows. erform].	
	Installed Windows	Mindow Server 2008 R2 - Full Installation 2 Window Server 2008 R2 - Full Installation Window Server 2008 R2 - Server Core Statilistic Window Server 2008 R4 - Server Core Installation Window Server 2008 R4 - Full Restallation Window Server 2008 R4 - Full Restallation	
	Back	Perform	Remove

9. When the following confirmation window appears, read the content and then click [Yes].

?	Question	
	?	EXPRESSBUILDER copies Starter Pack into the partition where Windows has been installed. Current disk space : XXXXXMB Required disk space: XXMB
		Yes No

Note

The following window will appear if Starter Pack has been installed. Read the message, and then click [Yes].



10. After copying the files, the following window appears. Click [Close].



The server then restarts.

Note

You do not need to press <F3> key at this time.

11. Proceed application step according to the installation type.

Full installations

After Windows starts, the following window appears. Click [OK].

Installing Starter Pack.	
Preparation of Starter Pack was completed.	
Click [OK] to continue installing Starter Pack.	
	OK

Server Core installations

(1) Enter the following command at the command prompt, and then specify the drive letter of System Drive (usually, C drive).

Cd /d	10	2:\	Sta	rtI	PKG∖	bin										
C:\U	Jse	ers	\ad	mir	ist	rat	or>d	cd	/d	с:	\Sta	artI	PKG	\bin	n	

(2) Enter the following, and then press <Enter> key.



12. Read the message that appears, and then click [OK].



Installation of Starter Pack starts.



When the following message appears, Starter Pack installation is complete.

Starter Pa	ack X	I
j	Installing Starter Pack was finished. The setup reboots for installing drivers. After taking out it of the DVD-ROM drive, if EXPRESSBUILDER DVD is set in the DVD-ROM Drive, dick [OK].	
	()	

13. Click [OK] to restart the system.

Installation of Starter Pack is now complete.

3.6 Setting Up Device Drivers

Install and set up device drivers provided for the standard configuration.

For details regarding the installation and setup of a driver for an optional device, refer to the manual supplied with the optional device.

3.6.1 Installing the LAN and BACS (teaming) drivers

(1) LAN and BACS drivers

LAN and BACS driver are installed at the time for Windows pre-installed model. If EXPRESSBUILDER is used for setup, the LAN and BACS driver will automatically be installed. If the OS standard installer is used for setup, install Starter Pack to install the LAN and BACS driver.

WOL IS S	The second se
Note • To chang console u using the • Be sure to IP address	e the LAN or BACS driver settings, log on to the system from a local sing an administrator's account. Remotely changing the settings by operating system's remote desktop feature is not supported. b select the Internet Protocol (TCP/IP) check box when specifying an s.

(2) Optional LAN board / Riser Card

This server supports the following optional LAN boards / Riser Card. The drivers for LAN boards / Riser Card are automatically installed using the OS plug-and-play function.

Optional LAN boards: N8104-128/132/138

Optional Riser Card: N8104-135

(3) Network adapter name

After installing the LAN drivers, the following network adapter names will be displayed by the Device Manager or BACS.

Network adapters for the standard configuration

Broadcom NetXtreme Gigabit Ethernet #xx*

If connecting with an optional LAN board:

[N8104-128] Broadcom BCM57711 NetXtreme II 10 GigE (NDIS VBD Client) #xx* [N8104-132/138] Broadcom NetXtreme Gigabit Ethernet #xx*

If connecting with an optional Riser Card:

[N8104-135] Broadcom NetXtreme Gigabit Ethernet #xx*

* If there are adapters with the same name, a different identification number will be assigned to xx.

Tips

The ID for N8104-128 might be a number of two or more digits. This is due to the LAN driver specifications and not an error. This number cannot be changed.

3.6.2 Setting up LAN drivers

(1) Setting link speed

The transfer rate and duplex mode of the network adapter must be the same as those of the switching hub. Follow the procedure below to specify the transfer rate and duplex mode.

- 1. Open the Device Manager.
- 2. Expand **Network Adapters**, and then double-click the name of the network adapter you want to set. The properties of the network adapter will be displayed.
- Select the Advanced tab, and then set the Speed & Duplex values to the same as those of the switching hub.
- 4. Click [OK] in the Network Adapter Properties dialog box.
- 5. Restart the system.

The link speed setting is now complete.

(2) Setting the iSCSI Offload Engine (if using N8104-128)

If using N8104-128 with the server, iSCSI Offload Engine must be set to off.

Follow the procedure below to set it.

- 1. Double-click the **Broadcom Control Suite3** icon on the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Select Device Management under Explorer View, and then N8104-128 network adapter from System device (VBD).
- 3. Select the Configurations tab, and then expand Resource Reservations.
- 4. Remove a checkmark from [iSCSI Offload Engine] under [Pre-Allocated Resource], if checked. Then, click [Apply].
- 5. Complete steps 2 to 4 for each N8104-128 network adapter.
- 6. Restart the system.

iSCSI Offload Engine setup is now complete.

Important Please refer to "N8104-128 LAN Driver Installation Guide" that is attached to the LAN boards to configure N8104-128.

3.6.3 Setting up team/LiveLink

Note

When deleting the team, refer to *Chapter 1* (3.6.3 Setting up team/LiveLink) – (4) Procedure for deleting team. When replacing the motherboard or a LAN board, follow these steps to remove the team and then create it again after replacement.
Be sure to specify the same Jumbo Mtu (Jumbo Packet) setting to all the adapters that compose a team.

(1) Team types

The following team types are supported.

• Smart Load Balancing and Failover (without Standby Member)

All adapters that compose the team perform communication.

If a communication failure occurs on an adapter, other adapters that compose the team continue the communication.

When the adapter on which the communication failure occurred recovers, it joins the team again and resumes the communication.

• Smart Load Balancing (Auto-Failback Disable) (with Standby Member)

Among the adapters that compose the team, primary adapters except the standby member perform communication.

If a communication failure occurs, the standby member continues the communication.

When the adapter on which the communication failure occurred recovers, it joints the team again and the standby adapter returns to the standby state.

(2) LiveLink

LiveLink is a function that detects communication route failures of adapters. It periodically investigates the communication status of specified destinations (IP address).

Link packets are sent from each adapter within a team.

If a response to the transmission of a link packet within the specified range is not detected, it is identified as a communication route failure and adapter communication is stopped.

When a response to the submission of a link packet is detected, communication LiveLink identifies communication as having been recovered, and communication using that adapter automatically resumes.

Note

You must set up LiveLink when you create a team.

(3) Setting up team/LiveLink

Note	 The team must be composed of two adapters. Possible combinations of network adapters that compose the team are as follows. Between standard network adapters. Between N8104-128 adapters Between LAN card/riser cards excluding N8104-128 A standard network adapter and LAN board / Riser Card(N8104-128 does not
Tips	include.) To edit a team, right-click on the BACS team, and then select Edit TEAM . Then refer to step 3 and later in <i>Chapter 1 (3.6.3 Setting up team/LiveLink) – (3)</i> <i>Setting up team</i> to edit the team.

- 1. Double-click the **Broadcom Control Suite3** icon on the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Select **Team Management** from the left menu, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.

n Manarement	Configurations	Statistics VI Information 📃 🔻
999	Uital Signs	
	MAC Address	6C-F0-49-56-97-8A
Unassigned Adapters	Permagent MAC Address	6C-F0-49-56-97-8A
[0017] Broadcom NetXtreme Gigabit Ethernot	IP Address	169.254.158.110
Add	to a Team V6 IR Address	fe80::54ec:8ea0:930:9e6e
[] [0010] broadcom NetXa ene Gigabit Eule	ate a Team hk St <mark>a</mark> tus	Up
Mar	lage leams	Full
Ure	ate a VLAN peed in Mbps)	1000
	Official Capabilities	LSO,CO,RSS
	Mtu	1500
	Driver Information	
	Driver Status	Loaded
	Driver Name	b57nd60a.sys
	Driver Version	14.6.0.7
	Driver Date	1/26/2011
	Resources	
	Bus Type	PCI-E (1X)
	Bus Number	4
Device Management Team Management	Vital Signs The Vital Signs section of the In network adapters that are insta adapter and general network of	iformation tab has useful information abo alled in your system, such as the link stat. onnectivity.

The Broadcom Teaming wizard appears.

3. Click [Next].



Note

Do not use Expert Mode.

4. Enter any name into the team name entry column, and then click [Next].



5. Make sure that the following team type is selected, and then click [Next]. Team type: Smart Load Balancing WITH and Failover (SLB)



6. Select the adapters that compose the team, click [Add] to add them to the **Team Members** area, and then click [Next].

🖶 Broadcom Teaming Wizard				? ×
Creating/Modifying a Team: Assigning Te Specify which adapters to include in the t Include adapters that you wish to set for t	eam Mem eam. the stand	bers Iby role.		BROADCOM
Available Adapters	TOE	LSO	CO	RSS
[0018] Broadcom NetXtreme Gigabit Eth	No	Yes	Yes	Yes
1				Ŀ
Add 🦆 🗌	Remove	1 🕇		
Team Members	TOE	LSO	CO	RSS
[0017] Broadcom NetXtreme Gigabit Eth	No	Yes	Yes	Yes
•				F
Team Offload Capabilities		LSO, CO	, RSS	
Team Mtu	150	0		
Click here for more information about confi	guring tea	aming.		
			Previ	ew 🚺
Gancel		< Bac	*	Next >

- 7. Proceed according to your desired team type.
 - Smart Load Balancing and Failover (without Standby Member)
 - (1) Select **Do not configure a standby member**.
 - (2) Click [Next].

Broadcom Teaming Wizard Creating/Modifying a Team: Designating a Standby Member Do you want to designate an available adapter as a standby member?	
-Optionally select if you want a standby member for the team.	
 Do not configure a standby member. C Use the following member as a standby member: 	
[0017] Broadcom NetXtreme Gigabit Ethernet	
Enable Auto-Fallback Disable mode	
Click here for information about designating a standby member and enabling. Auto-Fallback Disable mode,	
Preview	
Cancel KBack Ne	xt > (2

- Smart Load Balancing (Auto-Failback Disable) (with Standby Member)
 - (1) Select Use the following member as a standby member.
 - (2) Select the adapter that is to be a standby member from the drop-down list.
 - (3) Select Enable Auto-Failback Disable mode.
 - (4) Click [Next].

Broadcom Teaming Wizard Creating/Modifying a Team: Designating a Standby Member Do you want to designate an available adapter as a standby member?	? ×
Optionally select if you want a standby member for the team.	
(1) Use the tollowing memoer as a standy memoer. (2) [0012] Broadcom NetXneme Grabit Ethernet (3) If Enable Auto-Fallback Disable mode	
Click here for information about designating a standby member and enabling. Auto-Fallback Disable mode.	
Preview	
<u>Cancel</u> KBack Next >	(4



8. Select Yes for Configure LiveLink?, and then click [Next].

🧱 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Configuring LiveLink Do you want to configure LiveLink?	BROADCOM.
Configure LiveLink?	
LiveLink detects loss of network connectivity beyond the sw routes traffic only through team members that have a live li	vitch and nk.
Click here for more information about configuring teaming,	
Prev	view
Qancel < Back	Next >

You can use the default setting for Probe interval and Probe maximum retries. If you change these
values, select a value from each drop-down list, click the target probe (Probe Target xx), and then click
[Edit Target IP Address...].

🔡 Broadcom Teaming Wiza	rd		? ×
Creating/Modifying a Tean Configure LiveLink(TM) att	n: Configuring Liv tributes.	eLink (continued)	BROADCOM
Probe interval (seconds): Probe maximum retries: Probe VLAN ID (Optional:	0 -		
Tagget Probe Target 1 Probe Target 2 Probe Target 3 Probe Target 4		IP Address	
At least one Live	Edit Target IP eLink probe target m nation about configu	Address nust be specified. ing teaming.	Preview
	<u>C</u> ancel	< Back	Next >

_			
Γi	i e	٦	c
			-

- The setting range of Probe interval (link packet transmission interval) is 1 to 60 (units: seconds).
- The setting range of Probe maximum retries (link packet retry count) is 1 to 10 (times).
- Switching a path upon detection of a communication path error by LiveLink takes (Probe maximum retries + 1) x Probe interval (seconds) at maximum.
 If an optional LAN board detects that a link is down, failover occurs immediately after the link goes down. It takes the time specified for Probe interval (seconds) to recover from the link going down.
- 10. In the Target xx text box, enter the IP address of the alive monitoring server, and then click [OK].

🔜 LiveLink Configuration		
-IP Setting		
Team name:	Team 1	
Target 1:		
Target 2:		
Target 3:		
Target 4:	- 1000	
Please enter either an IPv4 or IPv6 address for the probe targets IP address field.		
Ok	Can	cel

 Target xx must be the same broadcast domain as that specified for the data communication IP and LiveLink communication IP (described in step 13). Specify an IP address that exists on the network and with which communication is possible.

• If communication with the IP address specified in *Target xx* is not possible, the team will also be unable to communicate. It is therefore recommended that you specify multiple IP addresses using *Probe Target*. Up to four IP addresses can be specified.
11. Click [Next].



12. Select an adapter from the Team Members area, and then click [Edit Member IP Address...].

🔜 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Configuring LiveLink (continued) Configure the IP address for each team member.	BROADCOM.
Teänfindehoefs IPv4 Addre [0017] Broadcom NetXtreme Gigabit Ethernet [0018] Broadcom NetXtreme Gigabit Ethernet #2	IPv6 Addr
Edit Member IP Address.	
Click here for more information about configuring teaming. Pre	view
<u>C</u> ancel < Back	Next >

13. Enter the IP address used for LiveLink communication, and then click [OK].

LiveLink Co	nfiguratior	1	×
_IP Setting —			
Name:	[0017] Bro	adcom NetXtreme Gigabit Ethernet	
IP∨4 Addre	ss		
IPv6 Addre	ss		
C	OK	<u>C</u> ancel	

Note

- Be sure to specify an IP address for LiveLink communication for all the adapters that compose the team. The address specified here is the IP address for LiveLink communication. Specify a different IP address for data communication.
- For *Target xx*, specify an IP address that is unique on the network and with which communication is possible.

14. Click [Next].



15. Make sure that Skip manage VLAN is selected under Manage VLAN, and then click [Next].

🔜 Broadcom Teaming Wizard	<u>? ×</u>
Creating/Modifying a VLAN: Configure VLAN Support Specify whether you want to create or delete a VLAN.	BROADCOM
Manage VLAN	
C Add VLAN	
🔿 Edit VLAN	
Skip manage VLAN	
	Preview
<u>C</u> ancel < Back	Next >

16. Make sure that **Commit changes to system and Exit the wizard** is selected under **Commit changes**, and then click [Finish].



Note

When the message below appears, select [Yes].

"Applying the changes will temporarily interrupt the network connection. The process may take several minutes and the connection will resume afterwards. Do you want to continue?"

Tips

After creating a team, if the teaming adapter displays like the following image, perform steps 8 through 14 again and correct the LiveLink settings.



17. Restart the system.

View

- 18. After the system starts, follow step 1 to start Broadcom Control Suite3 and confirm that a team has been created. Confirm the team settings on the Information window to the right.
 - Broadcom Advanced Control Suite . . X <u>File View T</u>ools T<u>e</u>ams <u>H</u>elp Information
 Configurations
 Statistics
 Team Properties Explorer View Team Managemen E Team 1 Team Name Team Type Team 1 Smart Load Balancing(TM) and Failover Virtual Adapters Team Type Team Offload Capabilities Team Mtu Driver Name Driver Version Driver Date LSO, CO, RSS Team 1 ([0021] BASP Virtual Adapter) 1500 Basp.sys 1.4.6🏢 [0007] Broadcom NetXtreme Gigabit Ethernet 2010/12/21 [00 10] Broadcom NetXtreme Gigabit Ethernet # Probe Interv Probe Max Ret sianed A ters Probe Vlan ID Probe Target 1 100.100.100.10 Probe Target 2 Probe Target 3 Probe Target 4 100.100.100.20 100.100.100.30 100.100.100.40 Probe Max Retrie Device Management Team Ma 27LS3 ROADCON
- Smart Load Balancing and Failover (without Standby Member)

Smart Load Balancing (Auto-Failback Disable) (with Standby Member)



Team setup is now complete.

(4) Procedure for deleting team

Tips

You must delete teams from Broadcom Control Suite3. You cannot delete the team from the team adapter displayed in the Device Manager.

- 1. Double-click **Broadcom Control Suite3** in the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Click **Team Management** from the left menu, right-click the team name under **Teams**, and then select **Delete Team** from the short-cut menu.

🐭 Broadcom Advanced Control Suite 3		
<u>F</u> ile <u>V</u> iew <u>T</u> ools T <u>e</u> ams <u>H</u> elp		
Explorer View 🕴 🖡	■ ① Information 🚱 Configurations 🖓 Statistic	s v Ø
Team Man <mark>a</mark> gement		
Teams	Team Properties	onte
	Team Name	Team 1 🚆
Edit Team	Team Type	Smart Load
Delete Team	Team Offload Capabilities	LSO, CO, R
Add VLAN P Virtual Adapter)	Team Mtu	1500
PriPri	Driver Name	Basp.sys
[0018] Broadcom NetXtreme Gioabit Ethernet	Driver Version	1.4.6
	Driver Date	2010/12/21
<u> </u>	Team Properties Displays information about the team.	_
Device Management		
iin Team Management		
•		
BROADCOM	BAC	3

Tips

- When the message below appears, select [Yes].
 "The selected team will be deleted from system, do you want to
 proceed?
 NOTE: Applying the changes will temporarily interrupt the
 network connection. The process may take several
 minutes and the connection will resume afterwards."
- 3. Insert EXPRESSBUILDER DVD into the optical disk drive. If Autorun Menu appears, close the menu.

Tips

You do not have to insert EXPRESSBUILDER DVD if Starter Pack was installed from Internal Flash Memory. Proceed to the next step.

- 4. Double-click addlvlanstats.vbs in the following folder.
 - When using EXPRESSBUILDER DVD: Optical disk drive:\021\win\winnt\ws2008x64\lan
 - If Starter Pack was installed from Internal Flash Memory: System drive:\StartPKG\ws2008x64\lan

5. When the following message appears, click [OK].



6. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Team deletion is now complete.

3.6.4 Graphics accelerator driver

The graphics accelerator driver for standard configurations is installed when Starter Pack is installed from EXPRESSBUILDER.

The graphic accelerator driver is automatically installed on pre-installed model or during setup with EXPRESSBUILDER.

The graphics accelerator driver is only enabled in Full installations. Standard VGA is used in the case of Server Core installation.

To reinstall drivers separately, complete the following steps.

1. Insert EXPRESSBUILDER DVD into the optical disk drive.

If Autorun Menu appears, close the menu.

Tips

Tips You do not have to insert EXPRESSBUILDER DVD if Starter Pack was installed from Internal Flash Memory.

- 2. From the Start menu, point to All programs, Accessories, and then select Explorer.
- 3. Double-click the install.bat icon in the following folder.
 - When using EXPRESSBUILDER DVD: Optical disk drive:\021\win\winnt\ws2008x64\video
 - If Starter Pack was installed from Internal Flash Memory: System drive:\StartPKG\ws2008x64\video

You will be prompted to confirm the End User License Agreement during this process. Click the [ACCEPT] button and continue.

4. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Graphic accelerator driver installation is now complete.

3.6.5 When using a SCSI controller (N8103-107)

The driver for SCSI controller N8103-107 is automatically installed by Windows Plug-and-Play.

3.6.6 When using a SAS controller (N8103-104A/142)

The driver for SAS controller N8103-104A/142 is automatically installed by Windows Plug-and-Play.

3.6.7 When using a RAID Controller (N8103-160)

The driver for RAID Controller N8103-160 is automatically installed by Windows Plug-and-Play.

3.6.8 When using a Fibre Channel controller (N8190-153/154)

The driver for Fibre Channel controller N8190-153/154 is automatically installed by Windows Plug-and-Play.

3.7 Installing the Bundled Software

The supplied EXPRESSBUILDER DVD contains the server monitoring software NEC ESMPRO Agent and system management software NEC ESMPRO Manager. You can install NEC ESMPRO Agent automatically by performing Setup with EXPRESSBUILDER.

Open the Programs or Control Panel window from the **Start** menu, and make sure that the folders for the utilities you have installed are contained. If you did not install them at the time of Setup with EXPRESSBUILDER, refer to *Chapter 2 Installing the Bundled Software* to install the software separately.

3.8 License Authentication

To use Windows Server 2008 R2, confirm whether the license has been authenticated, and if it has not, perform the license authentication procedure.

The following describes the license authentication procedure.

(1) Full installations

1. Open the Control Panel from the Start menu, click System and Security, and then select System.

If the following message appears, Windows has already been activated on your system. You do not need to complete this procedure.

🛂 System			_ 🗆 ×
Control Panel •	System and Security * System		👻 🔯 Search C 😢
Control Panel Home	View basic information abo	out your computer	0
Device Manager	Windows edition		
Remote settings	Windows Server 2008 R2 5	itandard	
Advanced system settings	Copyright © 2009 Microso	ft Corporation. All rights reserved.	B
	System	Intel®) Xeon®) CPU E5506 @ 2,13GHz 2,13 GHz	
	Installed memory (RAM):	4.00 G8	
	System type:	64-bit Operating System	
	Pen and Touch:	No Pen or Touch Input is available for this Display	
	Computer name, domain, and a	vorkgroup settings	
	Computer name:	WIN-RO6HQKR5EQ4	Change settings
	Full computer name:	WIN-RO6HQKR5EQ4	
	Computer description:		
	Workgroup:	WORKGROUP	
	Windows activation		
	Windows is activated		ask for , and a
See also	Product ID: xxxxxx-xxx-xx	200000-200000	genuine
Windows Update			cean more online

2. For installation from Backup DVD-ROM, replace the product key.

When the following window appears, click Change product key.

🔊 🗢 🖳 🔹 Control Panel 🔹	System and Security + System	-	Search Control Panel	
	TICH DOM: INVITION OF	ut your computer		
Control Panel Home	Windows edition			
Device Manager	Windows Server 2008 R2 S	tandard		
Remote settings	Copyright © 2009 Microsof	t Corporation. All rights reserve	ved.	
Advanced system settings				
	System			
	Processor:	Intel(R) Xeon(R) CPU	E5506 @ 2.13GHz 2.13 GHz	
	Installed memory (RAM):	4.00 GB		
	System type:	64-bit Operating System		
	Pen and Touch:	No Pen or Touch Input is a	valable for this Display	
	Computer name, domain, and w	orkgroup settings		
	Computer name:	WIN-RO6HQKR5EQ4	😭 Change	settings
	Full computer name:	WIN-RO6HQKR5EQ4		
	Computer description:			
	Workgroup:	WORKGROUP		
See also	Windows activation			
Action Center	-			
Propert Contract	3 2 days until automatic .	activation activate withoows i	1000	

3. When the following window appears, enter the product key found on the COA label, and then click [Next].



4. Follow the instructions in the following message to start the license authentication process.

K Windows Activation	×
🚱 🕅 Windows Activation	
How do you want to activate Windows?	
Use my modem to connect directly to the activation service (recommended if you have a modem)	
Use the automated phone system	
What is activation?	
	Cancel

Windows activation is now complete.

(2) Server Core installations

 At the command prompt, enter the following, and then press <Enter> key. slmgr -dli



If the following message appears, Windows has already been activated on your system. You do not

need to complete this procedure. Click [OK] to finish.

Windows Script Hos	t	X
Name: Windows Serv Description: Windows channel Partial Product Key: ; License Status: Licen:	er(R), ServerStandardCore edition : Operating System - Windows Server(R), OEM_SLP <xxxx sed</xxxx 	
	OK.	

2. For installation from Backup DVD-ROM, replace the product key

At the command prompt, enter the following, and then press <Enter> key. Set the product key found on the COA label in *PID*.

```
slmgr -ipk PID
```



3. Obtain an installation ID for Windows activation.

At the command prompt, enter the following, and then press <Enter> key. slmgr -dti



- 4. Reference <code>%systemroot%\system32\sppui\phone.inf</code> for the telephone number of the license authentication customer service.
- 5. Call the above number, inform the representative of the installation ID which you obtained in step 3, and receive a confirmation ID.
- 6. Type the confirmation ID you received in step 5.

At the command prompt, enter the following, and then press <Enter> key. *CID* is the confirmation ID that you received from customer service.

slmgr -atp CID



Windows activation is now complete.

3.9 Applying Service Pack

When applying Service Pack 1, refer to "About Windows Server 2008 R2 and Windows 7 Service Pack 1". http://www.58support.nec.co.jp/global/download/w2008r2/sp1.html

3.10 Installation When Multiple Logical Drives Exist

Before starting installation, backup data for future use in case of data loss.

Important Before starting setup, be sure to disconnect hard disk drives from the RAID Controller that is not to be setup. Install those hard disk drives after setup has completed. Conducting setup with hard disk drives being connected with RAID Controller may cause existing data to be erased unintentionally.

(1) Installation process

Setup with EXPRESSBUILDER
 Refer to Chapter 1 (3.2 Setup with EXPRESSBUILDER), and proceed with setup.

In this case, EXPRESSBUILDER installs the Windows on the first detected hard disk drive or logical drive.

- Setup with OS standard installer
 - 1. Refer to Chapter 1 (3.3 Setup with OS Standard Installer), and start setup.
 - When the following message appears, select the partition to which you want to install the operating system.

Select the location to which Windows will be installed

The order and numbers of the disks displayed on the screen <u>might not match the server's slot</u> of the hard disk drives. <u>Distinguish between the hard disk drives by viewing the hard disk drive</u> <u>capacity and partition size</u> displayed on the screen, and then select a drive to install the Windows system.

Selecting an improper drive might cause an unintentional corruption of the existing data. Be careful when selecting a hard disk drive on which to install the system.

Important	 For details, refer to the following Microsoft website:
	http://support.microsoft.com/kb/937251/en-us
	• You cannot edit the drive letters for the system volume or boot volume
	after setup is complete. Make sure that the drive letters assigned in this
	window are correct, and then proceed with setup.

3. Refer to *Chapter 1 (3.4 Setup with OS Standard Installer)*, and proceed to setup Windows with OS standard installer and the instructions.

Tips

The drive letter might change after installation. If you want to change the drive letter, use the procedure shown in *Changing drive letter assignments* below.

(2) Changing drive letter assignments

To change the drive letter, follow the steps below. But these steps cannot change drive letter assignments for the system volume or boot volume. If you want to change them, re-install the Windows.

- 1. From the Start menu, right-click Computer and then select Management. Next, launch Server Manager.
- 2. From the window on the left, select Storage and then Disk Management.
- 3. Right-click the volume whose drive letter you want to change, and then select **Change drive letter and path**.
- 4. Click [Change].
- 5. Click [Assign next drive letter], and then select the drive letter you want to assign.
- 6. Click [OK].
- 7. When the following message appears, read the contents and then click [OK].

Some programs are dependent on drive letters, and may not run properly. Continue?

8. Close the Server Manager.

4. Setting Up Windows Server 2008

Set up Windows Server 2008.

4.1 Before Starting Setup

Read through the cautions explained here before starting setup.



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Confirm during Setup with EXPRESSBUILDER

: Confirm during Setup with OS standard installer

			(1/5)
Setup			Items to confirm
EB	08	Windows family	 The following editions of the Windows Server 2008 family may be installed. Windows Server 2008 Standard 64-bit (x64) Edition Windows Server 2008 Enterprise 64-bit (x64) Edition Windows Server 2008 Standard 32-bit (x86) Edition Windows Server 2008 Enterprise 32-bit (x86) Edition Inquiries about installing other editions may be made at your sales representative.
		Hardware configuration	The following hardware configurations require special procedures.
EB	OS		 Reinstalling to a mirrored volume Disable the mirroring and reset to the basic disk. After installation, enable the mirroring again. Use [Computer Management] – [Disk Management] to create, disable, or remove the mirrored volume.
EB	OS		• Peripheral devices such as RDX/MO Remove an MO device before installing an OS. Some peripheral devices need to be halted before installation. Refer to the manual provided with the peripheral devices for how to set a device appropriate to installation.
EB	OS		 DAT, LTO, and similar media Do not set media that is unnecessary to installation during setup.
EB	OS		• Connecting to multiple hard disk drives (logical drives) For details on reinstalling operating systems to a system in which multiple logical drives exist, refer to <i>Chapter 1 (4.10 Installation When Multiple Logical Drives</i> <i>Exist</i>).

			(2/5)	
Se	tup		Items to confirm	
EB	05	System partition size <windows Server 2008 64-bit Edition></windows 	The system partition size can be calculated by using the following formula. Size required to install the OS + paging file size + dump file size + application size Full installations Size required to install the OS = 11,600 MB (Windows Server 2008) = 12,300 MB (Windows Server 2008 with Service Pack 2) = 16,720 MB (Windows Server 2008 + Service Pack 2)	
			Paging file size (recommended) = installed memory size × 1.5 Dump file size = installed memory size + 300 MB Application size = as required by the application Size required to install the OS = 4,100 MB (Windows Server 2008)	
			= 12,300 MB (Windows Server 2008 with Service Pack 2) = 9,300 MB (Windows Server 2008 + Service Pack 2) Paging file size (recommended) = installed memory size × 1.5	
			Dump file size= installed memory size × 1.3Dump file size= installed memory size + 300 MBApplication size= as required by the application	
				For example, if the installed memory size is 1 GB (1,024 MB) and Full installation is selected, the partition size is calculated as follows: 11,600 MB + (1,024 MB \times 1.5) + 1,024 MB + 300 MB + application size = 14,460 MB + application size
			 Note The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the boot volume paging file must be large enough to store dump files. Make sure you set a sufficient paging file size. If the paging file is insufficient, there will be a virtual memory shortage that may result in an inability to collect correct debug information. Regardless of the sizes of internal memory and write debug information, the maximum size of the dump file is "size of internal memory + 300 MB". When installing other applications or other items, add the amount of space needed by the application to the partition. 	
			If the partition size for installing the system is smaller than the size required for installation + paging file size, expand the partition size or add another disk. If your system does not have a sufficient dump file size, divide the required file space into multiple disks by performing the following steps.	
			 Set the system partition size to a size sufficient to install the OS and paging file. Write the debug information of the dump file onto another disk by referring to <i>Chapter 1 (7. Setup for Solving Problems)</i>. 	
			If there is not enough disk space to write the debug information, set the partition size to a size sufficient to install the OS and paging file, and then add another disk for the dump file.	

			(3/5)
Se	up		Items to confirm
EB	EB OS System partition si <windows< td=""><td>The system partition size can be calculated by using the following formula. Size required to install the OS + paging file size + dump file size + application size Full installations</td></windows<>		The system partition size can be calculated by using the following formula. Size required to install the OS + paging file size + dump file size + application size Full installations
		Server 2008 32-bit Edition>	Size required to install the OS = 6,300 MB (Windows Server 2008) = 9,300 MB (Windows Server 2008 with Service Pack 2) = 9,400 MB
			Paging file size (recommended)= installed memory size × 1.5Dump file size= installed memory size + 300 MBApplication size= as required by the application
			Server Core installations
			Size required to install the OS = 2,200 MB (Windows Server 2008) = 9,300 MB (Windows Server 2008 with Service Pack 2) = 5,300 MB (Windows Server 2008 + Service Pack 2)
			Paging file size (recommended)= installed memory size × 1.5Dump file size= installed memory size + 300 MBApplication size= as required by the application
			For example, if the installed memory size is 1 GB (1,024 MB) and Full installation is selected, the partition size is calculated as follows: $6,300 \text{ MB} + (1,024 \text{ MB} \times 1.5) + 1,024 \text{ MB} + 300 \text{ MB} + \text{application size} = 9,160 \text{ MB} + \text{application size}$
			 Note The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the boot volume paging file must be large enough to store dump files. Make sure you set a sufficient paging file size. If the paging file is insufficient, there will be a virtual memory shortage that may result in an inability to collect correct debug information. A paging file size of 4096 MB or greater cannot be specified for one partition in some system configurations. If a message prompting you to specify a value smaller than 4096 MB appears, specify 4095 MB. If the mounted memory size is 2 GB or greater, the maximum size of the dump file is "2048 MB + 300 MB". When installing other applications or other items, add the amount of space
			If the partition size for installing the system is smaller than the size required for
			 installation + paging file size, expand the partition size or add another disk. If your system does not have a sufficient dump file size, divide the required file space into multiple disks by performing the following steps. 1. Set the system partition size to a size sufficient to install the OS and paging file. 2. Write the debug information of the dump file onto another disk by referring to
			Chapter 1 (7. Setup for Solving Problems). If there is not enough disk space to write the debug information, set the partition size to a size sufficient to install the OS and paging file, and then add another disk for the dump file.

-			(4/5		
Se	tup		Items to confirm		
EB	OS	Upgrade to Windows Server 2008	In-place upgrade from Windows Server 2003 to Windows Server 2008 is not recommended because it overwrites the files and registries and might make an unexpected effect on the system and applications.		
			If you want to use Windows Server 2008, back up the necessary data before installing Windows Server 2008.		
			TipsIn-place upgrade refers to overwriting an existing OS (in this case, Windows 2003) with another OS (Windows Server 2008).		
FR	05	Using	If using Bitl ocker, note the following		
		BitLocker	 Before installing an OS, be sure to create the following two partitions in the hard disk drive: 		
			 System partition (to store the loader) 		
			 Boot partition (to store the OS) 		
			Note For details, refer to the following document provided in Microsoft TechNet: BitLocker Drive Encryption Step-by-Step Guide		
			• Be sure to keep the recovery password secure. Do not keep it near a server running BitLocker.		
			In the recovery password is not entered, the OS cannot be started, and the content of the partition encrypted by BitLocker cannot be referenced any more.		
			The recovery password might be required at startup of the OS after the following:		
			 Replacement of motherboard 		
			 Initialization of trusted platform module (TPM) 		
			 Change of BIOS setting 		
			• To reinstall the operating system into a partition that is encrypted with BitLocker, delete the BitLocker-encrypted partition prior to reinstallation.		
EB	OS	Installing Service Pack	You can install the Service Pack on the server. When the Service Pack is not attached to your system, prepare it by yourself.		
EB	OS	License authentication	License authentication might be required, depending on the installation of Windows. For details, refer to <i>Chapter 1 (4.8 License Authentication)</i> .		
			 Note Activate within 60 days following installation. A virtual product key is used when installing in a virtual environment. It is not used when directly installing an operating system to a physical server. 		

4.2 Setup with EXPRESSBUILDER

This section describes how to install Windows with EXPRESSBUILDER.

This feature automatically recognizes the RAID Controller connected to the server and configures the RAID System, so you must complete the hardware installation of the server by following "*User's Guide*".

Important	Setup with EXPRESSBUILDER may delete all data of the hard disk drive
	depending on the settings. Pay attention to input parameters. You must be especially careful when configuring the following:
	 RAID settings wizard
	 Partition Settings in the Windows Setup wizard
	Backing up user data, as needed, is recommended.
	• Before starting setup, be sure to disconnect hard disk drives from the RAID Controller that is not to be setup. Install those hard disk drives after setup has completed. Conducting setup with hard disk drives being connected with RAID Controller may cause existing data to be erased unintentionally. It is recommended to make backup copy of user data before starting setup.
Note	The Scalable Networking Pack (SNP) function is disabled on systems that have been installed by using EXPRESSBUILDER. The setting of SNP function may affect the system performance. Contact your sales representative for details.
Tips	 Setup with EXPRESSBUILDER allows you to use a pre-specified parameter file or save the parameters specified in setup as a parameter file on a removable media or Internal Flash Memory (if purchased optionally).
	 For details on creating a parameter file, refer to Chapter 1 (8 Windows OS Parameter File).

4.2.1 Setup flow



4.2.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- > Either of the following OS installation media
 - NEC operating system installation media (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation media (hereafter referred to as Windows Server 2008 R2 DVD-ROM)
- > First Steps Guide
- Either of the following EXPRESSBUILDER
 - EXPRESSBUILDER DVD
 - Internal Flash Memory
 (If "Internal Flash Memory" is installed)
- Prepare if needed:
 - Removable media for Windows OS parameter file
 - Service Pack

(If the OS installation media contains Service Pack 1, you need not apply the service pack again.)

Tips

- EXPRESSBUILDER may be distributed in Internal Flash Memory.
 EXPRESSBUILDER can be run from Internal Flash Memory if it is installed in the server.
- If you are using a server with Internal Flash Memory installed, you can install the OS without using EXPRESSBUILDER DVD.

4.2.3 Setup procedure

During Setup with EXPRESSBUILDER, parameters are specified through the wizard. You can also save the parameters as one file (a parameter file) to removable media.

Note Read through the items in *Chapter 1 (4.1 Before Starting Setup)* prior to installing Windows.

- 1. Turn peripheral device power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select **Os installation** *** **default** ***. You will automatically advance to step 4, with no need for further input.

Boot selection	
Boot selection	
Tool Hemmi (Horrar Hode)	
Automatic select at 10 seconds	

4. Select English on the language selection window, and then click [OK].

?	Qu	estio	n				
EXPRESSBUILDERで使用する言語を選択してください。							
	Se	elect a	ι language to ι	use for the	EXPRESSBUI	DER.	
		0	日本語	۲	English		
		0	Français	0	Italiano		
		0	Deutsch	0	Español		
					-		
				OK			

5. When the Windows PE software license agreement window appears, click [Yes].

Q Question]
Confirm the following End-User License Agreement. To use this software, agree this license.	
END-USER LICENSE AGREEMENT FOR MICROSOFT® WINDOWS® PREINSTALLATION ENVIRONMENT IMPORTANT-READ CAREFULLY: This End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and the manufacturer (Manufacturer2) of the special purpose computing device or software ("SYSTEM") you acquired which includes certain Microsoft software product(s) installed on or for use with the SYSTEM ("SOFTWARE"). The SOFTWARE includes computer software, and may include associated media, printed materials, and "online" or electronic documentation. Any software provided along with the SOFTWARE that is associated with a separate end-user license agreement than this EULA. By installing, copying, downloading, accessing or otherwise using the SOFTWARE, you agree to be bound by the terms of the SULA. If you do not agree to the terms of this EULA, Manufacturer and Microsoft Licensing, GP ("MS") are unwilling to license the SOFTWARE to you.	
Note Unless you agree these ter	ms, you cannot use EXPRESSBUILDER

6. Select Setup this computer from Top Menu of EXPRESSBUILDER, and then click [Next].

NEC	2	EXPRESSBUILDE Version 6. xx- xxx . xx (xx	R			
To invoke each	o invoke each function, select the radio button, and then click (Next). (Remove) is clicked, you can remove USB devices inserted into this computer safely.					
	Setup this computer					
	Invoke various utilities					
	C Configure EXPRESSBUILDER settings					
	C Exit EXPRESSBUILDER					
	→ Next	Remov	/e			

7. Set parameters on this menu according to your requirement.
When not using parameter file: Go to Step 8.
When using a parameter file: Go to Step 9.

I when using a parameter me. Go to Step 9.

Note

When setting up again, parameter input via the wizard can be omitted by loading the saved parameter file.

8. If you do not use a parameter file, select an OS from the pull-down menu in [Install Windows], and click [Next].

On this dialog, select "Windows Server 2008 x86" from the pull-down menu. \rightarrow Go to Step 10.

NEC	2	EXPRI	ESSBUILDER ersion 6. xx - xxx .xx (xxx)
To install an op If [Configure R4 If [Load a parar	rating system, select an item in the listbox, and ID system only] is selected, EXPRESSBUILDER o neter file] is selected, you can set up the comput	then click [Next]. nly configures RAID system without er according to the parameter file.	OS installation.
	Install Windows	Windows Server 2008 x86	×
	C Configure RAID system only		
	C Load a parameter file		
	Back	Next	USB Remove

9. If you use a parameter file, select [Load a parameter file] and click [Next]. Load a parameter file according to displayed instructions.

NEC	2	EXPRESSBUILD)ER				
To install an op If [Configure R If [Load a para	To install an operating system, select an item in the listbox, and then click (Next). If [Configure RAID system only] is selected, BORESSBUILDER only configures RAID system without OS installation. If [Lood a parameter file] is selected, you can set up the computer according to the parameter file.						
	C Install Windows	Windows Server 2008 x88					
	C Configure RAID system only						
	Coad a parameter file						
	Back	→ Next	emove				

Confirm settings on Parameter Setup Menu as needed, then click [Next]. \rightarrow Go to Step 13.

NEC			EXPRESS Version	BUILDER		
Set parameters for the sel If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	Set parameters for the setup. If [Sectings] is clicked, you can change the parameters of the category. If [Save] is clicked, you can save the parameter to a file. ••• If "I" is displayed, you cannot proceed to the next step. Click [Settings] to set the parameters.					
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB)	: System Partition (40GB)	0	Default values Default Settings Skip		
		+				
Windows settings	User information User settings	Network settings	Windows Components Default settings	Default Settings		
		+				
Application settings	Applications installation Default settings			Default Settings		
	Back	Next	Save	Remove		

10. Set parameters required for setup.

Click [Settings] of the relevant category to change parameters.

NEC			EXPRESS Version	BUILDER 6. XX - XXX . XX (XXX)			
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	Set parameters for the setup. If [Settings] is clicked, you can change the parameters of the category. If [Swe] is clicked, you can seve the parameter to a file. ••• If " is displayed, you cannot proceed to the next step. Click [Settings] to set the parameters.						
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settings			
Windows settings	User information	Network settings	Windows Components	Default			
•	Default settings	Default settings	Default settings	Settings			
Application settings	Applications installation Default settings			Default Settings			
	Back	→ Next	Save	Remove			

Click [Default] to restore the default values.

You can see the default values by clicking [Default values].

EXPRESSBUILDER Version 6.xx-xxx .xx (xxx)				
) set the parameter	s.			
	Ø Default values			
	 Settings			

10-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically. Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRES: Version	SBUILDER 6. xx - xxx . xx (xxx)			
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	Set parameters for the setup. If (Settings) is clicked, you can change the parameters of the category. If (Save) is clicked, you cans to parameter to a file. "If "Is displayed, you cannot proceed to the next step. Click (Settings) to set the parameters.						
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)		Default values Default Settings Skip			
Windows settings	User information Default settings	Network settings Default settings	Windows Components Default settings	Default Settings			
Application settings	Applications installation Default settings	+		Default Settings			
	Back		Save	USB Remove			

When creating new logical drives

(1)Click [Settings] in RAID settings.

(2)Use the wizard to set up logical drives.

Important If you proceed with wizard, the existing RAID system is destructed and the contents of hard disk drive will be erased.

When skipping the creation of new logical drives

Click [Skip] in RAID settings.

When the RAID settings wizard is terminated, Parameter Setup Menu appears again.

10-2 Windows settings

Set up Windows by using the Windows settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER 6. xx - xxx . xx (xxx)
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you co *** If "I" is displayed, you	tup. u can change the parameter n save the parameter to a cannot proceed to the next	s of the category. file. t step. Click [Settings] to se	et the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settings Skip
Windows settings	User information	Network settings	Windows Components	Default
•	Default settings	Default settings	Default settings	Settings
Application settings	Applications installation Default settings	•		Default Settings
	Back	→ Next	Save Save	Remove

- (1) Click [Settings] in Windows settings.
- (2) Click [Next] in the Windows settings wizard.

•	
Follow the steps below to set the parameters necessary for Win If [Use OS standard installer] is selected, you need to input para	dows setup. Imeters step by step without this wizard by using the
standard installer.	
Start	_
Set Windows preferences	Use OS standard installer
Set partition preferences	_
Set user preferences	_
Set network preferences	-
Check/Exit	1 / 8 Page
Next	Cancel

(3) Specify the Windows basic settings.

Change settings for "Edition" and "Time Zone" as needed, and click [Next].

sic informa	ition	
Operat	ing System	: Windows Server 2008 x86
O Use	OS standard in	staller
	Copy the OEM	drivers into the removable media
_ ☉ Setu	up with EXPRES	SBUILDER
Edi	tion	: Standard(Full Installation)
Lar	nguage	: English
Tim	ne zone	: (GMT-08:00) Pacific Time (US & Canada)

- (4) Set up the partitions.
 - Confirm settings on the dialog shown below, change them as needed, and then click [Next].

3 Witzard	
Set parameters about the partition of Windows installation. Windows can be installed into the first hard disk drive or logical drive. The partition size ca area where 2TB is exceeded cannot be used.)	an be set within 2TB.(The
If there are any partitions in the destination disk, below red-tramed area is deleted.	
Current partitions(the red-framed area is deleted) :	
:Free area (148.1GB)	
Partitioning	
Use the existing partition	
© Create a new partition	
O Specify the maximum amount	
	В
	3 / 8 Page
Back Next	Cancel

Important • Partition size

- Specify a partition size larger than the minimum required for installing the operating system. (Refer to Chapter 1 (4.1 Before Starting Setup).)
- The maximum partition size is 2,097,152 MB.
- If you select *Create a new partition* under *Partitioning*, the entire contents of the hard disk drive will be deleted.
- If you select *Use the existing partition* under *Partitioning*, data in the first partition is formatted and deleted. Data in other partitions will be kept. The figure below shows in which partitions data will be deleted.

First partition	Second partition	Third partition
Deleted	Retained	Retained

• You cannot reinstall to an existing partition that has been upgraded to a Dynamic Disk (refer to *Chapter 1 (4.1 Before Starting Setup)*). Do not select Use the existing partition under Partitioning.

(5) Enter user information.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Wizard	
Set parameters about user information. Input Computer name within 15 characters. Administrator password requires more than 6 categories(numbers / uppercase / lowercase	- characters, and must contain characters from three of the following / signs).
User information	
Computer name	: 1-1766-0123456 (Required) 🗹 Auto
User name	: Administrator
Administrator password	: (Required)
Confirm Administrator password	: (Required)
	4 / 8 Page
Back Next	Cencel

Note	For Windows Server 2008, you must enter a computer name and administrator password that satisfies the following conditions:
	- Contains 6 or more characters
	 Contains characters from at least three of the following categories: numbers, uppercase letters, lowercase letters, and symbols.
Tips	• The Computer name has been assigned by automatic assignment function. If
	you need to assign another computer name, remove the checkmark from
	"Auto", and enter the desired computer name.
	• If a parameter file is used for setup or if you return to a previous screen, ••••••
	is displayed in the Administrator password and Confirm Administrator
	password text boxes even if no value has been entered.

(6) Set up the network.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

parameters about network protocol.	
u input IP address, select [Custom settings], and then click [Advanced].
letwork protocols	
 Standard setting 	
C Custom settings	
Standard adapter – Internet Protocol (IPv4) 💌	Advanced
	5 / 8 Page
Dest. Next	0
Back Next	Gancel

Tips

The order of entry in **Custom settings** may differ from the numbering of LAN ports.

(7) Enter the domain or workgroup name to be used. Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Workgroup name	: VORKGROUP
) Join a domain	
Domain name	:
Account name	:
Password	:
Confirm password	:

(8) Select the Windows components for installation.
 Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Wizard	
Set parameters about Windows components.	
Select Windows features and Server roles to be enabled.	
-Server roles	
□ Web server(IIS)	
DHCP server	
DNS server	
File services	
Print services	
Windows features	
SNMP service	Advanced
Simple TCP/IP services	
□ WINS server	
	7 / 8 Page
	7 / 6 Fage
Back Next	Cancel

(9) Confirm settings.

Confirm settings on the dialog shown below, and click [Finish].

neter setting is completed. hish this wizard, click [Finish].	
Installed OS	: Windows Server 2008 x86
(Setup with EXPRESSBUILDER)	
Edition	: Standard(Full Installation)
Language	: English
Time zone	: (GMT-08:00) Pacific Time (US & Canada)
Partition	: Create a new partition(40GB)
	8 / 8 Pag

When the Windows settings wizard is terminated, Parameter Setup Menu appears again.

10-3 Application settings

Set up applications using the Application settings wizard in Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER 6. xx - xxx . xx (xxx)
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. I can change the parameter In save the parameter to a cannot proceed to the next	s of the category. file. : step. Click [Settings] to se	et the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settings Skip
U		+		
Windows settings	User information	Network settings	Windows Components Default settings	Default Settings
		+	6	
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	Save	USB Remove

- (1) Click [Settings] in Application settings.
- (2) Confirm settings on the dialog shown below, change them as needed, and click [Finish].

🕜 Wizard	
Select applications to install.	
For more information on each application, refer	to [Description of Application] column.
List of applications	Selected applications
Apply drivers for mass storage controller	NEC ESMPRO Agent
	Add >> Universal RAID Utility Microsoft Visual C++ 2005 SP1 Redistributable F
	<< Delete
- Description of Application	
Description of Application	
	Finish

- 11. Save parameters on Parameter Setup Menu. Click [Save], and save the parameter file according to displayed instructions. If you do not need to save parameters, go to Step 12.
- 12. Click [Next] on Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER 6. xx - xxx .xx (xxx)	
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	Set parameters for the setup. If [Settings] is clicked, you can change the parameters of the category. If [Save] is clicked, you can save the parameter to a file. "If "I's displayed, you cannot proceed to the next step. Click [Settings] to set the parameters.				
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settings Skip	
		+			
Windows settings	User information User settings	Network settings Default settings	Windows Components Default settings	Default Settings	
		+			
Application settings	Applications installation Default settings			Default Settings	
	Back	Next	Save	Remove	

13. Confirm the summary of setup on the screen below, and click [Perform].



14. Install the additional applications.

If **Installing the OS and applications** is selected, the following message will appear.

Question	
	Insert the media including the additional applications.
?	
	[Message ID : H2001]
	OK Cancel

Insert the CD-ROM or removable media that contains the necessary applications, and install them according to displayed messages.

15. Remove the removable media or DVD(EXPRESSBUILDER) from the server.

🕕 Informati	on	
	Remove the CD/DVD and other removable media.	
1		
	[Message ID : H1002]	
	OK	

16. Insert the Windows Server 2008 DVD-ROM into the optical disk drive, and then click [OK].

Question	
	Insert Backup OS disk into the drive.
?	
	[Message ID : H2003]
	OK Cancel

Windows Server 2008 and selected applications will be installed automatically and restart several times.

17. When the software license agreement window appears, select **I accept the license terms**, and then click [Next].

Set Up Windows	
🥑 🗗 Set Up Windows	
Please read the license terms	
MICROSOFT SOFTWARE LICENSE TERMS	1
MICROSOFT WINDOWS SERVER 2008, STANDARD	
These license terms are an agreement between Microsoft Corporation (or base where you live, one of its affiliates) and you. Please read them. They apply to software named above, which includes the media on which you received it, if an terms also apply to any Microsoft	d on the 1y. The
0 updates,	
D supplements,	
D Internet-based services, and	
П support services	-
I accept the license terms	
	Next

18. When the message "Thank you" appears, click [Start].



Tips

It may take several minutes until the logon window appears. Wait until it appears, even though nothing changes on the screen.

19. When the following message appears, press <Ctrl> + <Alt> + keys.

Press CTRL + ALT + DELETE to log on

20. Follow displayed instructions to log on to the system.

Full installations:

When the following screen appears, enter your password into the text box, and then click 😜.



Server Core installations:

When the following screen appears, click **Other User**.

	Other User	
۲	Cancel Windows Server 2008 Standard	

When the following screen appears, enter administrator into User text box and the specified password into Password text box, and then click **S**.

	administrator Password
	Cancel
(Windows Server 2008 Standard

- 21. Click [OK] in the Setup Complete window.
- 22. Follow the instructions described in *Chapter 1 (4.5 Setting Up Device Drivers)* to set up the device drivers supplied with this server as standard.
- 23. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 24. Apply Service Pack as needed according to Chapter 1 (4.9 Applying Service Pack).
- 25. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with EXPRESSBUILDER is now complete.

4.3 Setup with OS Standard Installer

This section describes how to install Windows with OS Standard Installer.

This feature automatically recognizes the RAID Controller connected to the server and configures the RAID System, so you must complete the hardware installation of the server by following "*User's Guide*".

Important	Setup with OS standard Installer may delete all data of the hard disk drive		
	depending on the settings. Pay attention to input parameters. You must be		
	especially careful when configuring the following:		
	-RAID settings wizard		
	Backing up user data, as needed, is recommended.		
Tips	 Setup with OS Standard Installer allows you to use a pre-specified parameter file 		
	or save the parameters specified in setup as a parameter file on a removable		
	media or Internal Flash Memory (if purchased optionally).		
	 For details on creating a parameter file, refer to 8 Windows OS Parameter File. 		

4.3.1 Setup flow



4.3.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- > Either of the following OS installation media
 - NEC operating system installation media (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation media (hereafter referred to as *Windows Server 2008 DVD-ROM*)
- > First Steps Guide
- Either of the following EXPRESSBUILDER
 - EXPRESSBUILDER DVD
 - Internal Flash Memory

(If "Internal Flash Memory " is installed)

- > Prepare if needed:
 - Removable media for Windows OS parameter file
 - Service Pack
 - (If the OS installation media contains Service Pack 1, you need not apply the service pack again.)

Tips

EXPRESSBUILDER may be distributed in Internal Flash Memory. EXPRESSBUILDER can be run from Internal Flash Memory if it is installed in the server.
If you are using a server with Internal Flash Memory installed, you can install the OS without using EXPRESSBUILDER DVD.

4.3.3 Setup procedure

This section describes the procedure for installing Windows Server 2008 with OS standard installer.

Note

Before starting setup, refer to *Chapter 1 (4.1 Before Starting Setup)*. It describes how to make partitions.

- 1. Turn peripheral device power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select **Os installation** *** **default** ***. You will automatically advance to step 4, with no need for further input.

Boot sele Os installation *** Tool Henu (Normal Mo Tool Menu (Redirection	Boot selection ction default *** de) on mode)
	Automatic select at 10 seconds

4. Select English on the language selection window, and then click [OK].

?	Question				
	EXPRESSBUILDERで使用する言語を選択してください。				
	Select a	a language to u	ise for the	EXPRESSBUIL	.DER.
	0	日本語	۲	English	
	0	Français	0	Italiano	
	0	Deutsch	0	Español	
				1	
			OK		

5. When the Windows PE software license agreement window appears, click [Yes].

Question		
Confirm the following End-User Li To use this software, agree this li	cense Agreement. cense.	
· · · · · · · · · · · · · · · · · · ·		
IMPORTANT-READ CAREFULLY:	TOR MICROSOFT (g	
This End-User License Agreement entity) and the manufacturer (W you acquired which includes cert ('SOFTWARE' includes comput or electronic documentation. Any software provided along with or separate terms of use is licenet than this EULA. By installing, copying, download terms of this EULA. If you do not agree to the terms license the SOFTWARE to you.	It ("EULA") is a legal lanufacturer2) of the lanufacturer2 of the lini Microsoft software er software, and may he SOFTWARE that seed to you under the I ng, accessing or othe of this EULA, Manufa	greement between you (either an individual or a single special purpose computing device or software ("SYSTEM") product(s) installed on or for use with the SYSTEM include associated media, printed materials, and "online" is associated with a separate end-user license agreement rarms of that license agreement or terms of use rather rwise using the SOFTWARE, you agree to be bound by the cturer and Microsoft Licensing, GP ("MS") are unwilling to
	Yes	No
	Note	Unless you agree these te

nless you agree these terms, you cannot use EXPRESSBUILDER.
6. Select Set up this computer from Top Menu of EXPRESSBUILDER, and then click [Next].

NE	C	EXPRESSBUILDER Version 6. xx - xxx . xx (xxx)
To invoke ea	h function, select the radio button, and then click [Next].	
If [Remove] i	s clicked, you can remove USB devices inserted into this computer s	afely.
C	Setup this computer This computer	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ _{Next}	VSB Remove

7. Set parameters on this menu according to your requirement.
□ When not using parameter file: Go to Step 8.
□ When using a parameter file: Go to Step 9.



8. If you do not use a parameter file, select an OS from the pull-down menu in [Install Windows], and click [Next].

On this dialog, select "Windows Server 2008 x86" from the pull-down menu.

\rightarrow Go to Step 10.	
NEC	EXPRESSBUILDE
install the Operating System, select the item in the lis	tbox, and then click [Next].
[Configure RAID system only] is selected, EXPRESSBUI [Load a parameter file] is selected, you can setup accor	LDER only configures RAID system without the OS installation. rding to the parameter file.
Install Windows	Windows Server 2008 x86
•	
C Configure RAID system only	
C Load a parameter file	

9. If you use a parameter file, select [Load a parameter file] and click [Next]. Load a parameter file according to displayed instructions.

NEC	EXPRESSBUILDER Version 6.xx-xxx.xx (xxx)
To install the Operating System, select the item in t If [Configure RAID system only] is selected, EXPRES If [Load a parameter file] is selected, you can setup	he listbox, and then click [Next]. SBUILDER only configures RAID system without the OS installation. according to the parameter file.
C Install Windows	Windows Server 2009 x96
C Configure BAID system of C Load a parameter file	
Back 🗲	→ Next ^{USE} Remove

Confirm settings on Parameter Setup Menu as needed, then click [Next]. \rightarrow Go to Step 16.

NEC			EXPRESS Version	BUILDER
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. u can change the parameter n save the parameter to a cannot proceed to the next	s of the category. file. : step. Click [Settings] to s	et the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settings Skip
		+		
Windows settings	User information User settings	Network settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings	\frown		Default Settings
	Back	→ Next	Save	Remove

- 10. Set parameters required for setup.
 - Click [Settings] of the relevant category to change parameters.

NEC			EXPRESS Version	BUILDER 6. xx - xxx .xx (xxx)
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. ι can change the parameter n save the parameter to a l cannot proceed to the next	s of the category. file. : step. Click [Settings] to se	et the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)	0	Default values Default Settings Skip
		+		
Windows settings	User information Default settings	Network settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	Save	Remove

Click [Default] to restore the default values.

You can see the default values by clicking [Default values].

EXPR	Version 6. xx-xxx .xx (xxx)
) set the parameters	5.
	@ Default values
	Default

10-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically. Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER 6. xx - xxx . xx (xxx)
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you co *** If "!" is displayed, you	tup. u can change the paramete in save the parameter to a u cannot proceed to the nex	rs of the category. file. :t step. Click [Settings] to s	et the parameters.	
RAID settings Skip	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)		Default values Default Settings Skip
Windows settings	User information Default settings	Network settings Default settings	Windows Components Default settings	Settings
Application settings	Applications installation Default settings	+		Default Settings
	Back	→ Next	Save	Remove

When creating new logical drives

- (1) Click [Settings] in RAID settings.
- (2) Use the wizard to set up logical drives.

Important If you proceed with wizard, the existing RAID system is destructed and the contents of hard disk drive will be erased.

When skipping the creation of a new logical drives

Click [Skip] in RAID settings.

11. Click [Settings] in Windows settings.



12. Click [Next] in the Windows settings wizard.



13. Specify the Windows basic settings.

The basic information window appears. Select Use OS standard installer, and then click [Next].

Wizard		
If [Use OS standard installer] is so media, and applications such as E If [Setup with EXPRESSBUILDER]	elected, Windows is installed by using the standard SMPRO must be installed separately after Windows is selected, both Windows and applications can be	installer contained in the OS installation. Installed easily.
Basic information Operating System	: Windows Server 2008 x86	
Use OS standard	installer	
Setup with EXPRE	SSBUILDER	
Edition	: Standard(Full Installation)	
Language	English	
Time zone	: (GMT-08:00) Pacific Time (US & Canada)	×
		2 / 8 Page
Back Ne	ext	Cancel

14. Confirm settings on the confirmation window, and click [Finish].

3	Wizard		
Para To B	meter setting is completed.		
101	nish this wizard, click [Finish].		
	Installed OS	: Windows Server 2008 x86	
	(Use OS standard installer)		
	Copy OEM drivers	: Not act	
			8 / 8 Page
	Back		Finish

15. Click [Next] on Parameter Setup Menu.

NEC		EXPR	Version 6. xx - xxx .xx (xxx
Set parameters for the setup. If [Settings] is clicked, you can change ti If [Save] is clicked, you can save the par *** If "!" is displayed, you cannot proces	ne parameters of the catego rameter to a file. ad to the next step. Click [Se	ry. ettings] to set the parameters	s.
RAID settings OK Logical drive1	(148GB)		Default values Default Default Settings Skip
Windows settings User Info	rmation Network s rettings Default s	ettings Windows Com ettings Default set	nponents Default trings Settings
Application settings Skip Default set	nstallation ettings		Default Settings
Baci	<€ →Next	9	Save Remove

16. Confirm the summary of setup on the screen below, and click [Perform].

NEC	EXPRESSBUILDER Version 6. xx-xxx.xx (xxx)
Ready to set up the computer. To start the setup, click [Perform].	
Steps	Summary of setup
 Configuring RAID system 	RAID configuration Configure
 Changing a media 	* All data is deleted.
 Installing OS 	Installed OS Windows Server 2008 x86
	Copy OEM drivers Not act
Back	Perform

17. Continue setup according to displayed message.

When the following message appears, set OS installation media and click [OK].

Question	
	Insert the Backup OS disk into the drive.
?	
	[Message ID : 2XXX]
	OK Cance I

18. The server reboots automatically.

If you use Internal Flash Memory, press <F3> key when the following message appears during POST.

Press <F2> Setup, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network

Note

Since the OS installation media is set in the optical disk drive in Step 17, boot the system from the optical disk drive having higher boot priority, not from Internal Flash Memory.

19. Run from the OS installation media.

If a bootable operating system is already installed on the hard disk drive, press <Enter> key while the message "Press any key to boot from CD or DVD..." is displayed on the top of the screen.

When the boot sequence proceeds, the message "Windows is loading files..." appears.

Note If "Windows is loading files..." message does not appear, <Enter> key was not pressed correctly. Reboot and retry again.

This step is unnecessary if no bootable operating system exists.

20. When the following window appears, select a language, enter information for the other items, and then click [Next].



 When the following message appears, click [Install Now ^(C)]. Windows Server 2008 installation starts.



22. When the following window appears, enter the product key and then click [Next]. Note that this window does not appear if you use Backup DVD-ROM for installation.



23. When the following window appears, select the Windows edition you have purchased. Select I have selected the edition of Windows that I purchased check box, and then click [Next]. If the product key was entered, only the corresponding editions are displayed.

Select the edition of Windows that you pur	hased			
Windows Version Window Server 2008 Standard (Full Installatio Window Server 2008 Enterprise Full Installatio Window Server 2008 Standard Gener Core In Windows Server 2008 Standard Gener Core In Windows Server 2008 Datacenter (Server Core) n) nij zilisticon) stalisticon)			
You enter your product key. Windows can not To enter your product key. Click the Back button ↓ You obcese on the enter your product key no will need to reinstall the correct edition of Windows that □ I have selected the edition of Windows that	smatically determine which edition you purchased. To return to the previous page. , make sure that you adent the edition of Windows royou will med by contractate that edition, a you you will need to protect the second second second second was later and potentially lose files and information. purchased			
Cellecting information 2 Installing Windows	Let			
Tips	The Windows version	s that appear on th	ie screen differ o	depending on the OS

24. When the following window appears, confirm the content of the license agreement. If you agree, select **I accept the license terms** and then click [Next].



25. When the following message appears, select the installation type. Select **Custom (advanced)** in this case.



26. The "Where do you want to install Windows?" window appears.

Note

Go to Step 30 if RAID Controller is not used.

Click Load Driver.

If the following message appears, replace the OS installation media and EXPRESSBUILDER DVD in the optical disk drive, and then click [Browse]. Next, go to step 27.

Load Driver
To install the driver needed to access your hard drive, insert the installation media containing the driver files, and then click OK.
Note: The installation media can be a floppy disk, CD, DVD, or USB flash drive.
[Browse] [OK] [Cancel]

- Tips
- If using Internal Flash Memory, you do not need to remove the OS installation media.
- At this time, a message "The Installation media can be a floppy disk, CD, DVD, or USB flash drive." appears on the screen, you must use the supplied EXPRESSBUILDER DVD or Internal Flash Memory.
- Specify one of the following locations, and then click [OK].
 When using EXPRESSBUILDER, select the optical disk drive. When using Internal Flash Memory, select the volume of INTER-FLASH.

N8103-149/150/151 RAID Controller :

- Windows Server 2008 64-bit Edition
 \021\win\winnt\oemfd\ws2008x64\megasas2
- Windows Server 2008 32-bit Edition \021\win\winnt\oemfd\ws2008\megasas2
- 28. Select the necessary driver from the driver list shown, and then click [Next].

When using the N8103-149/150/151 RAID Controller

[LSI MegaRAID SAS 9267-8i]

29. If you used EXPRESSBUILDER DVD, remove it and then insert the OS installation media.

30. Select the disk in which the partition will be created, and then click Drive options (advanced)

```
Important If a partition has already been created, go to step 33.
```

31. Click [New], enter the partition size into the size input box, and then click [Apply].

Note When installing the OS to a disk of over 2,097,152 MB (2 TB), the partition size can only be set to 2,097,152 MB or less.

- 32. Select the partition created in step 31, and then click [Format].
- 33. In the window below, select the created partition, and then click [Next].



When the following message appears, Windows installation starts automatically.



 ne
 DS.

At this time, if EXPRESSBUILDER DVD is still in the optical disk drive, a message prompting you to replace it with an OS installation media appears. Remove EXPRESSBUILDER DVD and then insert the OS installation media.

In	stall Windows – Insert Disc
Pl	ease insert Windows installation disc 1.
	OK Cancel

34. The content displayed differs depending on what you selected in step 23. Confirm the following, and then proceed.

Full installations:

(1) After setup of Windows Server 2008 is completed, the following window appears, prompting you to change your password before logging on. Click [OK].



(2) Change your password, and then click the 🕑 button.



Tips

- Passwords must fulfill the following requirements in Windows Server 2008.
 Contains 6 or more characters
 Contains characters from at least three of the following categories: numbers, uppercase letters, lowercase letters, and symbols.
- (3) When the following message appears, click [OK].



(4) When the Initial Configuration Tasks window appears after you log on, enter the user information.

Pe	erform the following tasks to initially configure this server		Windows Serve Standard		
0	Provide Computer Infor	mation	2	Specifying computer information	
	Set time zone	Time Zone:	(GMT-08:00) Pacific Time	(US <u>Canada</u>)	
	Configure <u>p</u> etworking	Local Area Connection: Local Area Connection 2:	Not connected Not connected		
	Provide computer name and domain	Full Computer Name: Workgroup:	WIN-LBSQ96EYDEC WORKGROUP		
0	Update This Server		2	Updating your Windows server	
	Enable automatic updating and feedback	Updates: Feedback:	Not configured Windows Error Reporting o Not participating in Custom	ff er Experience Improvement Program	
	Pownload and install updates	Checked for Updates: Installed Updates:	Never Never		
0	Customize This Server		2	Customizing your server	
	Add roles	Roles:	None		
	Add features	Features:	None		

Server Core installations:

 If the following message appears after Windows Server 2008 setup has completed, press <Ctrl> + <Alt> + keys.



(2) When the following message appears, click Other User.

	Other User	
C	Cancel Windows Server 2008 Standard	

(3) When the following window appears, enter administrator into the User text box and then click ④. Password entry is not required at this time.



(4) The following window appears, prompting you to change your password before logging on. Click [OK].



(5) Change your password, and then click [].



- Passwords must fulfill the following requirements in Windows Server 2008.
 Contains 6 or more characters
 Contains characters from at least three of the following categories: numbers, uppercase letters, lowercase letters, and symbols.
- (6) When the following message appears, click [OK].



(7) The command prompt will appear. Set the user information.



Tips

For detailed setup procedures, refer to the Microsoft "Step by Step Guide".

- 35. Install Starter Pack by referring to Chapter 1 (4.4 Installing Starter Pack).
- 36. Install drivers and specify detailed settings by referring to Chapter 1 (4.5 Setting Up Device Drivers).
- 37. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 38. Apply Service Pack as needed according to Chapter 1 (4.9 Applying Service Pack).
- 39. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with OS standard installer is now complete.

4.4 Installing Starter Pack

Starter Pack contains drivers customized for this server. Be sure to apply Starter Pack before running the system.

Important	Also install Starter Pack in the following cases.				
	 The system configurations have changed (when internal option devices have been added or removed) 				
	If a dialog box prompting you to restart appears after changing system configurations, click [No] and then install Starter Pack.				
	 If the system was restored using a restore process 				
	 If a system has been restored using the backup tool 				
Note	The Scalable Networking Pack (SNP) function is disabled upon Starter Pack installation is complete.				
	The setting of SNP function may affect the system performance.				
	Contact your sales representative for details.				
Tips	If the OS is installed by using EXPRESSBUILDER, Starter Pack is already applied.				
	If the configuration is not changed, you do not need to apply Starter Pack again.				

4.4.1 When using EXPRESSBUILDER DVD

- 1. Log on to the system with the built-in administrator, which has administrative privileges.
- 2. Insert EXPRESSBUILDER DVD into the optical disk drive.
- 3. Proceed application step according to the installation type.

For Full installations

When Autorun Menu appears, click **Set up Windows** to open the short-cut menu and then select **Install Starter Pack**.

EXPRESSBUILDER	
NEC	EXPRESSBUILDEF
Menu items	ate .
Set up Window	/S Create a parameter file for Windows OS
Set up softwar	Install .NET Framework Ver2.0 Redistributable Package(x86) Install .NET Framework Ver2.0 Redistributable Package(x64) Install Microsoft Visual C++ 2005 SP1 Redistributable Package(x86)
1	Install Starter Pack
1	🔘 Close Menu
	Version 6.xx-xxx.xx (xx

Server Core installations

(1) Enter the following command at the command prompt, and then specify the optical disk drive letter (for example, D drive).

```
cd /d D:\021\win\winnt\bin
C:\Users\administrator>cd /d D:\021\win\winnt\bin
```

(2) Enter the following, and then press <Enter> key.

р	kgsetup.vbs
	D:\021\win\winnt\bin>pkgsetup.vbs

4. The setup message appears.

itarter Pa	ck 🗵
?	Setup is going to install Starter Pack. If you install it, dick [OK], If you wish to cancel it, dick [Cance]]. This process disables Scalable Networking Pack(SNP) function. If you use SNP function, enable it after the reboot.
	OK Cancel

Tips

Although it may take several minutes for the above window to appear, wait for the window to appear without attempting any further operation.

Read the message that appears, and then click [OK].

Starter Pack installation starts.



5. When the following message appears, Starter Pack installation is complete. Follow the instructions in the message, and remove EXPRESSBUILDER DVD.



6. Click [OK] and then restart the system.

Installation of Starter Pack is now complete.

4.4.2 When using Internal Flash Memory

(Optional "Internal Flash Memory " is required)

- 1. After installing the operating system, the system will restart.
- Use Internal Flash Memory to run EXPRESSBUILDER. When "Press <F2> Setup, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network" appears during POST, press <F3> key.

```
Note At this time, be sure to remove the DVD from the optical disk drive.
```

3. When the following message appears, select **Os installation** *** **default** ***. You will automatically advance to the next window, with no need for further input.



4. Select English on the language selection window, and then click [OK].



5. When the Windows PE software license agreement window appears, click [Yes].

2 Question	7
Confirm the following End-User License Agreement. To use this software, agree this license.	
END-USER LICENSE AGREEMENT FOR MICROSOFT® WINDOWS® PREINSTALLATION ENVIRONMENT	
This End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and the manufacturer ("Manufacturer]) of the special purpose computing device or software ("SYSTEM") you acquired which includes certain Microsoft software product(s) installed on or for use with the SYSTEM ("SOFTWARE").	
The SOFTWARE includes computer software, and may include associated media, printed materials, and 'online' or electronic documentation. Any software provided along with the SOFTWARE that is associated with a separate end-user license agreement or separate terms of use is licensed to you under the terms of that license agreement or terms of use rather than this EULA.	
By installing, copying, downloading, accessing or otherwise using the SOFTWARE, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, Manufacturer and Microsoft Licensing, GP ("MS") are unwilling to license the SOFTWARE to you.	
Yes No	_
Note Unless you agree these	

6. Select Invoke various utilities from Top Menu of EXPRESSBUILDER, and then click [Next].

NE	c	EXPRESSBUILDER Version 6. xx- xxx . xx (xxx)
To invoke ead	function, select the radio button, and then click [Next].	
In [iternove] is	cickey, you can remove oub devices inserved into any computer as	nei).
	C Setup this computer	
[Invoke various utilities 	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ _{Next}	Remove

7. Select Install Starter Pack to installed Windows and then click [Next].

NEC	EXPRESSBUILDER Version 6. xx - xxx . xx (xxx)
Various utilities can be individually invoked from this menu. Select a utility, and then click [Next].	
Install Starter Pack to installed Windo Save or restore RAID configuration da	ta
C Run a file directly	
	xt USB Remove

8. Select the installed Windows from the drop-down list, and then click [Perform].



9. When the following confirmation window appears, read the content and then click [Yes].

?	Question	
	2	EXPRESSBUILDER copies Starter Pack into the partition where Windows has been installed. Current disk space : XXXXX MB Required disk space: XXMB
		Yes No

Note



10. After copying the files, the following window appears. Click [Close].

1nformat	tion					
	EXPRESSBUILDER completed copying Starter Pack into the partition where Windows has been installed.					
1	If [Close] is selected, this computer reboots. After logging in Windows, install Starter Pack following the message.					
	[Message ID : M1000]					
	Close					

The server then restarts.

Note

You do not need to press <F3> key at this time.

11. Proceed application step according to the installation type.

Full installations

After Windows starts, the following window appears. Click [OK].

Installing Starter Pack.
Preparation of Starter Pack was completed.
Click [OK] to continue installing Starter Pack.
OK

Server Core installations

 Enter the following command at the command prompt, and then specify the drive letter of System Drive (usually C drive).

cd /d C:\StartPKG\bin	
C:\Users\administrator>cd	/d C:\StartPKG\bin

(2) Enter the following, and then press <Enter> key.



12. Read the message that appears, and then click [OK].

Starter P	ack		×
?	Setup is going to install Sta If you install it, dick [OK], If you wish to cancel it, dic This process disables Scalal If you use SNP function, er	rter Pack. k [Cancel]. ble Networking Pack(SNP) function. hable it after the reboot.	
		OK Cancel	
	Tips	Although it may take	seve

Although it may take several minutes for the above window to appear, wait for the window to appear without attempting any further operation.

Installation of Starter Pack starts.



When the following message appears, Starter Pack installation is complete.

Starter Pa	ack 🔀
i	Installing Starter Pack was finished. The setup reboots for installing drivers. After taking out it of the DVD-ROM drive, if EXPRESSBUILDER DVD is set in the DVD-ROM Drive, dick [OK].

13. Click [OK] to restart the system.

Installation of Starter Pack is now complete.

4.5 Setting Up Device Drivers

Install and set up device drivers provided for the standard configuration.

For details regarding the installation and setup of a driver that is not described here, refer to the manual supplied with the driver.

4.5.1 Installing the LAN and BACS (teaming) drivers

(1) LAN and BACS drivers

If EXPRESSBUILDER is used for setup, the LAN and BACS driver will automatically be installed. If the OS standard installer is used for setup, install Starter Pack to install the LAN and BACS driver.



(2) Optional LAN board / Riser Card

This server supports the following optional LAN boards / Riser Card.

The drivers for LAN boards / Riser Card are automatically installed using the OS plug-and-play function.

Optional LAN boards: N8104-128/132/138

Optional Riser Card: N8104-135

(3) Network adapter name

After installing the LAN drivers, the following network adapter names will be displayed by the Device Manager or BACS.

Network adapters for the standard configuration

Broadcom NetXtreme Gigabit Ethernet #xx*

If connecting with an optional LAN board:

[N8104-128] Broadcom BCM57711 NetXtreme II 10 GigE (NDIS VBD Client) #xx* [N8104-132/138] Broadcom NetXtreme Gigabit Ethernet #xx *

If connecting with an optional Riser Card:

[N8104-135] Broadcom NetXtreme Gigabit Ethernet #xx *

* If there are adapters with the same name, a different identification number will be assigned to xx.

Tips

The ID for N8104-128 might be a number of two or more digits. This is due to the LAN driver specifications and not an error. This number cannot be changed.

4.5.2 Setting up LAN drivers

(1) Setting link speed

The transfer rate and duplex mode of the network adapter must be the same as those of the switching hub. Follow the procedure below to specify the transfer rate and duplex mode.

- 1. Open the Device Manager.
- 2. Expand **Network Adapters**, and then double-click the name of the network adapter you want to set. The properties of the network adapter will be displayed.
- Select the Advanced tab, and then set the Speed & Duplex values to the same as those of the switching hub.
- 4. Click [OK] in the Network Adapter Properties dialog box.
- 5. Restart the system.

The link speed setting is now complete. Proceed to set up WOL.

(2) Setting the iSCSI Offload Engine (if using N8104-128)

If using N8104-128 with the server, iSCSI Offload Engine must be set to off.

Follow the procedure below to set it.

- 1. Double-click the **Broadcom Control Suite3** icon on the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Select Device Management under Explorer View, and then N8104-128 network adapter from System device (VBD).
- 3. Select the Configurations tab, and then expand Resource Reservations.
- 4. Remove a checkmark from [iSCSI Offload Engine] under [Pre-Allocated Resource], if checked. Then, click [Apply].
- 5. Complete steps 2 to 4 for each N8104-128 network adapter.
- 6. Restart the system.

iSCSI Offload Engine setup is now complete.

Important Pleas refer "N8104-128 LAN Driver Installation Guide" that is attached to the LAN boards to configure N8104-128.

4.5.3 Setting up team/LiveLink

N

lote	• You must set up LiveLink when setting up a team. Teams that are not
	configured for LiveLink are not supported.

- When deleting the team, refer to Chapter 1 (4.5.3 Setting up team/LiveLink)
 (4) Procedure for deleting team. When replacing the motherboard or a LAN board, follow these steps to remove the team and create it again after replacement.
- Be sure to specify the same Jumbo Mtu (Jumbo Packet) setting to all the adapters that compose a team

(1) Team types

The following team types are supported.

 Smart Load Balancing and Failover (without Standby Member) All adapters that compose the team perform communication.
 If a communication failure occurs on an adapter, other adapters that compose the team continue the communication.

When the adapter on which the communication failure occurred recovers, it joins the team again and resumes the communication.

• Smart Load Balancing (Auto-Failback Disable) (with Standby Member) Among the adapters that compose the team, primary adapters except the standby member perform communication.

If a communication failure occurs, the standby member continues the communication.

When the adapter on which the communication failure occurred recovers, it joints the team again and the standby adapter returns to the standby state.

(2) LiveLink

LiveLink is a function that detects communication route failures of adapters. It periodically investigates the communication status of specified destinations (IP address).

Link packets are sent from each adapter within a team.

If a response to the transmission of a link packet within the specified range is not detected, it is identified as a communication route failure and adapter communication is stopped.

When a response to the submission of a link packet is detected, communication LiveLink identifies communication as having been recovered, and communication using that adapter automatically resumes.

Note

You must set up LiveLink when you create a team.

(3) Setting up team/LiveLink

Note	 The team must be composed of two adapters.
	• Possible combinations of network adapters that compose the team are as
	follows.
	 Between standard network adapters.
	- Between N8104-128 adapters
	- Between LAN card/ riser cards excluding N8104-128
	- A standard network adapter and LAN board / Riser Card(N8104-128 does not
	include.)
Tips	To edit a team right-click on the BACS team, and then select Edit TEAM
	To our a tourn, right onor on the Broot tourn, and then beloot East TEAM .
	Then refer to step 3 and later in <i>Chapter 1</i> (4.5.3 Setting up team/LiveLink) - (3)

- 1. Double-click the **Broadcom Control Suite3** icon on the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Select **Team Management** from the left menu, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.

Setting up team/LiveLink to edit the team.

Eile View Tools Tgams Help Explorer View Team Management (0017) Broadcom NetXtreme Gigabit Effect (0018) Broadcom NetXtreme Gigabit Effect Create a Team Create Create a Team Crea	Information ▼ Isigns Information ▼ Address 6C-F0-49-56-97-8A anent MAC Address 6C-F0-49-56-97-8A dress 169,254,158,110 IP Paddress fe80:154e:c8e0:930:966 tatus Up L
Explorer View 1 Team Management 1 Constraints of the second of the sec	Information ▼ Isigns €C+0-49-56-97-8A Address 6C+0-49-56-97-8A anent MAC Address 6C+0-49-56-97-8A Idress 169, 254, 158, 110 IP Address fe80::54ec:8ea0:930:9e6e itabus Up ex Full d (n Mbps) 1000 ad Capabilities LSO, CO,RSS 1500 1500
Team Management Vital Parame (0017) Broadcom NetXtreme Gigabit Ethe Create a Team Marage Feam Create a Vital Marage Feam Marage Feam Create a Vital Marage Feam Create a Vital Dive Create a Vital Dive D	Signs 6C-F0-49-56-97-8A Address 6C-F0-49-56-97-8A anent MAC Address 6C-F0-49-56-97-8A Idress 169, 254, 159, 110 IP Address fe80::54ec:8ea0:930:966e itabus Up xx Full d (n Mbps) 1000 ad Capabilities LSO, CO,RSS 1500 er Information
Teams MAC Output Display [0017] Broadcom NetXtreme Gigabit Etherant [0018] Broadcom NetXtreme Gigabit	Address 6C-F0-49-56-97-8A anent MAC Address 6C-F0-49-56-97-8A idress 169-254.158.10 IP Address fe80::54ec:8ea0:930:966e Iatus Up vaddress Fe80::54ec:8ea0:930:966e iatus Up d (in Mbps) 1000 ad Capabilities LSO_CO_RSS tsou 1500
Control Broadcom NetXtreme Gigabit Ether Control Broadcom NetXtreme Gigabit Ether Control Broadcom NetXtreme Gigabit Ether Create a Team Create a VLAN Dreet Dreet Dreet Create a VLAN Create a VLAN Dreet Dreet Dreet Create a VLAN	anent MAC Address 6C-F0-49-56-97-8A Idress 169-254, 153, 110 IP Address fe80::54ec:8ea0:930:966 Istabus Up exx Full (d (Mbps) 1000 ad Capabilities LSO,CO,RSS 1500 1500
[0017] Broadcom NebXtreme Gigabit Ether [0018] Broadcom NebXtreme Gigabit Ether [0018] Broadcom NebXtreme Gigabit Ether [Oreate a Team Manege Team Create a VLAN [Drive Drive	idress 169.254,158.110 IP Address fc80::54c:3ea0:930:966e istus Up ex Full d (n Mbps) 1000 ad Capabilities LSO,CO,RSS 1500 1500
Add to a Team for Coreste a Team for Coreste a Team for Coreste a Team for Coreste a VLAN	IP Address fe80::54ec:8ea0:930:966e Itatus Up Vax Full d (in Mbps) 1000 ad Capabilities LSO,CO,RSS tsou 1500
Create a Team Andrew Create a Team Andrew Create a Team Andrew Create a VLAN Andrew Create a VLAN Andrew Create a VLAN Drive Drive Create Andrew Create Andr	status Up cx Full (d Mbps) 1000 ad Capabilities LSO,CO,RSS 1500 1500
Menege Teams Create a VLAN Multi Multi Drive Drive	ex Full d (in Mbps) 1000 ad Capabilities LSO,CO,RSS 1500 er Information
Create a VLAN et al Create a VLAN et al Muu Drive Drive	d (in Mbps) 1000 ad Capabilities LSO,CO,RSS 1500 er Information
• Ceffs Ma Dive Drive	ad Capabilities LSO,CO,RSS 1500 er Information
Mtu Dirive Drive	1500 er Information
E Drive Drive	er Information
Drive	
Drive	r Status Loaded
	r Name b57nd60a.sys
Drive	r Version 14.6.0.7
Drive	r Date 1/26/2011
E Res	ources
Bus T	ype PCI-E (1X)
Bus N	lumber 4
	Jns Signs section of the Information tab has useful information abo adapters that are installed in your system, such as the link statu and general network connectivity.

The Broadcom Teaming wizard appears.

3. Click [Next].



Note

Do not use Expert Mode.

4. Enter any name into the team name entry column, and then click [Next].



5. Make sure that the following team type is selected, and then click [Next]. Team type: Smart Load Balancing (TM) and Failover (SLB)

💀 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Team Type Select the type of team you want to create.	юм.
Team type: Smart Load Balancing(TM) and Failover (SLB)	
C 802.3ad Link Aggregation using Link Aggregation Control Protocol (LACP)	
TCP Offload Engine (TOE) support is supported only on a SLB team type. If a team type other than SLB is selected, no TCP connections will be offloaded.	n
Click here for information to help you decide which type of team to create,	
Preview	
<u></u> ancel < Back Next >	

6. Select the adapters that compose the team, click [Add] to add them to the **Team Members** area, and then click [Next].

歸 Broadcom Teaming Wizard					? X
Creating/Modifying a Team: Assigning Te Specify which adapters to include in the t Include adapters that you wish to set for t	eam Mem eam. the stand	bers Iby role.		BROADO	ом
Available Adapters	TOE	LSO	CO	RSS	
[0018] Broadcom NetXtreme Gigabit Eth	No	Yes	Yes	Yes	
•				Þ	
Add 🦆 📃	Remove] î	•••••		
Team Members	TOE	LSO	CO	RSS	
[0017] Broadcom NetXtreme Gigabit Eth	No	Yes	Yes	Yes	
•				Þ	
Team Offload Capabilities		LSO, CO	, RSS		
Team Mtu	150	0			
Click here for more information about confi	guring tea	aming.			
			Previ	ew 🖡	
Gancel		< Bac	*	Next >	

- 7. Proceed according to your desired team type.
 - Smart Load Balancing and Failover (without Standby Member)
 - (1) Select **Do not configure a standby member**.
 - (2) Click [Next].

E Ci D m	roadcom Teamine Wizard eating/Modifying a Team: Designating a Standby Member y ou wart to designate an available adapter as a standby ember?	?×	
	Optionally select if you want a standby member for the team.		
1)	 Do not configure a standby member. Use the following member as a standby member: 		
	[0017] Broadcom NetXtreme Gigabit Ethernet	-	
	Enable Auto-Fallback Disable mode		
	Click here for information about designating a standby member and er Auto-Fallback Disable mode.	nabling_	
	Cancel < Back	Next >	12

- Smart Load Balancing (Auto-Failback Disable) (with Standby Member)
 - (1) Select Use the following member as a standby member.
 - (2) Select the adapter that is to be a standby member from the drop-down list.
 - (3) Select Enable Auto-Failback Disable mode.
 - (4) Click [Next].

🔜 Broadcom Teaming Wizard	?×	
Creating/Modifying a Team: Designating a Standby Member Do you want to designate an available adapter as a standby member?	BROADCOM.	
Optionally select if you want a standby member for the team. Do not configure a standby member. U O Use the following member as a standby member (2) (0017) Broadcom NetXtreme Gisabit Ethernet (3)		
Click here for information about designating a standby member and en Auto-Fallback Disable mode.	nabling	
Pre Cancel < Back	eview	(4

Note

Enable Auto-Failback Disable mode is cleared while editing the team. Select it again.

8. Select Yes for Configure LiveLink?, and then click [Next].

🔡 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Configuring LiveLink Do you want to configure LiveLink?	BROADCOM.
Configure LiveLink?	
LiveLink detects loss of network connectivity beyond the survive routes traffic only through team members that have a live li	vitch and nk.
Click here for more information about configuring teaming,	
Prev Qancel Sack	view Next >

You can use the default setting for Probe interval and Probe maximum retries. If you change these values, select a value from each drop-down list, click the target probe (Probe Target xx), and then click [Edit Target IP Address...].

🔛 Broadcom Teaming Wiza	rd		<u>?</u> ×
Creating/Modifying a Tear Configure LiveLink(TM) at	n: Configuring Liv tributes.	veLink (continued	BROADCOM
Probe interval (seconds):		2 🔻	
Probe maximum retries:		5	
Probe VLAN ID (Optional:	0 -	0	
Target		IP Address	
Probe Target 1			
Probe Target 2			
Probe Target 3			
Probe Target 4			
			•
At least one Liv	Edit Target IP eLink probe target i	Address must be specified.	
Click here for more inform	nation about configu	ring teaming,	
			Preview
	<u>C</u> ancel	< Back	Next >

Tips

- The setting range of Probe interval (link packet transmission interval) is 1 to 60 (units: seconds).
- The setting range of Probe maximum retries (link packet retry count) is 1 to 10 (times).
- Switching a path upon detection of a communication path error by LiveLink takes (Probe maximum retries + 1) x Probe interval (seconds) at maximum.
 If an optional LAN board detects that a link is down, failover occurs immediately after the link goes down. It takes the time specified for Probe interval (seconds) to recover from the link going down.
- 10. In the Target xx text box, enter the IP address of the alive monitoring server, and then click [OK].



Note

- Target xx must be the same broadcast domain as that specified for the data communication IP and LiveLink communication IP (described in step 13). Specify an IP address that exists on the network and with which communication is possible.
- If communication with the IP address specified in *Target xx* is not possible, the team will also be unable to communicate. It is therefore recommended that you specify multiple IP addresses using *Probe Target*. Up to four IP addresses can be specified.

11. Click [Next].



12. Select an adapter from the Team Members area, and then click [Edit Member IP Address...].

🔜 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Configuring LiveLink (continued) Configure the IP address for each team member.	BROADCOM.
To3.nf methodra IPv4 Addre [0017] Broadcom NetXtreme Gigabit Ethernet [0018] Broadcom NetXtreme Gigabit Ethernet #2	IPv6 Addr
Edit Member IP Address.	×
Click here for more information about configuring teaming. Pre	view
<u>C</u> ancel < Back	Next >

13. Enter the IP address used for LiveLink communication, and then click [OK].

LiveLink Co	nfiguration				×
-IP Setting					
Name:	[0017] Broa	adcom NetXt	reme Gigabit	Ethernet	
IP∨4 Addre	ss				
IP∨6 Addre	ss				
	ОК		<u>C</u> ancel		

Note

Be sure to specify an IP address for LiveLink communication for all the adapters that compose the team. The address specified here is the IP address for LiveLink communication. Specify a different IP address for data communication.
For *Target xx*, specify an IP address that is unique on the network and with which communication is possible.

14. Click [Next].



15. Make sure that Skip manage VLAN is selected under Manage VLAN, and then click [Next].

🔜 Broadcom Teaming Wizard	<u>? ×</u>
Creating/Modifying a VLAN: Configure VLAN Support Specify whether you want to create or delete a VLAN.	BROADCOM.
Manage VLAN	
C Add VLAN	
C Edit VLAN	
Skip manage VLAN	
A	
	Preview
<u>C</u> ancel < Back	Next >

16. Make sure that **Commit changes to system and Exit the wizard** is selected under **Commit changes**, and then click [Finish].



Note

When the message below appears, select [Yes].

"Applying the changes will temporarily interrupt the network connection. The process may take several minutes and the connection will resume afterwards. Do you want to continue?"

Tips

After creating a team, if the teaming adapter displays like the following image, perform steps 8 through 14 again and correct the LiveLink settings.



17. Restart the system.

- 18. After the system starts, follow step 1 to start **Broadcom Control Suite3** and confirm that a team has been created. Confirm the team settings on the **Information** window to the right.
 - Broadcom Advanced Control Suite . . X <u>File View T</u>ools T<u>e</u>ams <u>H</u>elp Information
 Configurations
 Statistics
 Team Properties Explorer View Team Managemen E Team 1 Team Name Team Type Team 1 Smart Load Balancing(TM) and Failover View Virtual Adapters Team Offload Capabilities LSO, CO, RSS Team 1 ([0021] BASP Virtual Adapter) Team Mtu Driver Name Driver Version Driver Date 1500 Basp.sys 1.4.6 🐞 [0007] Broadcom NetXtreme Gigabit Ethernet 2010/12/21 [00 10] Broadcom NetXtreme Gigabit Ethernet # Probe Inter Probe Max Ret sianed A ters Probe Vlan ID 100.100.100.10 Probe Target 1 Probe Target 2 Probe Target 3 Probe Target 4 100.100.100.20 100.100.100.30 100.100.100.40 Probe Max Retrie Device Management Team Ma SALSS ROADCON
- Smart Load Balancing and Failover (without Standby Member)

- Smart Load Balancing (Auto-Failback Disable) (with Standby Member)



Team setup is now complete.

(4) Procedure for deleting team

Note

You must delete teams from Broadcom Control Suite3. You cannot delete the team from the team adapter displayed in the Device Manager.

- 1. Double-click **Broadcom Control Suite3** in the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Click **Team Management** from the left menu, right-click the team name under **Teams**, and then select **Delete Team** from the short-cut menu.

Broadcom Advanced Control Suite 3 Eile View Tools Teams Help Explorer View	Unformation Configurations Van Statistics	
Team Man <mark>a</mark> gement		
- RRE Teams	Team Properties	G
Dog Toom 1	Team Name	Team 1
Edit Team	Team Type	Smart Load
🗖 📥 📂 🗛 🛛 Delete Team	Team Offload Capabilities	LSO, CO, R
Add VLAN (P Virtual Adapter)	Team Mtu	1500
Fallback	Driver Name	Basp.sys
	Driver Version	1.4.6
[0018] Broadcom NetXtreme Gigabit Ethernel	Driver Date	2010/12/21
4	Team Properties	_
Device Management	Displays information about the team.	
BROADCOM	BAC	_

Note

When the message below appears, select [Yes].



3. Insert EXPRESSBUILDER DVD into the optical disk drive. If Autorun Menu appears, close the menu window.

Tips

You do not have to insert EXPRESSBUILDER DVD if Starter Pack was installed from Internal Flash Memory. Proceed to the next step.

- 4. Double-click addlvlanstats.vbs in the following folder.
 - When using EXPRESSBUILDER DVD: <Windows Server 2008 64-bit Edition> Optical disk drive:\021\win\winnt\ws2008x64\lan <Windows Server 2008 32-bit Edition> Optical disk drive:\021\win\winnt\ws2008\lan
 - If Starter Pack was installed from Internal Flash Memory:

 </
- 5. When the following message appears, click [OK].

Le	egacyVlanStats
	Registry Addition Completed, Reboot the system
	OK I

6. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Team deletion is now complete.

4.5.4 Graphics accelerator driver

The graphics accelerator driver for standard configurations is installed when Starter Pack is installed from EXPRESSBUILDER.

If you completed Setup with EXPRESSBUILDER, then the graphics accelerator driver has been automatically installed.

Tips

The graphics accelerator driver is only enabled in Full installations. Standard VGA is used in the case of Server Core installation.

To reinstall drivers separately, complete the following steps.

1. Insert EXPRESSBUILDER DVD into the optical disk drive. If Autorun Menu appears, close the menu window.

Tips

You do not have to insert EXPRESSBUILDER DVD if Starter Pack was installed from Internal Flash Memory.

- 2. From the Start menu, point to All programs, Accessories, and then select Explorer.
- 3. Double-click the install.bat icon in the following folder.

When using EXPRESSBUILDER DVD:

- Windows Server 2008 64-bit Edition
 Optical disk drive:\021\win\winnt\ws2008x64\video
- Windows Server 2008 32-bit Edition
 Optical disk drive:\021\win\winnt\ws2008\video

If Starter Pack was installed from Internal Flash Memory:

- Windows Server 2008 64-bit Edition
 System drive:\StartPKG\ws2008x64\video
- Windows Server 2008 32-bit Edition
 System drive:\StartPKG\ws2008\video

Continue installation according to the onscreen messages. You will be prompted to confirm the End User License Agreement during this process. Click the [ACCEPT] button and continue.

4. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Graphic accelerator driver installation is now complete.

4.5.5 When using a SCSI controller (N8103-107)

The driver for SCSI controller N8103-107 is automatically installed by Windows Plug-and-Play.

4.5.6 When using a SAS controller (N8103-104A/142)

The driver for SAS controller N8103-104A/142 is automatically installed by Windows Plug-and-Play.

4.5.7 When using a RAID Controller (N8103-160)

The driver for RAID Controller N8103-160 is automatically installed by Windows Plug-and-Play.

4.5.8 When using a Fibre Channel controller (N8190-153/154)

The driver for Fibre Channel controller N8190-153/154 is automatically installed by Windows Plug-and-Play.
4.6 Specifying PAE Option

If the server can mount a memory of more than 4 GB in a 32-bit system, specify the PAE option settings to use that memory.

Important The PAE option is not supported by Windows Server 2008 Standard.

For Windows Server 2008, the PAE option can be specified by using the Bcdedit.exe file. Follow the procedure below to specify the PAE option.

- 1. Select Run from the Start menu.
- 2. Enter cmd.exe in the Open text box, and then click [OK] to start the command prompt.
- 3. Execute the following command at the command prompt: bcdedit /set pae forceenable
- 4. Restart the system. The above setting is applied after restart.
- Execute the following command at the command prompt: bcdedit
 Make sure that pae ForceEnable is added to Windows Boot Loader.

Specification of the PAE option settings is now complete. For details about Bcdedit.exe, refer to the following:

Boot Configuration Data Editor Frequently Asked Questions

http://technet.microsoft.com/en-us/library/cc721886(WS.10).aspx

4.7 Installing the Bundled Software

The supplied EXPRESSBUILDER DVD contains the server monitoring software NEC ESMPRO Agent and system management software NEC ESMPRO Manager.

You can install NEC ESMPRO Agent automatically by performing Setup with EXPRESSBUILDER.

Open the Programs or Control Panel window from the **Start** menu, and make sure that the folders for the utilities you have installed are contained. If you did not install them at the time of Setup with EXPRESSBUILDER, refer to *Chapter 2 Installing the Bundled Software* to install the software separately.

4.8 License Authentication

To use Windows Server 2008, confirm whether the license has been authenticated, and if it has not, perform the license authentication procedure.

The following describes the license authentication procedure.

(1) Full installations

1. Select **Run** from the **Start** menu.

Enter the following, and then press <Enter> key.

slui		
🖅 Run		×
	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.	
<u>O</u> pen:	slui	
	This task will be created with administrative privileges.	
	OK Cancel <u>B</u> rowse	

If the following message appears, Windows has already been activated on your system. You do not

need to complete this procedure. Click [Close] to exit.

Nindows Activation		×
🕞 🕅 Windows Activation		
Activation was successful		
Activation helps verify that your copy of Window a genuine copy of Windows Server®, you are e all available updates and product support from more online about the benefits of genuine Winc	ys is genuine. With ligible to receive Microsoft. <u>Learn</u> lows	ask for lenuine Microsoft software
		Close

2. For installation from Backup DVD-ROM, replace the product key. When the following window appears, click **Change product key**.

Windows Activation	×
🕥 💦 Windows Activation	
The Windows Server $\mathop{\otimes}\limits$ Standard product key you typed is invalid for activation	
Buy a new product key online	
→ Iype a different product key	
✤ <u>Contact Microsoft to help resolve this problem</u>	
c	ancel

3. When the following window appears, enter the product key found on the COA label, and then click [Next].



4. Follow the instructions in the following message to start the license authentication process.

Nindows Activation	×
💮 🕅 Windows Activation	
Activate Windows now	
You must activate Windows within 60 days to continue using all Windows features.	
→ Activate Windows online now	
→ Ask me jater	
Show me other ways to activate	
Read our privacy statement online	
	Cancel

Windows activation is now complete.

(2) Server Core installations

1. At the command prompt, enter the following, and then press <Enter> key.

slmgr -dli



If the following message appears, Windows has already been activated on your system. You do not

need to complete this procedure. Click [OK] to finish.

Windows Script Host	x
Name: Windows Server(R), ServerStandard edition Description: Windows Operating System - Windows Server(R), OEM_SLP channel Partial Product Key: 7CYMX License Status: Licensed	
<u> </u>	

2. For installation from Backup DVD-ROM, replace the product key.

At the command prompt, enter the following, and then press <Enter> key. Set the product key found on the COA label in *PID*.

slmgr -ipk PID

<mark>⊛ Administrator:C:\Windows\system32\cmd.exe</mark> Microsoft Windows [Uersion 6.0.6001] Copyright <c> 2006 Microsoft Corporation. All rights reserved. C:\Users\Administrator>slmgr −ipk XXXXX-XXXXX-XXXXX-XXXXX-XXXX

3. Obtain an installation ID for Windows activation.

At the command prompt, enter the following, and then press <Enter> key. slmgr -dti



- 4. Reference %systemroot%\system32\slui\phone.inf for the telephone number of the license authentication customer service.
- 5. Call the above number, inform the representative of the installation ID which you obtained in step 3, and receive a confirmation ID.
- 6. Type the confirmation ID you received in step 5.

At the command prompt, enter the following, and then press <Enter> key. CID is the confirmation ID that you received from customer service.

slmgr -atp CID



Windows activation is now complete.

4.9 Applying Service Pack

When applying Service Pack 2, refer to the following Microsoft website: <u>http://support.microsoft.com/kb/948465/en-us</u>

4.10 Installation When Multiple Logical Drives Exist

Before starting installation, backup data for future use in case of data loss.

Important Before starting setup, be sure to disconnect hard disk drives from the RAID Controller that is not to be setup. Install those hard disk drives after setup has completed. Conducting setup with hard disk drives being connected with RAID Controller may cause existing data to be erased unintentionally.

(1) Installation process

Setup with EXPRESSBUILDER
 Refer to Chapter 1 (4.2 Setup with EXPRESSBUILDER), and proceed with setup.

In this case, EXPRESSBUILDER installs the Windows on the first detected hard disk drive or logical drive.

- Setup with OS standard installer
 - 1. Refer to Chapter 1 (4.3 Setup with OS Standard Installer), and start setup.
 - 2. When the following message appears, select the partition to which you want to set up the operating system.

Select the location to which Windows will be installed

The order and numbers of the disks displayed on the screen <u>might not match the server's slot</u> of the hard disk drives. <u>Distinguish between the hard disk drives by viewing the hard disk drive capacity</u> <u>and partition size</u> displayed on the screen, and then select a drive to install the Windows system. Selecting an improper drive might cause an unintentional corruption of the existing data. Be careful when selecting a hard disk drive on which to install the system.

Important • For details, refer to the following Microsoft website:

- http://support.microsoft.com/kb/937251/en-us
- You cannot edit the drive letters for the system volume or boot volume after setup is complete. Make sure that the drive letters assigned in this window are correct, and then proceed with setup.
- 3. Refer to *Chapter 1 (4.3 Setup with OS Standard Installer)*, and proceed to setup Windows with OS standard installer and the instructions.

Tips

The drive letter might change after installation. If you want to change the drive letter, use the procedure shown in *Changing drive letter assignments* below.

(2) Changing drive letter assignments

To change the drive letter, follow the steps below. But these steps cannot change drive letter assignments for the system volume or boot volume. If you want to change them, re-install the Windows.

- 1. From the Start menu, right-click Computer and then select Management. Next, launch Server Manager.
- 2. From the window on the left, select Storage and then Disk Management.
- 3. Right-click the volume whose drive letter you want to change, and then select **Change drive letter and path**.
- 4. Click [Change].
- 5. Click [Assign next drive letter], and then select the drive letter you want to assign.
- 6. Click [OK].
- 7. When the following message appears, read the contents and then click [OK].

Some programs are dependent on drive letters, and may not run properly. Continue?

8. Close the Server Manager.

5. Setting Up Windows Server 2003 R2 x64 Edition

Set up Windows Server 2003 R2 x64 Edition.

5.1 Before Starting Setup

Read through the cautions explained here before starting setup.



ŀ

Confirm during Setup with EXPRESSBUILDER

: Confirm during Setup with OS standard installer

			(1/3)		
Se	tup		Items to confirm		
_	08	Windows family	 The following editions of the Windows Server 2003 family may be installed. Windows Server 2003 R2 Standard x64 Edition Windows Server 2003 R2 Enterprise x64 Edition Inquiries about installing other editions may be made at your sales dealer or maintenance service company. When applying Service Pack 1, refer to the following About Windows Server 2008 R2 and Windows 7 Service Pack 1: Note Setup with EXPRESSBUILDER cannot be used. 		
_	05	License authentication	If Windows Server 2003 R2 x64 Edition is installed from a backup CD, the license is already activated. If Windows Server 2003 R2 x64 Edition is installed from an OS CD instead of a backup CD, a product key is required for license authentication. At this time, the product key must be the same as that indicated on the COA label of Windows Server 2003 R2 x64 Edition. For details, refer to <i>Chapter 1 (5.6 License Authentication)</i> . Important • Activate within 30 days following installation. The system might be locked if 30 days have passed without activation.		
		Hardware configuration	When installing Windows Server 2003 R2 x64 Edition using the OS standard installer, the following hardware configurations require special procedures.		
-	OS		 When using the OEM drivers, be sure to change the boot order of the Flash FDD on the BIOS settings as follows: Select Boot, Floppy Drive BBS priorities, Boot Option #1, and then specify the Flash FDD used. Note Change as instructed in <i>Chapter 1 (5.2.3 Setup procedure)</i>. 		

			(2/3)			
Se	up		Items to confirm			
_	05	Hardware configuration	 Notes on using N8103-149/150/151 on Windows2003: When a battery is used:			
			 * The default cache mode of RAID Controller is AutoSwitch. It will not change to WriteBack mode unless it is changed manually at or after creation of VD. 			
-	OS	• Connecting MO devices Installing Windows while an MO device is connected can result in installatio failure. Remove the MO device, and then start installation from the beginning.				
-	OS	DAT, LTO, and similar media Do not set media that is unnecessary to installation during setup.				
_	OS	• Connecting to multiple hard disk drives (Logical Drives) For details on installing operating systems to a system in which multiple Logica Drives exist, refer to <i>Chapter 1 (5.7 Installation When Multiple Logical Drive</i> <i>Exist)</i> .				
_	05		Reinstallation to a dynamic disk: When installing the OS on a hard disk drive with multiple partitions that was upgraded to a dynamic drive and you wish to retain the existing partition configuration and data areas, note the following: XX.XX GB NTF5 Normal (system) Data area (partition to be retained)			
			 Select the partition on which the OS was previously installed. Select Leave the current file system intact (no change) for the OS partition format. 			
-	08	Service Pack	Before applying a Service Pack, make sure that Windows Server 2003 R2 Edition DISC 2 has been installed.			
-	08		Use Starter Pack when you apply a Service Pack from the Service Pack 2 CD-ROM.			
_	08		If you used OS installation media including Service Pack 2 for installation, you do not have to install Service Pack 2 again.			

			(3/3)		
Se	tup		Items to confirm		
	05	System partition size	The system partition size can be calculated by using the following formula. Size required to install the OS + paging file size + dump file size + application size Size required to install the OS = 4,100 MB (Windows Server 2003 R2 x64 Edition with Service Pack 2) = 5,900 MB (Windows Server 2003 R2 x64 Edition + Service Pack 2 CD-ROM) Paging file size (recommended) = installed memory size × 1.5 Dump file size = installed memory size + 1 MB Application size = as required by the application For example, if the installed memory size is 1 GB (1,024 MB) and Full installation is selected, the partition size is calculated as follows: 4,100 MB + (1,024 MB × 1.5) + 1,024 MB + 1 MB + application size = 6,661 MB + application size		
			 Note The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the boot volume paging file must be large enough to store dump files. Make sure you set a sufficient paging file size. If the paging file is insufficient, there will be a virtual memory shortage that may result in an inability to collect correct debug information. Regardless of the sizes of internal memory and write debug information, the maximum size of the dump file is "size of internal memory + 1 MB". When installing other applications or other items, add the amount of space needed by the application to the partition. 		
			 If the partition size for installing the system is smaller than the size required for installation + paging file size, expand the partition size or add another disk. If your system does not have a sufficient dump file size, divide the required file space into multiple disks by performing the following steps. 1. Set the system partition size to a size sufficient to install the OS and paging file. 2. Write the debug information of the dump file onto another disk by referring to 7. <i>Setup for Solving Problems</i>. If there is not enough disk space to write the debug information, set the partition size to a size sufficient to install the OS and paging file, and then add another disk for the dump file. 		
_	OS	Setup with OS standard installer	Dialog boxes might appear several times during installation, but it does not affect system installation. Click [Yes] on such dialog boxes, and continue installation according to the displayed messages.		

5.2 Setup with OS Standard Installer

This section describes how to install Windows with OS Standard Installer.

This feature automatically recognizes the RAID Controller connected to the server and configures the RAID System, so you must complete the hardware installation of the server by following "*User's Guide*".

Important	Setup with OS standard Installer may delete all data of the hard disk drive depending on the settings. Pay attention to input parameters. You must be especially careful when configuring the following: –RAID settings wizard Backing up user data, as needed, is recommended.
Tips	 Setup with OS Standard Installer allows you to use a prespecified parameter file or save the parameters specified in setup as a parameter file on a removable media or Internal Flash Memory (if purchased optionally). For details on creating a parameter file, refer to <i>Chapter 1 (8 Windows OS Parameter File)</i>.

5.2.1 Setup flow



5.2.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- Either of the following OS installation media
 - Backup CD-ROM Windows Server 2003 R2, Standard x64 Edition DISC 1 (hereafter referred to as *Backup CD-ROM DISC 1*), and Microsoft Windows Server 2003 R2 Standard x64 Edition DISC 2 (x2) (hereafter referred to as *Windows Server 2003 R2 Edition x64 DISC 2*)
 - Backup CD-ROM Windows Server 2003 R2, Enterprise x64 Edition DISC 1 (hereafter referred to as *Backup CD-ROM DISC 1*), and Microsoft Windows Server 2003 R2, Enterprise x64 Edition DISC 2 (x2) (hereafter referred to as *Windows Server 2003 R2 x64 Edition DISC 2*)
 - Microsoft Windows Server 2003 R2, Standard x64 Edition DISC 1 (hereafter referred to as Windows Server 2003 R2 x64 Edition DISC 1), and Microsoft Windows Server 2003 R2 Standard x64 Edition DISC 2 (x2) (hereafter referred to as Windows Server 2003 R2 x64 Edition DISC 2)
 - Microsoft Windows Server 2003 R2, Enterprise x64 Edition DISC 1 (hereafter referred to as *Windows Server 2003 R2 x64 Edition DISC 1*), and Microsoft Windows Server 2003 R2 Enterprise x64 Edition DISC 2 (x2) (hereafter referred to as *Windows Server 2003 R2 x64 Edition DISC 2*)
- Windows Server 2003 Editions Service Pack 2 (CD-ROM)
- > First Steps Guide
- Either of the following EXPRESSBUILDER
 - EXPRESSBUILDER DVD
 - Internal Flash Memory (If "Internal Flash Memory" is installed)

Note

- Prepare if needed:
 - Removable media for Windows OS parameter file
 - Flash FDD for creating OEM drivers (Windows Server 2003 x64 Edition)

	Use a Flash FDD as the removable media to create OEM drivers.			
Tips	 EXPRESSBUILDER may be distributed in Internal Flash Memory. EXPRESSBUILDER can be run from Internal Flash Memory if it is installed in the 			
	server.If you are using a server with Internal Flash Memory installed, you can install the			
	OS without using EVDDESSRI III DED DV/D			

OEM drivers are necessary if a RAID Controller or optional board is connected.

5.2.3 Setup procedure

This section describes the procedure for installing Windows Server 2003 R2 x64 Edition using the OS standard installer.

Note

Read through the items in *Chapter 1* (5.1 *Before Starting Setup*) prior to installing Windows.

- 1. Turn peripheral device power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select Os installation *** default ***.

	- Boot selection
Tool Menu Tool Menu	(Normal wode) (Redirection mode)
	Automatic select at 10 seconds

4. Select English on the language selection menu, and then click [OK].

?	Quest	ion					
EXPRESSBUILDERで使用する言語を選択してください。							
	Selec	t a language to us	se for the	EXPRESSBUIL	_DER.		
	0	日本語	۲	English			
	0	Français	0	Italiano			
	0	Deutsch	0	Español			
				1			
			ОК				

5. When the Windows PE software license agreement window appears, click [Yes].



Note

Unless you agree these terms, you cannot use EXPRESSBUILDER.

6. Select Setup this computer from Top Menu, of EXPRESSBUILDER, and then click [Next].

NEC	2	EXPRESSBUILDER Version 6.xx-xxx.xx(xxx)
To invoke each	unction, select the radio button, and then click [Next].	
If [Remove] is o	icked, you can remove USB devices inserted into this computer sa	fely.
	• Setup this computer	
	C Invoke various utilities	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ _{Next}	USB Remove

7. Set parameters on this menu according to your requirement.
□ When not using parameter file: Go to Step 8.
□ When using a parameter file: Go to Step 9.

Note When setting up again, parameter input via the wizard can be omitted by loading the saved parameter file.

8. If you do not use a parameter file, select an OS from the pull-down menu in [Install Windows], and click [Next].

On this dialog, select "Windows Server 2003 R2 x64 Edition" from the pull-down menu. \rightarrow Go to Step 10.

NE	C	EXPRESSBU Version 6. xx-	
To install an o If [Configure F If [Load a par	perating system, select an item in the listbox VAID system only] is selected, EXPRESSBUILE ameter file] is selected, you can set up the co	, and then click [Next]. ER only configures RAID system without OS installation mputer according to the parameter file.	1.
		Windows Server 2003 R2 x64 Edition 💌	
	C Configure RAID system only		
	C Load a parameter file		
	Васк	→ Next	Remove

9. If you use a parameter file, select [Load a parameter file] and click [Next]. Load a parameter file according to on-screen instructions.

NEC	-	EXPRESSBUILDER Version 6. xx - xxx (xxx)
To install an ope If [Configure RA If [Load a paran	rating system, select an item in the listbo ID system only] is selected, EXPRESSBUIL leter file] is selected, you can set up the c	x, and then click [Next]. DER only configures FAID system without OS installation. omputer according to the parameter file.
	C Install Windows	Windows Server 2003 R2 x64 Edition 💌
C	C Configure RAID system only	
	Back	→ Next ^{USB} * Remove

Confirm settings on Parameter Setup Menu as needed, then click [Next]. \rightarrow Go to Step 16.

NEC		EXPRESS Version	BUILDER
Set parameters for the setup. If [Settings] is clicked, you can change the param If [Save] is clicked, you can save the parameter t *** If "I" is displayed, you cannot proceed to the I	eters of the category. o a file. next step. Click [Settings] to :	set the parameters.	
RAID settings Skip Logical drive1 (148GB)	0	Default values Default Settings Skip
Windows settings User information	Network settings	Windows Components	Default
Skip Default settings	Default settings	Default settings	Settings
Application settings Skip Default settings	•••		Default Settings
Back	Next	Save	USB Remove
	J		

10. Set parameters required for setup.

Click [Settings] of the relevant category to change parameters.

NEC			EXPRESS Version	BUILDER
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you can *** If "I" is displayed, you	up. can change the parameter 1 save the parameter to a l cannot proceed to the next	s of the category. file. : step. Click [Settings] to s	et the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB)		0	Default values Default Settings
Windows settings	lieer information	Natwork sattings	Windows Components	Skip
Skip	Default settings	Default settings	Default settings	Settings
Application settings Skip	Applications installation Default settings			Default Settings
	Back	→ Next	Save	Remove

Click [Default] to restore the default values.

You can see the default values by clicking [Default values].

EXPR	Version 6. XX- XXX (XXX)
) set the parameters	s.
	Ø Default values
	Detault

10-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically. Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER 6. xx - xxx . xx (xxx)
Set parameters for the sel If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. I can change the parameter n save the parameter to a l cannot proceed to the next	s of the category. file. : step. Click [Settings] to s	et the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB)			Default Settings Skip
Windows settings Skip	User information Default settings	Network settings	Windows Components Default settings	Default Settings
Application settings	Applications installation Default settings	+		Default Settings
	Back	→ Next	G Save	Remove

When creating new logical drives

- (1) Click [Settings] in RAID settings.
- (2) Use the wizard to set up logical drives.

Important If you proceed with wizard, the existing RAID system is destructed and the contents of hard disk drive will be erased.

When skipping the creation of new logical drives

Click [Skip] in RAID settings.

11. Click [Settings] in Windows settings.



12. Click [Next] in the Windows settings wizard.

Wizard Follow the steps below If [Use OS standard ins standard installer.	to set the parameters necessary for Wind staller] is selected, you need to input parar	ows setup. neters step by step without t	his wizard by using the
	Start Set Windows preferences ↓ Set partition preferences ↓ Set user preferences ↓ Set network preferences ↓ Set component preferences ↓ Check/Exit	Use OS standard installer	1 / 8 Page
	Next		Cancel

13. Specify the Windows basic settings

The basic information window appears. Select Use OS standard installer, and then click [Next].

-		
Wizard		
If [Use OS standard installer] is s	elected, Windows is installed by using the standard in	staller contained in the OS
media, and applications such as E	SMPRO must be installed separately after Windows in	istallation.
If [Setup with EXPRESSBUILDER]	is selected, both Windows and applications can be in	stalled easily.
Basic information		
Operating System	· Windows Server 2003 B2 x64 Edition	
operating official	1 Mildono Sartar 2005 AL Xo T Estador	
Ise OS standard	installer	
Copy the OE	In anvers into the removable media	
Setup with EXPRE	ESSBUILDER	
Edition	: 💌	
Language	: 💌	
Time zone	: 💌	
		2 / 9 Page
Back N	ext	Cancel

If copying the OEM drivers to the removable media, select **Copy the OEM drivers into the removable** media.

Tips

If you copied the OEM drivers to a Flash FDD, format it to FAT16.

14. Confirm settings on the confirmation window, and click [Finish].

meter setting is completed. nish this wizard, click [Finish].	
Installed OS	: Windows Server 2003 R2 x64 Edition
(Use OS standard installer)	
Copy the OEM drivers	: Act
	0 / 0 Per
	9 / 9 Pag

15. Click [Next] on Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER
Set parameters for the setup. If [Settings] is clicked, you can chang If [Save] is clicked, you can save the *** If "!" is displayed, you cannot pro-	e the parameters of the parameter to a file. Iceed to the next step. (category. Click [Settings] to se	et the parameters.	
RAID settings RAID12di Logical dri	1 sk) ve1 (148GB)		0	Default values Default Settings Skip
Windows settings User i	nformation Ne	twork settings	Windows Components	Default
Skip Defau	It settings D	efault settings	Default settings	Settings
Application settings Skip Defau	ns installation It settings			Default Settings
E	lack 🗲 🗧	Next	Save	Remove

16. Confirm the summary of setup on the screen below, and click [Perform]. The server automatically restarts.

NEC	EXPRESSBUILDER Version 6.xx-xxx (xxx)
Ready to set up the computer. To start the setup, click [Perform].	
Steps Copying OEM drivers Changing a media Installing OS	Summary of setup RAID configuration Not configure Installed OS Windows Server 2003 R2 x54 Edition Copy OEM drivers Act
Back 🗲	Perform Remove
Note	 If you select the Copy insert a Flash FDD inter Do not remove the me

17. Continue setup according to on-screen message.

If the **Copy the OEM drivers to the removable media** checkbox is selected in step 13, the following window appears. Follow the onscreen instructions and continue the operation.

Question	
3	OEM drivers(XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
	[Message ID : F2000]
	Yes No

When the following message appears, set OS installation media, and click [OK].

Question	
	Insert the Backup OS disk into the drive.
?	
	[Message ID : H2×××]
	0K Cancel

18. The server automatically restarts.

To use OEM driver, change boot priority of Flash FDD on BIOS settings, after restarting the server. Select **Boot**, **Floppy Drive BBS priorities**, **Boot Option #1**, and then specify the Flash FDD used.

19. Run from the OS installation media.

If a bootable operating system is already installed on the hard disk drive, press <Enter> key while the message "Press any key to boot from CD or DVD..." is displayed on the top of the screen.

The boot sequence proceeds and the following message appears.

Windows Setup		
	Note	If this message does not appear, reboot the server and retry.

This step is unnecessary if no bootable operating system exists.

 If a RAID Controller or optional SCSI Controller is used, press <F6> key while either of the following messages is displayed. If not, go to step 27 without pressing <F6> key.

"Setup is inspecting your computer's hardware configuration" (on the top of the screen)

"Press F6 if you need to install a third party SCSI or RAID driver..." (on the bottom of the screen)

Tips
Note that nothing changes on the screen even when <F6> key is pressed.
If the OEM drivers list is not displayed at step 22,24 or 26, check the boot order of the Flash FDD on BIOS settings.

21. The following message appears.

Rindoze Setap
Setup could not determine the type of one or more mass storage devices installed in your system, or you have chosen to manually specify an adapter. Durrently, Setup will load support for the following mass storage devices(s):
<none></none>
* To specify additional SCSI adapters. CO-BOM drives, or special disk controllers for use with Windows, including those for which you have a device support disk from a mass storage device manufecturer, press S.
* If you do not have any device support disks from a mass storage device menufacturer, or do not want to specify additional mass storage devices for use with Windows, press EMTER.
S-Specify Additional Device ENTER-Continue F3-Exit

If N8103-149/150/151 RAID Controller is connected, press <S> key and go to step 22. If not, go to step 23.

22. Select the following from the driver list, and then press <Enter> key.

LSI MegaRAID SAS RAID Controller Driver

The screen shown in step 21 appears. Go to step 23.

- 23. If N8103-107 is connected, press <S> key and go to step 24. If not, go to step 25.
- 24. Select Adaptec Ultra320 SCSI Cards (Windows 64-bit), and then press <Enter> key.

Note

If the following message appears, press <S> key to proceed.

The driver you provided seems to be newer than the Windows default driver. Windows already has a driver that you can use for "Adaptec Ultra 320 SCSI Cards (Windows 64-bit)" Unless the device manufacturer prefers that you use the driver on the floppy disk, you should use the driver in Windows.

The screen shown in step 21 appears again. Go to step 25.

25. If N8103-104A is connected, press <S> key and go to step 26. If not, press <Enter> key and go to step 27.

- 26. Select LSI Fusion-MPT SAS Driver (Server 2003 x64), and then press <Enter> key. The screen shown in step 21 appears again. Press <Enter> key and go to step 27.
- 27. When the following message appears, press <Enter> key to start Windows setup.



The following screen is displayed for setting the partition of Windows.

If the partition created is shown as "G:", delete the partition "G:". If it is shown as "C:", you do not need to delete the partition.





Create a partition again by pressing <C> key.

The creation of partition completes when the new partition is created in drive "C:", as shown below.



Important
<u>A partition in which you install Windows must be created in drive "C:".</u>
When installing Windows Server 2003 R2 Edition to a disk of over 2,097,152 MB (2 TB), the partition size can only be set to 2,097,152 MB or less.

Tips

The server automatically restarts after copying files. Do not remove the CD-ROM and the Flash FDD.

After this, follow the onscreen instructions to continue setup. For details, refer to "*First Step Guide*" supplied with the OS.

Tips

When a driver is selected from the drive list, a message indicating that the driver has not passed logo testing might appear, but this does not affect the setup. Click [OK] to continue setup.

- 28. The server automatically restarts after installing Windows Server 2003 R2 x64 Edition.
- 29. The Windows Setup dialog box appears after log on.

r in close	s Setup	>
6	Windows Setup is not complete. We recommend that you continue Setup so that you can install the additional components that are available in this version of the Windows Server operating system.	
	For more information about the new components, see the documentation on Windows Server CD 2.	
	To continue Setup, insert Windows Server CD 2, or specify the location where the Windows Server CD 2 files are stored, and then click DK.	
	Location of Windows Server CD 2 files:	
	D:\ <u>B</u> rowse	

Important Be sure to install the Windows Server 2003 R2 x64 Edition DISC 2 according to the following steps even if the dialog box does not appear.

- 30. Insert the Windows Server 2003 R2 x64 Edition DISC 2 into the optical disk drive. Check the settings, and then click [OK].
- 31. When the installation procedure completes, remove the Windows Server 2003 R2 x64 Edition DISC 2 from the optical disk drive and then restart the server.
- 32. Install Starter Pack by referring to Chapter 1 (5.3 Installing Starter Pack (Service Pack)).
- 33. Install drivers and specify detailed settings by referring to Chapter 1 (5.4 Setting Up Device Drivers).
- 34. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 35. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with OS standard installer is now complete.

5.3 Installing Starter Pack

After installing Windows Server 2003 R2 x64 Edition, follow the steps below to install Starter Pack and Windows x64 hotfix: KB921411.

Starter Pack contains drivers customized for this server. Be sure to apply Starter Pack before running the system.

Important	 Also install Starter Pack and Windows x64 hotfix: KB921411 in the following cases:
	 The system configurations have changed (when internal option devices have been added or removed) If a dialog box prompting you to restart appears after changing system configurations, click [No] and then update the system.
	 If the system was restored using a restore process If a system has been restored using the backup tool
	Be sure to install Service Pack 2 (CD-ROM) from Starter Pack.
	 If you used a Windows Server 2003 x64 Edition CD-ROM including Service Pack 2 for installation, you do not have to install Service Pack 2 again.
Note	Before applying a Service Pack, make sure that Windows Server 2003 R2 is displayed in the system properties window.
Tips	If you used the Windows Server 2003 x64 Edition CD-ROM including Service Pack 2 for installation, you do not have to install Windows x64 hotfix: KB921411 again.

Install Starter Pack after applying Windows x64 hotfix: KB921411.

If Windows Server 2003 R2 x64 Edition is operated in the following environment, the system might halt while returning from the hibernation state:

- The system is in a multi-processor configuration
- Service Pack 2 has not been installed

To set hibernation, apply Service Pack 2 or KB902839 hotfix*.

* KB902839 can be obtained from the following website: http://support.microsoft.com/kb/902839/en-us

5.3.1 Procedures for applying Starter Pack and Windows x64 hotfix (KB) 921411

(1) When using EXPRESSBUILDER DVD

- 1. Log on to the system with a user account that has administrative privileges (such as Administrator).
- Insert EXPRESSBUILDER DVD into the optical disk drive. If you installed the Windows Server 2003 with Service Pack 2, go to step 9.
- 3. When the menu appears automatically, close it.
- 4. Select Run from the Start menu, and then execute the following command: *Optical disk drive*:\021\win\winnt\w2k3amd\qfe\enu\kb921411.exe
- 5. When the following message appears, click [Next].

Software Update Installatio	n Wizard	×
Ð	Use this wizard to install the following software update: Hotfix for Windows x64 (KB921411)	
	Before you install this update, we recommend that you: - Back up your system - Close all open programs You might need to restart your computer after you complete this update. To continue, click Next.	
	< Back (<u>Next</u>) Cancel	

After this, continue installation according to the onscreen messages.

6. When the following message appears, click [Finish] and remove EXPRESSBUILDER DVD before restarting.

Software Update Installation Wizard		
Ð	Completing the Hotfix for Windows x64 (KB921411) Installation Wizard	
	You have successfully completed the KB921411 Setup Wizard.	
	To apply the changes, the wizard has to restart Windows. To restart Windows automatically, click Finish. If you want to restart hater, select the Do not restart now check box, and then click Finish.	
	< <u>B</u> ack Finish Cancel	

- 7. Log on to the system with a user account that has administrative privileges (such as Administrator).
- 8. Insert EXPRESSBUILDER DVD into the optical disk drive.

9. When the following menu appears, click Setup Windows to open the short-cut menu, and then select Install Starter Pack.



10. Read the setup message, and then click [OK].



Wait until the message appears without attempting any further operation. This may take several minutes.

Starter Pack installation starts.



The dialog box shown below might appear while installing Starter Pack, but Important this does not affect the installation. This dialog box disappears after several



11. When the following message appears, Starter Pack installation is complete.

Starter Pack 🔀			
2	Installing Starter Pack was finished. The setup will install Service Pack continuously.		
	If you want to continue installing, click [Yes]. If you want to stop installing, click [No].		
	Yes No		

To apply the Service Pack, click [Yes] and go to step 12.

To not apply the Service Pack, click [No] and go to step 14.

Important If you are using OS installation media that does not contain Service Pack 2, click [Yes]. You must apply Service Pack 2. If Starter Pack is being reinstalled in an environment where Service Pack 2 has already been installed, you do not need to reinstall Service Pack 2.

12. When the following message appears, click [Yes].

Installing	Service Pack 🔀
?	Installing Service Pack.
~	If you want to continue installing, click [Yes] and select Service Pack (browse the file like an "e.g."). If you want to stop installing, click [No].
	e.g. XXXXXXXXXXXXXXXXXXXXX-ENU.EXE
	<u>Y</u> es <u>N</u> o

13. When the following dialog box appears, specify the Service Pack to apply and then click [Open].



Tips	• If you use a Service Pack CD-ROM, when the dialog box above appears, remove
	EXPRESSBUILDER DVD from the optical disk drive and then insert the Service
	Pack CD-ROM.
	• The extension of the Service Pack applicable to Starter Pack is *.exe or *.msu.
	No other Service Pack files can be installed.

Installation of the specified Service Pack starts.

When the Service Pack installation completion window appears, restart the system.

14. When the following message prompts you to restart the server , click [Yes] and remove media from the optical disk drive before restarting.

Starter Pack 🔀			
?	The setup does not install Service Pack. Do you want to reboot?		
	Yes <u>N</u> o		

Installation of Starter Pack is now complete.

- (2) When using Internal Flash Memory (Required only when optional "Internal Flash Memory" is installed)
 - 1. After installing the operating system, restart the server.
 - 2. When "Press <F2> Setup, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network" appears during POST, press <F3> key.

• Be sure to remove bootable media from the optical disk drive.

3. When the following message appears, select Os installation *** default ***.



4. Select English on the language selection menu, and then click [OK].

?	Que	estior	ı			
	EX	PRE	SSBUILDERで使	を用する言	語を選択してく	ださい。
	Se	lect a	language to u	ise for the	EXPRESSBUI	DER.
		0	日本語	o	English	
		0	Français	0	Italiano	
		0	Deutsch	0	Español	
			_		-	
				OK		

5. When the Windows PE software license agreement window appears, click [Yes].



Note

Unless you agree these terms, you cannot use EXPRESSBUILDER.

6. Select Invoke various utilities from Top Menu of EXPRESSBUILDER, and then click [Next].

NE	C	EXPRESSBUILDER Version 6.3xx-3xx(3xx)
To invoke ea	ich function, select the radio button, and then click [Next].	
If [Remove]	is clicked, you can remove USB devices inserted into this compute	er safely.
	O Setup this computer	
	Invoke various utilities	
C	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ _{Next}	USB Remove

7. Select Install Starter Pack to installed Windows and then click [Next].

NEC	EXPRESSBUILDER Version 6. xx - xxx (xxx)
Various utilities can be individually invoked from this menu. Select the utility, and then click [Next].	
Install Starter pack to installed Wir Save or resore Krdb commonwork	udows
C Run a file directly	
Back 🗲 🔶	Next USB Remove

8. Select the installed Windows from the drop-down list, and then click [Perform].



9. Read the message and then click [Yes].

?	Question	
		EXPRESSBUILDER copies Starter Pack into the partition where Windows has been installed.
	?	Current disk space : XXXXX MB Required disk space: xXMB
		Yes No

Note

The following window will appear if Starter Pack is already installed. Read the message, and then click [Yes].

	Starter Pack is already stored in the partition.
?	If [OK] is selected, delete the stored Starter Pack and install the new one.
	[Message ID : M2001]

10. After copying the files, the following window appears. Click [Close].



Note

The server restarts.

You do not need to press <F3> key at this time.

11. Log on to the system with a user account that has administrative privileges (such as Administrator).

Important	The screen as shown below appears when Windows starts. Do	not click [OK]				
	on this screen. Proceed to Step 12.					
	Installing Starter Pack.					
	Preparation of Starter Pack was completed.					
	Click [OK] to continue installing Starter Pack.					
	OK					
	If you click [OK], "KB921411" will not be applied.					
	perform from Step 1 of (2) When using Internal Flash Memory.	I Fack. Inen,				

If you installed the Windows Server 2003 with Service Pack 2, go to step 15.

12. Select **Run** from the **Start** menu, and then execute the following command: *System drive*:\StartPKG\w2k3amd\qfe\enu\kb921411.exe

13. When the following message appears, click [Next].

Software Update Installation	ı Wizard	×
Ð	Use this wizard to install the following software update: Hotfix for Windows x64 (KB921411)	
	Before you install this update, we recommend that you: - Back up your system - Close all open programs You might need to restart your computer after you complete this update. To continue, click Next.	
	< Back Cancel	

After this, continue installation according to the onscreen messages.

14. When the following message appears, click [Finish] to restart the system.



15. After Windows starts, the following window appears. Click [OK].



16. Read the message, and then click [OK].



Although it may take several minutes for the above window to appear, wait for the window to appear without attempting any further operation.

Installation of Starter Pack starts.



Note

The following progress message appears while Starter Pack is being installed. Wait a moment until the update is complete.

installing Starter Pack.	
Please wait for a while	
Checking the OS information. >> Updating drivers. Performing the end process of Starter Pack.	

When the following message appears, Starter Pack installation is complete.

Starter Pack 🔀	
2	Installing Starter Pack was finished. The setup will install Service Pack continuously.
	If you want to continue installing, click [Yes]. If you want to stop installing, click [No].
	<u>Yes</u> <u>N</u> o

To apply the Service Pack, click [Yes] and go to step 17.

To not apply the Service Pack, click [No] and go to step 19.

ImportantIf you are using OS installation media that does not contain Service Pack 2,
click [Yes]. You must apply Service Pack 2.If Starter Pack is being reinstalled in an environment where Service Pack 2
has already been installed, you do not need to reinstall Service Pack 2.

17. When the following message appears, click [Yes].

Installing	Service Pack 🔀
2	Installing Service Pack.
~	If you want to continue installing, click [Yes] and select Service Pack (browse the file like an "e.g."). If you want to stop installing, click [No].
	e.g. XXXXXXXXXXXXXXXXXXXXX-ENU.EXE
	<u>Y</u> es <u>N</u> o

18. When the following dialog box appears, specify the Service Pack to install and then click [Open].

Open		<u>? ×</u>
Look jn:	🖙 Local Disk (C:) 💌 🔶 📸 🗰 🗸	
My Recent Documents Desktop My Documents My Computer	Documents and Settings Program Files WINDOWS Wmpub	
My Network	File name:	<u>O</u> pen
Places	Files of type: Execute file(".exe)	Cancel



Installation of the specified Service Pack starts. When the Service Pack installation completion window appears, restart the system.

19. When the following message prompts you to restart the system, click [Yes].

Starter Pack 🔀			
2	The setup does not install Service Pack. Do you want to reboot?		
	Yes <u>N</u> o		

Installation of Starter Pack is now complete.
5.3.2 Recovery process

If Windows x64 hotfix: KB921411 is not applied before installing Starter Pack, "!" might be displayed on the USB root hub in the Device Manager window.

In this case, apply Windows x64 hotfix: KB921411 and install Starter Pack according to the procedure below.

- 1. Start Windows Explorer, and then select Folder Options from the Tool menu.
- 2. In the Advanced settings area on the View tab, select the Show hidden files and folders option button for Hidden files and folders under Files and Folders.
- 3. Clear the following check boxes under Files and Folders, and then click [OK].
 - Hide extensions for known file types
 - Hide protected operating system files (recommended)

When the message "You have chosen to display protected operating system files..." appears, click [Yes].

4. Check the files.

Open the drivers folder under *System drive*: \WINDOWS\system32, and make sure that usbhub.sys and usbport.sys are stored in the folder.

If a file is missing, copy the target file(s) according to the procedure below.

- (1) Open the dllcache folder under System drive:\WINDOWS\system32.
- (2) Copy the usbhub.sys and/or usbport.sys to the drivers folder under *System* drive:\WINDOWS\system32.
- 5. Restart the system.
- 6. Refer to Chapter 1 (5.3.1 Procedures for applying Starter Pack and Windows x64 hotfix (KB) 921411) to install Starter Pack.
- 7. Restart the system.

The recovery process is now complete.

Note

If the system files and hidden files still do not display, select the check boxes that were cleared in step 3.

5.4 Setting Up Device Drivers

Install and set up device drivers provided for the standard configuration. For details regarding the installation and setup of an optional device driver, refer to the manual supplied with the optional device.

5.4.1 Installing the LAN and BACS (teaming) drivers

(1) LAN and BACS drivers

If the OS standard installer is used for setup, install Starter Pack to install the LAN and BACS driver.

Important	 To use the BACS, Microsoft .NET Framework Version 2.0 must be installed. To install Microsoft .NET Framework 2.0, insert EXPRESSBUILDER DVD to the optical disk drive, select Setup Windows and then Install the .NET Framework Ver2.0 Redistributable Package(x64) from the autorun menu. WOL is supported by the standard network adapters only.
Note	 To change the LAN or BACS driver settings, log on to the system from a local console using an administrator's account. Remotely changing the settings by using the operating system's remote desktop feature is not supported. Be sure to select the Internet Protocol (TCP/IP) check box when specifying an IP address

(2) Optional LAN board / Riser Card

This server supports the following optional LAN boards / Riser Card. The drivers for LAN boards / Riser Card are automatically installed using the OS plug-and-play function.

Optional LAN boards: N8104-132/138

Optional Riser Card: N8104-135

If [! Ethernet Controller] is displayed in Device Manager after LAN card or riser card has been installed, you need to install the driver in the following procedure.

1. Set EXPRESSBUILDER DVD in optical disk drive.

When the Autorun menu appears, close the window.

Tips

If you apply Starter Pack from Internal Flash Memory, you do not need to set EXPRESSBUILDER DVD.

2. Launch Device Manager, and double-click [! Ethernet Controller].

The [Ethernet Controller Properties] appears.

3. Click [Update Driver] in [Driver] tab.

[Hardware Update Wizard] appears.

- 4. Select [No, do not connect now.], and click [Next].
- 5. Select [Install from a list or specific location], and click [Next].

6. Select [Search for the best driver in these locations], and [Include this location in the search]. Enter the following location and click [Next].

• When using EXPRESSBUILDER DVD:

Optical disk drive: \021\win\winnt\w2k3amd\lan\bcom\drvinst\14060401\x64\win2003\x64

• When applying Starter Pack from Internal Flash Memory:

System drive: \StartPKG\w2k3amd\lan\bcom\drvinst\14060401\x64\win2003\x64

Note Be sure to uncheck the [Search removable media (floppy, CD-ROM...)] check box, if checked.

- 7. Click [Finish].
- 8. When you have applied LAN driver to every [! Ethernet Controller], remove EXPRESSBUILDER DVD from the optical disk drive, and restart the system.

Installing Starter Pack now completes.

Important [! Ethernet Controller] may not be displayed in Device Manager after LAN card or riser card has been installed. In such a case, the LAN driver is installed automatically. Make sure that the network adapter name for LAN card/riser card is found on [(Network Adapter Name)] under [Network Adapters] tab.

(3) Network adapter name

After installing the LAN drivers, the following network adapter names will be displayed by the Device Manager or BACS.

Network adapters for the standard configuration Broadcom NetXtreme Gigabit Ethernet #xx*

If connecting with an optional LAN board:

[N8104-132/138] Broadcom NetXtreme Gigabit Ethernet #xx*

If connecting with an optional Riser Card:

[N8104-135] Broadcom NetXtreme Gigabit Ethernet #xx*

* If there are adapters with the same name, a different identification number will be assigned to xx.

5.4.2 Setting up LAN drivers

(1) Setting link speed

The transfer rate and duplex mode of the network adapter must be the same as those of the switching hub. Follow the procedure below to specify the transfer rate and duplex mode.

- 1. Open the **Device Manager**.
- 2. Expand **Network Adapters**, and then double-click the name of the network adapter you want to set. The properties of the network adapter will be displayed.
- 3. Select the **Advanced** tab, and then set the **Speed & Duplex** values to the same as those of the switching hub.
- 4. Click [OK] in the Network Adapter Properties dialog box.
- 5. Restart the system.

Network adapter setup is now complete.

5.4.3 Setting up team/LiveLink

Note

- You must set up LiveLink when setting up a team. Teams that are not configured for LiveLink are not supported.
 - When deleting the team, refer to *Chapter 1 (5.4.3 Setting up team/LiveLink) (4) Procedure for deleting team.* When replacing the motherboard or a LAN board, follow these steps to remove the team and create it again after replacement.
 - Be sure to specify the same Jumbo Mtu (Jumbo Packet) setting to all the adapters that compose a team

(1) Team types

The following team types are supported.

resumes the communication.

- Smart Load Balancing and Failover (without Standby Member) All adapters that compose the team perform communication.
 If a communication failure occurs on an adapter, other adapters that compose the team continue the communication.
 When the adapter on which the communication failure occurred recovers, it joins the team again and
- Smart Load Balancing (Auto-Failback Disable) (with Standby Member) Among the adapters that compose the team, primary adapters except the standby member perform communication.

If a communication failure occurs, the standby member continues the communication.

When the adapter on which the communication failure occurred recovers, it joints the team again and the standby adapter returns to the standby state.

(2) LiveLink

LiveLink is a function that detects communication route failures of adapters. It periodically investigates the communication status of specified destinations (IP address).

Link packets are sent from each adapter within a team.

If a response to the transmission of a link packet within the specified range is not detected, it is identified as a communication route failure and adapter communication is stopped.

When a response to the submission of a link packet is detected, communication LiveLink identifies communication as having been recovered, and communication using that adapter automatically resumes.

Note

You must set up LiveLink when you create a team.

(3) Setting up team/LiveLink

Note	The team must be composed of two adapters.
	Possible combinations of network adapters that compose the team are as
	follows.
	 Between standard network adapters.
	 Between LAN boards and Riser Card.
	 A standard network adapter and LAN boards / Riser Card
Tips	To edit a team, right-click on the BACS team, and then select Edit TEAM.
	Then refer to step 3 and later in <i>Chapter 1 (5.4.3 Setting up team/LiveLink) - (3)</i> Setting up team/LiveLink to edit the team.

- 1. Double-click the **Broadcom Control Suite3** icon on the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Select **Team Management** from the left menu, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.

oadcom Advanced Control Suite 3		
e <u>V</u> iew <u>T</u> ools T <u>e</u> ams <u>H</u> elp		
ver View	🖳 🥖 Configurations	Statistics 🗘 Information 🗸 🔻
n Management	🖂 Vital Signs	
Teams	MAC Address	6C-F0-49-56-97-8A
uuru (III) Vinessianadi Adaptera aaaaaaaaaaaaaaaaaaaaaaaaaa		6C-F0-49-56-97-8A
[0017] Recordsom NatVisama Circubit Ethornot	IP Address	169.254.158.110
Add 1	o a Team V5 IP Address	fe80::54ec:8ea0:930:9e6
[0018] Broadcom NetXtreme Gigabit Ethe Creat	e a Team hkeStatus	Up
Mana	ge Teams	Full
Creat	e a VLAN 🔤 d (in Mbps)	1000
	Offoad Capabilities	LSO,CO,RSS
	Mtu	1500
	Driver Information	
	Driver Status	Loaded
	Driver Name	b57nd60a.sys
	Driver Version	14.6.0.7
	Driver Date	1/26/2011
	Resources	
	Bus Type	PCI-E (1X)
	Bus Number	4
Device Management Team Management	Vital Signs The Vital Signs section of the II network adapters that are inst adapter and general network of	nformation tab has useful information ab alled in your system, such as the link sta onmectivity.

The Broadcom Teaming wizard appears.

3. Click [Next].



Note

Do not use Expert Mode.

4. Enter any name into the team name entry column, and then click [Next].



5. Make sure that the following team type is selected, and then click [Next]. Team type: Smart Load Balancing (TM) and Failover (SLB)



6. Select the adapters that compose the team, click [Add] to add them to the **Team Members** area, and then click [Next].

🖶 Broadcom Teaming Wizard				?	×
Creating/Modifying a Team: Assigning Te Specify which adapters to include in the t Include adapters that you wish to set for t	eam Mem eam. the stand	bers Iby role.		BROADC	ом
Available Adapters	TOF	1.50	l co	BSS	
[0018] Broadcom NetXtreme Gigabit Eth	No	Yes	Yes	Yes	
↓				<u> </u>	
Add 🦆 🗌	Remove	11			
Team Members	TOE	LSO	CO	RSS	
[0017] Broadcom NetXtreme Gigabit Eth_	No	Yes	Yes	Yes	
•				F	
Team Offload Capabilities		LSO, CO	, RSS		
Team Mtu	150	0			
Click here for more information about confi	guring tea	aming.			
			Previ	ew 💽	
Gancel		< Bac	*	Next >	

- 7. Proceed according to your desired team type.
 - Smart Load Balancing and Failover (without Standby Member)
 - (1) Select **Do not configure a standby member**.
 - (2) Click [Next].

eating/Modifying a Team: Designating a Standby Member you want to designate an available adapter as a standby mber?	BROADCOM	
-Optionally select if you want a standby member for the team.		
 Do not configure a standby member. Use the following member as a standby member: 		
[0017] Broadcom NetXtreme Gigabit Ethernet	<u>-</u>	
Enable Auto-Fallback Disable mode		
Click here for information about designating a standby member and en Auto-Fallback Disable mode.	abling_	
-		
Gancel K Back	Next >	10
	• you want to designate an available adapter as a standby member? • Optionally select if you want a standby member for the team. • Do not configure a standby member. • Use the following member as a standby member: [0017] Broadcom Net/Kreme Gigabit Ethernet • Enable Auto-Fallback Disable mode 2lick here for information about designating a standby member and en Auto-Fallback Disable mode. Pre	you want to designate an available adapter as a standby metr? Optionally select if you want a standby member for the team. Optionally select if you want a standby member for the team. Out configure a standby member. Use the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member and enabling. Out of the following member and enabling. Preview Qancel Cancel Cancel

- Smart Load Balancing (Auto-Failback Disable) (with Standby Member)
 - (1) Select Use the following member as a standby member.
 - (2) Select the adapter that is to be a standby member from the drop-down list.
 - (3) Select Enable Auto-Failback Disable mode.
 - (4) Click [Next].

🔜 Broadcom Teaming Wizard	<u>?×</u>	
Creating/Modifying a Team: Designating a Standby Member Do you want to designate an available adapter as a standby member?	BROADCOM.	
Optionally select if you want a standby member for the team.		
(1) C Use the following member as a standby member. (2) (0017) Broadcom NetXtreme Glashit Ethernet. (3) V Enable Auto-Fallback Disable mode.		
Lick here for information about designating a standby member and en Auto-Falback Disable mode.	abling_	
Pre	eview	(1
		(4

Note

Enable Auto-Failback Disable mode is cleared while editing the team. Select it again.

8. Select Yes for Configure LiveLink?, and then click [Next].

🔡 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Configuring LiveLink Do you want to configure LiveLink?	BROADCOM.
Configure LiveLink?	
LiveLink detects loss of network connectivity beyond the services traffic only through team members that have a live lively lively through team members.	vitch and nk.
Click here for more information about configuring teaming,	
Pres	view
<u>C</u> ancel < Back	Next >

You can use the default setting for Probe interval and Probe maximum retries. If you change these
values, select a value from each drop-down list, click the target probe (Probe Target xx), and then click
[Edit Target IP Address...].

🔜 Broadcom Teaming Wiza	rd		? ×
Creating/Modifying a Tear Configure LiveLink(TM) at	n: Configuring Live tributes.	Link (continued)	BROADCOM
Probe interval (seconds): Probe maximum retries: Probe VLAN ID (Optional:	0 - (
Target Probe Target 1 Probe Target 2 Probe Target 3 Probe Target 4		IP Address	
At least one Liv	Edit Target IP A eLink probe target mu nation about configurin	ddress Ist be specified. I <u>g teaming</u> ,	Preview
	<u>C</u> ancel	< Back	Next >

Tips

- The setting range of Probe interval (link packet transmission interval) is 1 to 60 (units: seconds).
- The setting range of Probe maximum retries (link packet retry count) is 1 to 10 (times).
- Switching a path upon detection of a communication path error by LiveLink takes (Probe maximum retries + 1) x Probe interval (seconds) at maximum.
 If an optional LAN board detects that a link is down, failover occurs immediately after the link goes down. It takes the time specified for Probe interval (seconds) to recover from the link going down.
- 10. In the Target xx text box, enter the IP address of the alive monitoring server, and then click [OK].



Note

- Target xx must be the same broadcast domain as that specified for the data communication IP and LiveLink communication IP (described in step 13). Specify an IP address that exists on the network and with which communication is possible.
- If communication with the IP address specified in *Target xx* is not possible, the team will also be unable to communicate. It is therefore recommended that you specify multiple IP addresses using *Probe Target*. Up to four IP addresses can be specified.

11. Click [Next].



12. Select an adapter from the Team Members area, and then click [Edit Member IP Address...].

🔜 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Configuring LiveLink (continued) Configure the IP address for each team member.	BROADCOM
TeSiff Mehibers IPv4 Addre [0017] Broadcom NetXtreme Gigabit Ethernet [0018] Broadcom NetXtreme Gigabit Ethernet #2 4 Edit Member IP Address.	IP∨6 Addr
Every member must have a static IP address.	
Click here for more information about configuring teaming, Pre	wiew
	Next >

13. Enter the IP address used for LiveLink communication, and then click [OK].

LiveLink Ca	nfiguration	•			X
-IP Setting					
Name:	[0017] Broa	adcom Net>	(treme Gigabi	it Ethernet	
IPv4 Addre	:88				
IP∨6 Addre	SS				
	ОК		<u>C</u> ancel		

Note

Be sure to specify an IP address for LiveLink communication for all the adapters that compose the team. The address specified here is the IP address for LiveLink communication. Specify a different IP address for data communication.
For *Target xx*, specify an IP address that is unique on the network and with which communication is possible.

14. Click [Next].



15. Make sure that Skip manage VLAN is selected under Manage VLAN, and then click [Next].

Broadcom Teaming Wizard Creating/Modifying a VLAN: Configure VLAN Support Specify whether you want to create or delete a VLAN.	
Manage VLAN	
C Add VLAN C Edir VLAN C Skip manace VLAN	
	Preview
<u>C</u> ancel < Back	Next >

16. Make sure that **Commit changes to system and Exit the wizard** is selected under **Commit changes**, and then click [Finish].



17. Restart the system.

- 18. After the system starts, follow step 1 to start **Broadcom Control Suite3** and confirm that a team has been created. Confirm the team settings on the **Information** window to the right.
 - Smart Load Balancing and Failover (without Standby Member)

plorer View	📮 🚦 🗘 Information 🎶 Configura	tions 🕼 Statistics 📃 🔹
eam Management	• • • • • • • • • • • • • • • • • • •	
	Team Properties	
E Ream 1	Team Name	Team 1
BASP Virtual Adapters	Team Type	Smart Load Balancing(TM) and Failov
	Team Offload Capabilities	LSO, CO, RSS
I ream I ([0021] BASP virtual Adapter)	I eam Mtu	1500
😑 📂 Primary Adapters	Driver Name	Basp.sys
[10007] Broadcom NetXtreme Gigabit Ethernet	Driver version	1.4.6
[00.10] Broadcom NetYtreme Gigabit Ethernet #2	Driver Date	2010/12/21
to a ground a state of the stat	Probe Interval	2
Unassigned Adapters	Probe Max Retries	3
	Probe Vian ID	100 100 100 10
	Probe Target 1	100.100.100.10
	Probe Target 2	100.100.100.20
	Probe Target 4	100.100.100.30
	Probe Max Retries	
	Probe Max Retries	
Device Management		
R Team Management		
	-	

- Smart Load Balancing (Auto-Failback Disable) (with Standby Member)

Image: Construction of the construc	xplurer view Team Management	Unformation Configurations	Statistics
Team Name Team 1 Team 1 (10021] BASP Virtual Adapters Team 1 (10021] BASP Virtual Adapters Image: Standay Adapters Image: Standay Adapters	E Teams	Team Properties	
Device Management	Team 1 Team 1 Team 1 ((0021) BASP Virtual Adapter) Primary Adapters Primary Adapters Toology Adapters Standby Adapters (0007) Broadcom NetXtreme Gigabit Ethernet Unassigned Adapters	Team Name Team Type Team Mode Team Offload Capabilities Team Mu Driver Name Driver Version Driver Date Probe Interval Probe Max Retries Probe Van ID Probe Target 1 Probe Target 2 Probe Target 4	Team 1 SLB (Auto-Falback Disable) Primary LSO, CO, RSS 1500 Basp.sys 1.4.6 2010/12/21 2 5 0 100.100.100.100.10 100.100.100.20 100.100.100.30 100.100.100.40
		Team Properties Displays information about the team.	

Team setup is now complete.

(4) Procedure for deleting team

Note

You must delete teams from Broadcom Control Suite3. You cannot delete the team from the team adapter displayed in the Device Manager.

- 1. Double-click **Broadcom Control Suite3** in the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Click **Team Management** from the left menu, right-click the team name under **Teams**, and then select **Delete Team** from the short-cut menu.

w^a Broadcom Advanced Control Suite 3 <u>F</u> ile <u>V</u> iew <u>T</u> ools T <u>e</u> ams <u>H</u> elp				- 0	×
Explorer View		Information Provide Configurations	Statistic	s 🔻	0
Team Management					Q
Em. See Teams		Team Properties			onte
		Team Name		Team 1	X
Edit Team		Team Type		Smart Load	Sie
🖬 🚍 🗤 🥬 🗛 🛛 Delete Team		Team Offload Capabilities		LSO, CO, R	2
Add VLAN P Virtual Adapter)		Team Mtu		1500	
Pri Hallback		Driver Name		Basp.sys	
[100 19] Broadcon NotVirona Cirabit Ethernal	••	Driver Version		1.4.6	
		Driver Date		2010/12/21	
▲	T	eam Properties			
 Device Management	Di	splays information about the team.			
Team Management	8				
-					
BROADCOM.		BA		5	7

Tips

When the message below appears, select [Yes]. "The selected team will be deleted from system, do you want to proceed? NOTE: Applying the changes will temporarily interrupt the

network connection. The process may take several minutes and the connection will resume afterwards."

3. Insert EXPRESSBUILDER DVD into the optical disk drive. If an autorun menu appears, close the menu window.

Important You do not have to insert EXPRESSBUILDER DVD if Starter Pack was installed from Internal Flash Memory. Proceed to the next step.

- 4. Double-click addlvlanstats.vbs in the following folder.
 - When using EXPRESSBUILDER DVD: Optical disk drive:\021\win\winnt\w2k3amd\lan
 - If Starter Pack was installed from Internal Flash Memory: *System drive*:\StartPKG\w2k3amd\lan

5. When the following message appears, click [OK].



6. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Team deletion is now complete.

5.4.4 When using a SCSI controller (N8103-107)

The driver for SCSI controller is installed when you apply "Starter Pack".

5.4.5 When using a SAS controller (N8103-104A/142)

The driver for SAS controller is installed when you apply "Starter Pack".

5.4.6 When using a RAID Controller (N8103-160)

The driver for RAID Controller is installed when you apply "Starter Pack". Note, however, If RAID Controller (N8103-149/150/151/160) is already used, the driver is automatically installed.

5.4.7 Graphics accelerator driver

The graphics accelerator driver for standard configurations is installed when Starter Pack is installed from EXPRESSBUILDER.

To reinstall drivers separately, complete the following steps.

1. Insert EXPRESSBUILDER DVD into the optical disk drive. If an autorun menu appears, close the menu window.

Tips

You do not have to insert EXPRESSBUILDER DVD if Starter Pack was installed from Internal Flash Memory.

- 2. From the Start menu, point to All programs, Accessories, and then select Explorer.
- 3. Double-click the install.bat icon in the following folder.

```
When using EXPRESSBUILDER DVD:
Optical disk drive:\021\win\winnt\w2k3amd\video
```

If Starter Pack was installed from Internal Flash Memory: System drive:\StartPKG\w2k3amd\video

- You will be prompted to confirm the End User License Agreement during this process. Click the [ACCEPT] button and continue.
- 4. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Graphic accelerator driver installation is now complete.

5.5 Installing the Bundled Software

The supplied EXPRESSBUILDER DVD contains the server monitoring software NEC ESMPRO Agent and system management software NEC ESMPRO Manager. Refer to *Chapter 2 Installing the Bundled Software* to install the software separately.

5.6 **License Authentication**

To use Windows Server 2003 R2 x64 Edition, the license must be authenticated in advance. Following describes the license authentication procedure.

Tips

Following this procedure is not required if you use Backup CD-ROM for installation.

Select Run from the Start menu. 1.

> Enter the following to the Open text box, and then click [OK]. oobe/msoobe /a



2. When the following message appears, click [Next].



The following message appears.

Generating new Installation ID.

Follow the instructions in the following message to start the license authentication process. 3.



Windows activation is now complete.

5.7 Installation When Multiple Logical Drives Exist

Before starting installation, backup data for future use in case of data loss.

(1) Installation process

- 1. Follow the steps to start installation with OS standard installer.
- When the following message appears, select the partition to which you want to set up the operating system.

The following list shows the existing partitions and unpartitioned space on this computer. Use the UP and DOWN ARROW keys to select an item in the list.

Important You cannot edit the drive letters for the system volume or boot volume after setup is complete. Make sure that the drive letters assigned in this window are correct, and then proceed with setup.

3. Follow the steps to proceed with installation with OS standard installer.

Tips

The drive letter might change after installation. If you want to change the drive letter, use the procedure shown in *Changing drive letter assignments* below.

(2) Changing drive letter assignments

To change the drive letter, follow the steps below. But these steps cannot change drive letter assignments for the system volume or boot volume. If you want to change them, re-install the Windows.

- 1. From the Start menu, right-click My Computer and then select Management. Next, launch Computer Management.
- 2. From the window on the left, select Disk Management.
- 3. Right-click the volume whose drive letter you want to change, and then select **Change drive letter and** path.
- 4. Click [Change].
- 5. Click [Assign next drive letter], and then select the drive letter you want to assign.
- 6. Click [OK].
- 7. When the following message appears, read the contents and then click [OK].

Changing the drive letter of a volume might cause programs to no longer run. Are you sure you want to change this drive letter?

8. Close the Computer Management window.

6. Setting Up Windows Server 2003

Set up Windows Server 2003 and the system.

6.1 Before Starting Setup

Read through the cautions explained here before starting setup.



: Confirm during Setup with EXPRESSBUILDER

OS

Confirm during Setup with OS standard installer

		(1/3
Setup		Items to confirm
ЕВ	Windows family	 The following editions of the Windows Server 2003 family may be installed. Windows Server 2003 R2 Standard Edition Windows Server 2003 R2 Enterprise Edition Inquiries about installing other editions may be made at your sales dealer or maintenance service company. For information about Service Packs, refer to 1.3 Service Pack Support. Note Setup with EXPRESSBUILDER cannot be used.
EB	License authentication	If Windows Server 2003 is installed from a backup CD, the license is already activated. If Windows Server 2003 is installed from an OS CD instead of a backup CD, a product key is required for license authentication. At this time, the product key must be the same as that indicated on the COA label of Windows Server 2003. For details, refer to Chapter 1 (6.7 License Authentication). Important Activate within 30 days following installation. The system might be
		locked if 30 days have passed without activation.
EB	Hardware configuration	 The following hardware configurations require special procedures. When using OEM drivers, be sure to change the boot order of the Flash FDD on the BIOS settings as follows: Select Boot, Floppy Drive BBS priorities, Boot Option #1, and then specify the Flash FDD used.
		Note Change as instructed in <i>Chapter 1 (6.2.3 Setup procedure)</i> .
В		 Notes on using N8103-149/150/151 on Windows2003: When a battery is used: The following message may appear on POST screen at reboot if Service Pack2 is not yet applied. It is not the problem. cache data recovered successfully When no battery is used: Set the cache mode of RAID Controller to the default setting (AutoSwitch or WriteThrough) until Service Pack 2 is applied. To operate the RAID Controller in WriteBack mode, change setting to WriteBack after Service Pack 2 is applied. * The default cache mode of RAID Controller is AutoSwitch. It will not change

			(2/3)	
Se	tup		Items to confirm	
EB	08	Hardware configuration	• Connecting MO devices Installing Windows while an MO device is connected can result in installation failure. Remove the MO device, and then start installation from the beginning.	
EB	OS		 DAT, LTO, and similar media Do not set media that is unnecessary to installation during setup. 	
EB	08		• Connecting to multiple hard disk drives (Logical Drives) For details on reinstalling operating systems to a system in which multiple Logical Drives exist, refer to <i>Chapter 1 (6.8 Reinstallation When Multiple Logical Drives</i> <i>Exist</i>).	
EB	05		 Reinstallation to a dynamic disk: When installing the OS on a hard disk drive with multiple partitions that was upgraded to a dynamic drive and you wish to retain the existing partition configuration and data areas, note the following: (C:) XXXX GB NTF5 Normal (system) Data area (partition to be retained) Select the partition on which the OS was previously installed. Select Leave the current file system intact (no change) for the OS partition format. 	
EB	OS	Service Pack	If Windows Server 2003 R2 is already installed, make sure that Windows Server 2003 R2 Edition DISC 2 has been installed before applying a Service Pack.	
EB	OS		Use Starter Pack when you apply a Service Pack from the Service Pack 2 CD-ROM.	
EB	OS		If you used OS installation media including Service Pack 2 for installation, you do not have to install Service Pack 2 again.	

			(3/3)		
Set	tup		Items to confirm		
ЕВ	OS	System partition size	The system partition size can be calculated by using the following formula. Size required to install the OS + paging file size + dump file size + application size Size required to install the OS = 3,500 MB (Windows Server 2003 R2 with Service Pack 2) = 5,300 MB (Windows Server 2003 R2 + Service Pack 2) Paging file size (recommended) = installed memory size × 1.5 Dump file size = installed memory size + 12 MB Application size = as required by the application For example, if the installed memory size is 1 GB (1,024 MB), the partition size is calculated as follows: 3,500 MB + (1,024 MB × 1.5) + 1,024 MB + 12 MB + application size = 6,072 MB + application size		
			 Note The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the boot volume paging file must be large enough to store dump files. Make sure you set a sufficient paging file size. If the paging file is insufficient, there will be a virtual memory shortage that may result in an inability to collect correct debug information. The maximum paging file size that can be specified for one partition is 4095 MB. If 1.5 times of the mounted memory size exceeds 4095 MB, specify 4095 MB. If the mounted memory size is 2 GB or greater, the maximum size of the dump file is "2048 MB + 12 MB". When installing other applications or other items, add the amount of space needed by the application to the partition. 		
			 system does not have a sufficient dump file size, divide the required file space into multiple disks by performing the following steps. 1. Set the system partition size to a size sufficient to install the OS and paging file. 2. Write the debug information of the dump file onto another disk by referring to 7. Setup for Solving Problems. If there is not enough disk space to write the debug information, set the partition size to a size sufficient to install the OS and paging file. 		
_	OS	Setup with OS standard installer	Dialog boxes might appear several times during installation, but it does not affect system installation. Click [Yes] on such dialog boxes, and continue installation according to the displayed messages.		
EB	08	Upgrade to Windows Server 2003 R2	according to the displayed messages.In-place upgrade from Windows Server 2003 to Windows Server 2003 R2 is no recommended because it overwrites the files and registries and might cause a unexpected effect on the system and applications.If you want to use Windows Server 2003 R2, back up the necessary data befor installing Windows Server 2003 R2.TipsIn-place upgrade refers to overwriting an existing OS (in this case, Windows 2003) with another OS (Windows Server 2003 R2).		

6.2 Setup with EXPRESSBUILDER

This section describes how to install Windows with EXPRESSBUILDER.

This feature automatically recognizes the RAID Controller connected to the server and configures the RAID System, so you must complete the hardware installation of the server by following "*User's Guide*".

Parameter File).

Important	Setup with EXPRESSBUILDER may delete all data in the hard disk drive
	depending on the settings. Pay attention to input parameters. You must be especially careful when configuring the following:
	 RAID settings wizard
	 Partition Settings in the Windows Setup wizard
	Backing up user data, as needed, is recommended.
	• Before starting setup, be sure to disconnect hard disk drives from the RAID Controller that is not to be setup. Install those hard disk drives after setup has completed. Conducting setup with hard disk drives being connected with RAID Controller may cause existing data to be erased unintentionally. It is recommended to make backup copy of user data before starting setup.
Tips	 Setup with EXPRESSBUILDER allows you to use a prespecified parameter file or save the parameters specified in setup as a parameter file on a removable media or Internal Flash Memory (if purchased optionally).
	• For details on creating a parameter file, refer to Chapter 1 (8 Windows OS

6.2.1 Setup flow



6.2.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- > Either of the following OS installation media
 - Backup CD-ROM Windows Server 2003 R2, Standard Edition DISC 1 (hereafter referred to as *Backup CD-ROM DISC 1*), and Microsoft Windows Server 2003 R2 Standard Edition DISC 2 (x2) (hereafter referred to as *Windows Server 2003 R2 DISC 2*)
 - Backup CD-ROM Windows Server 2003 R2, Enterprise Edition DISC 1 (hereafter referred to as *Backup CD-ROM DISC 1*), and Microsoft Windows Server 2003 R2 Enterprise Edition DISC 2 (x2) (hereafter referred to as *Windows Server 2003 R2 DISC 2*)
 - Microsoft Windows Server 2003 R2, Standard Edition DISC 1 (hereafter referred to as Windows Server 2003 CD-ROM), and Microsoft Windows Server 2003 R2 Standard Edition DISC 2 (x2) (hereafter referred to as Windows Server 2003 R2 DISC 2)
 - Microsoft Windows Server 2003 R2, Enterprise Edition DISC 1 (hereafter referred to as *Windows Server 2003 CD-ROM*), and Microsoft Windows Server 2003 R2 Enterprise Edition DISC 2 (x2) (hereafter referred to as *Windows Server 2003 R2 DISC 2*)
- First Steps Guide
- Either of the following EXPRESSBUILDER
 - EXPRESSBUILDER DVD
 - Internal Flash Memory (If "Internal Flash Memory" is installed)
- Windows Server 2003 Service Pack (CD-ROM)
- Prepare if needed:
 - Removable media for Windows OS parameter file
 - Tips

• EXPRESSBUILDER may be distributed in Internal Flash Memory. EXPRESSBUILDER can be run from Internal Flash Memory if it is installed in the server.

• If you are using a server with Internal Flash Memory installed, you can install the OS without using EXPRESSBUILDER DVD.

6.2.3 Setup procedure

During Setup with EXPRESSBUILDER, parameters are specified through the wizard. You can also save the parameters as one file (a parameter file) to removable media.

Note Read through the items in *Chapter 1 (6.1 Before Starting Setup)* prior to installing Windows.

- 1. Turn peripheral device power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select **Os installation** *** **default** ***. You will automatically advance to step 4, with no need for further input.



4. Select English on the language selection window, and then click [OK].



5. When the Windows PE software license agreement window appears, click [Yes].



6. Select Setup this computer from Top Menu of EXPRESSBUILDER, and then click [Next].

NEC	EXPRESSBUILDER Version 6. xx-xxx (xxx)
o invoke each function, select the radio button, and then click [Next].
f [Remove] is clicked, you can remove USB devices inserted int	to this computer safely.
Setup this computer	
C Invoke various utilities	
C Configure EXPRESSBUILDER setting	jS
C Exit EXPRESSBUILDER	
→	Next USB Remove

7. Set parameters on this menu according to your requirement. □ When not using parameter file: Go to Step 8. □ When using a parameter file: Go to Step 9.

Note When setting up again, parameter input via the wizard can be omitted by loading the saved parameter file.

8. If you do not use a parameter file, select an OS from the pull-down menu in [Install Windows], and click [Next].

On this dialog, select "Windows Server 2003 R2" from the pull-down menu. \rightarrow Go to Step 10

rating system, select an item in the listbox, and	
D system only] is selected, EXPRESSBUILDER or eter file] is selected, you can set up the compute	then dick [Next]. Ily configures RAID system without OS installation. er according to the parameter file.
	Windows Server 2003 R2
C Configure RAID system only	
C Load a parameter file	
	Totall Windows C Configure RAID system only Load a parameter file

9. If you use a parameter file, select [Load a parameter file] and click [Next]. Load a parameter file according to on-screen instructions.

NEC			SSBUILDER
To install an op If [Configure R/ If [Load a para	rating system, select an item in the listbox, and the ID system only] is selected, EXPRESSBUILDER only (neter file] is selected, you can set up the computer a	n dick [Next]. configures RAID system without ccording to the parameter file.	OS installation.
	C Install Windows	Windows Server 2003 R2	×
ſ	C Configure RAID system only		
			Remove

Confirm settings on Parameter Setup Menu as needed, then click [Next]. \rightarrow Go to Step 13.

NEC			EXPRESS Version	BUILDER
Set parameters for the sel If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	up. can change the parameter n save the parameter to a cannot proceed to the nex	rs of the category. file. t step. Click [Settings] to	set the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (12GB))	Default values Default Settings Skip
		+		
Windows settings	User information User settings	Network settings Default settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	Next	Save	Remove

10. Set parameters required for setup.

Click [Settings] of the relevant category to change parameters.

NEC			EXPRESS Version	6.xx-xxx.xx(xxx)
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you car *** If "!" is displayed, you	up. can change the parameter I save the parameter to a l cannot proceed to the next	s of the category. file. t step. Click [Settings] to se	t the parameters.	
RAID settings Skip	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (12GB)	0	Default values Default Settings Skip
		-	1	
Windows settings	User information User settings	Network settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back ←	→ Next	Save	Remove

Click [Default] to restore the default values.

You can see the default values by clicking [Default values].

EXPR	Persion 6. xx- xxx (xxx)
) set the parameters	
	Default values
	Derault

10-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically. Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	6.xx-xxx.xx(xxx)
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. J can change the parameter In save the parameter to a cannot proceed to the next	s of the category. file. : step. Click [Settings] to se	et the parameters.	
RAID settings Skip	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (12GB)		Default values Default Settings Skip
Windows settings	User information User settings	Network settings	Windows Components Default settings	Default Settings
Application settings	Applications installation Default settings	•		Default Settings
	Back		😡 Save	USB Remove

When creating new logical drives

(1)Click [Settings] in RAID settings.

(2)Use the wizard to set up logical drives.

Important If you proceed with wizard, the existing RAID system is destructed and the contents of hard disk drive will be erased.

When skipping the creation of new logical drives

Click [Skip] in RAID settings.

When the RAID settings wizard is terminated, Parameter Setup Menu appears again.

10-2 Windows settings

Set up Windows by using the Windows settings wizard on Parameter Setup Menu.

NEC		EXPRESS Version	BUILDER 6. XX - XXX . XX (XXX)
Set parameters for the setup. If [Settings] is clicked, you can change the paramet If [Save] is clicked, you can save the paramet *** If "!" is displayed, you cannot proceed to b	rameters of the category. ter to a file. the next step. Click [Settings] to	set the parameters.	
Disk surret		0	Default values
RAID settings Skip Logical drive1 (14	8GB) : System Partition (12GB)	Default Settings Skip
	-	C	
Windows settings User information User settings	n Network settings Default settings	Windows Components	Default Settings
	-	Ľ,	
Application settings OK Applications install Default setting	stions		Default Settings
васк	→ Next	💽 save	Remove

- (1) Click [Settings] in Windows settings.
- (2) Click [Next] in the Windows settings wizard.

Wizard				
Follow the steps below to If [Use OS standard insta standard installer.	o set the parameters necessary for Wind iller] is selected, you need to input paran	ows setup. neters step by	step without	this wizard by using the
	Start Set Windows preferences Set partition preferences J Set user preferences Set network preferences J Set component preferences Check/Exit	Use OS sta	ndard installer	1 / 9 Page
	Next			Cancel

- (3) Specify the Windows basic settings.
 - Change settings for "Edition" and "Time Zone" as needed, and click [Next].

sic information	
Operating System	: Windows Server 2003 R2
C Use OS standard	l installer
🔲 Copy OEM d	rivers into a removable media
 Setup with EXPR 	ESSBUILDER
Edition	: Standard Edition 💌
Language	: English
Time zone	: (GMT-08:00) Pacific Time (US and Canada); Tijuana 💌

- (4) Set up the partitions.
 - Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Wizard		
Set parameters about the partition of Windo Windows can be installed into the first hard area where 2TB is exceeded cannot be used	ows installation. disk drive or logical drive. The partition size can l .)	be set within 2TB.(The
If there are any partitions in the destination	disk, below red-framed area is deleted.	
Current partitions(the red-framed area is de	eleted) :	
:Free area		
(148.1GB)		
Partitioning		
Use the existing partition		
© Create a new partition		
C Specify the maximum amou	nt	
• Enter a value	: 40 (GB) *1TB=1024GB	
	(12GB - 148GB)	
1		3 / 9 Page
Back Next		Cancel

Important • Partition size

- Specify a partition size larger than the minimum required for installing the operating system. (Refer to Chapter 1 (6.1 Before Starting Setup).)
- The maximum partition size is 2,097,152 MB.
- If you select *Create a new partition* under *Partitioning*, the entire contents of the hard disk drive will be deleted.
- If you select Use the existing partition under Partitioning, data in the first partition is formatted and deleted. Data in other partitions will be kept. The figure below shows in which partitions data will be deleted.

First partition	Second partition	Third partition
Deleted	Retained	Retained

• You cannot reinstall to an existing partition that has been upgraded to a Dynamic Disk (refer to *Chapter 1 (6.1 Before Starting Setup)*). Do not select Use the existing partition under Partitioning.

(5) Enter user information.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Wizard	
Set parameters about user information. Input Computer name within 15 characters. Input User name/Company name within 25 ch	aracters.
User information	
Computer name	: 1-1786-0123456 (Required) 🗹 Auto
User name	: Administrator (Required)
Company name	:
Administrator password	:
Confirm Administrator password	:
Client Access Licenses (CAL)	
Per server mode	: 5
C Per device or per user mode	
	4 / 9 Page
Back Next	Cancel

Tips
The Computer name has been assigned by automatic assignment function. If you need to assign another computer name, remove the checkmark from "Auto", and enter the desired computer name.
If a parameter file is used for setup or if you return to a previous screen, •••••• is displayed in the Administrator password and Confirm Administrator password text boxes even if no value has been entered.

(6) Set up the network.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Wizard		
Set parameters about network protocol. If you input IP address, select [Custom settings], and then click [Adva	nced].	
Network protocols		
C Custom settings	Advanced	
	5 / 9 Page	
Back Next	Cancel	
Tips The order	of entry in Custom sett	ings may differ from the numbering of LAN ports.

(7) Enter the domain or workgroup name to be used.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Ioin a workgroup	
Workgroup name	: WORKGROUP
) Join a domain	
Domain name	:
Account name	:
Password	:
Confirm password	:

(8) Select the Windows components for installation. Confirm settings on the dialog shown below, change them as needed, and then click [Next].

a barran a share a barra 100 a darra a sa sa sa sa ba	
et parameters about Windows components. elect Windows components to be installed.	
Application servers	
Internet Information Services(IIS)	Advanced
Management and Monitoring tools	
Simple Network Management Protocol(SNMP)	Advanced
Network monitor tools	
	7 / 9 Page
Back Navt	Carrel
	0407007
Wizard	
Wizard Set parameters about Windows components. select Windows components to be installed.	
Wizerd bet parameters about Windows components. elect Windows components to be installed.	
Wizard Set parameters about Windows components. Select Windows components to be installed. Networking services	
Wizard Set parameters about Windows components. Select Windows components to be installed. Networking services Simple TCP/IP services	
Wizard Set parameters about Windows components. Select Windows components to be installed. Networking services Simple TCP/IP services Dynamic Host Configuration Protocol(DHCP)	
Wizard Vindows components. Select Windows components to be installed. Networking services Simple TCP/IP services Dynamic Host Configuration Protocol(DHCP) Domain Name System(DNS)	
Wizard Wizard Select Windows components. Select Windows components to be installed. Networking services Simple TCP/IP services Dynamic Host Configuration Protocol(DHCP) Domain Name System(DNS) Windows Internet Name Services(WINS)	
Vizard Vizard Viand Vindows components. Select Windows components. Select Windows components to be installed. Networking services Simple TCP/IP services Dynamic Host Configuration Protocol(DHCP) Comain Name System(DNS) Windows Internet Name Services(WINS) Other network file and print services	
Vizard Vizard Vizard Vizard Viabular Visard	
Wizard Set parameters about Windows components. Select Windows components to be installed. Networking services Simple TCP/IP services Dynamic Host Configuration Protocol(DHCP) Domain Name System(DNS) Windows Internet Name Services(WINS) Other network file and print services File services for Macintosh Print services for Macintosh	
Wizard Wizard Witard W	
Wizard Wizard Set parameters about Windows components. Select Windows components to be installed. Networking services Simple TCP/IP services Dynamic Host Configuration Protocol(DHCP) Domain Name System(DNS) Windows Internet Name Services(WINS) Other network file and print services File services for Macintosh Print services for UNIX	
Wizard Select Windows components. Select Windows components to be installed. Networking services Simple TCP/IP services Dynamic Host Configuration Protocol(DHCP) Domain Name System(DNS) Windows Internet Name Services(WINS) Other network file and print services File services for Macintosh File services for UNIX Print services for UNIX	8 / 9 Page
Wizzd Set parameters about Windows components. Select Windows components to be installed. Networking services Simple TCP/IP services Dynamic Host Configuration Protocol(DHCP) Domain Name System(DNS) Other network file and print services(WINS) Other network file and print services File services for Macintosh Print services for UNIX Reck Host	8 / 9 Page

(9) Confirm settings.

Confirm settings on the dialog shown below, and click [Finish].

Wizard	
arameter setting is completed.	
o finish this wizard, click [Finish].	
Installed OS	: Windows Server 2003 R2
(Setup with EXPRESSBUILDE	R)
Edition	: Standard Edition
Language	: English
Time zone	(GMT-08:00) Pacific Time (US and
Time zone	Canada); Tijuana
	9 / 9 Page
Pack	Finish
Daux	FINISH

When the Windows settings wizard is terminated, Parameter Setup Menu appears again.

10-3 Application settings

Set up applications using the Application settings wizard in Parameter Setup Menu.

NEC		EXPRESS Version	BUILDER 6. xx - xxx .xx (xxx)
Set parameters for the setup. If [Settings] is clicked, you can change the paran If [Save] is clicked, you can save the parameter *** If "!" is displayed, you cannot proceed to the	neters of the category. to a file. e next step. Click [Settings] to s	set the parameters.	
RAID settings Skip Logical drive1 (1480	(12GB) : System Partition (12GB)		Default values Default Settings Skip
Windows settings OK User information User settings	Network settings Default settings	Windows Components Default settings	Default Settings
Application settings	on	ſ	Default Settings
Back ←	→ Next	📿 save	USB Remove

- (1) Click [Setting] in Application settings.
- (2) Confirm settings on the dialog shown below, change them as needed, and click [Finish].

Wizard	
Select applications to install.	
For more information on each application, ref	er to [Description of Application] column.
List of applications	Selected applications
Apply drivers for mass storage controller	NEC ESMPRO Agent
	Add >> Universal RAID Utility Microsoft .NET Framework Version 2.0 Redistribution
	Microsoft Visual C++ 2005 SP1 Redistributable F
	<< Delete
Providence of Analization	*
Description of Application	
	Finish

- Save parameters on Parameter Setup Menu.
 Click [Save], and save the parameter file according to on-screen instructions. If you do not need to save parameters, go to Step 12.
- 12. Click [Next] on Parameter Setup Menu.

NEC			EXPRESS Version	6.xx-xxx (xxx)
Set parameters for the setup If [Settings] is clicked, you ca If [Save] is clicked, you can si *** If "!" is displayed, you can	n change the parameter ave the parameter to a nnot proceed to the next	s of the category. file. : step. Click [Settings] to se	t the parameters.	
RAID settings RA	sk array1 ID1(2disk) gical drive1 (148GB) :	System Partition (12GB)	0	Default values Default Settings Skip
Windows settings	User information User settings	Network settings Default settings	Windows Components Default settings	Default Settings
Application settings	plications installation Default settings	*		Default Settings
	Back	→ Next	💽 Save	Remove

13. Confirm the summary of setup on the screen below, and click [Perform].



14. Install the additional applications.

If **Installing the OS and applications** is selected, the following message will appear.

Question	
	Insert the media including the additional applications.
?	
	[Message ID : H2001]
	OK Cancel

Insert the CD-ROM or removable media that contains the necessary applications, and install them according to on-screen messages.

15. Remove the removable media or DVD(EXPRESSBUILDER) from the server.

🕕 Informat	on
	Remove the CD/DVD and other removable media.
0	
	[Message ID : H1002]
	OK

16. Insert the Windows Server 2003 DVD-ROM into the optical disk drive, and then click [OK].

Ques	tion
	Insert Backup OS disk into the drive.
?	
	[Message ID : H2003]
	OK Cance I

Windows Server 2003 and selected applications will be installed automatically and restart several times.

17. Confirm the license terms displayed on the screen below. Click [Yes] if you accept these terms.

_		
?	Question	
r		Read "MICROSOFT LICENSE AGREEMENT" of Microsoft Windows Package.
f	?	To continue Windows installation, select [Yes] and agree with a contract. If [No] is selected, the installation is discontinued.
)		[Message ID : H2004]
2		Yes No

Tips

If any OS CD-ROM other than Backup CD-ROM, the following message may appear. Click [OK] and enter the product key.

The setup script file does not contain a valid Product ID. Contact your system administrator for a valid Product ID.

Windows Server 2003 and the specified application programs are automatically installed. Logon the system.

 Important
 The dialog box shown below may appear during installation. You can ignore this dialog until the Setup Complete window appears.

 Windows Setup
 Important

 Important
 Important

 Windows Setup
 Important

 Important
 Important

 Windows Setup
 Important

 Important
 Important
- 18. Click [OK] in the Setup Complete window.
- 19. When installation completes, the [Windows Setup] screen appears.

s Setup	×
Windows Setup is not complete. We recommend that you ca so that you can install the additional components that are av version of the Windows Server operating system.	ontinue Setup ailable in this
For more information about the new components, see the do on Windows Server CD 2.	cumentation
To continue Setup, insert Windows Server CD 2, or specify I where the Windows Server CD 2 files are stored, and then c	the location lick OK.
Location of Windows Server CD 2 files:	
D:\	Browse
OK]	Cancel
	 Setup Windows Setup is not complete. We recommend that you can install the additional components that are aviversion of the Windows Server operating system. For more information about the new components, see the do on Windows Server CD 2. To continue Setup, insert Windows Server CD 2, or specify where the Windows Server CD 2 files are stored, and then components of Windows Server CD 2 files: D:\

Insert the Windows Server 2003 R2 DISC 2 into the optical disk drive.

Check the settings, and then click [OK].

When the installation procedure completes, remove the Windows Server 2003 R2 Edition DISC 2 from the optical disk drive and then restart the system.

Tips

- To install the service pack, be sure to apply Windows Server 2003 R2 DISC 2 before applying Starter Pack.
- 20. Install Starter Pack by referring to Chapter 1 (6.3 Installing Starter Pack).
- 21. Install drivers and specify detailed settings by referring to Chapter 1 (6.4 Setting Up Device Drivers).
- 22. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 23. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with EXPRESSBUILDER is now complete.

Setup with OS Standard Installer 6.3

This section describes how to install Windows with OS Standard Installer.

This feature automatically recognizes the RAID Controller connected to the server and configures the RAID System, so you must complete the hardware installation of the server by following "User's Guide ".

Important	 Setup with OS standard Installer may delete all data in the hard disk drive depending on the settings. Pay attention to input parameters. You must be especially careful when configuring the following: RAID settings wizard Backing up user data, as needed, is recommended.
Tips	 Setup with OS Standard Installer allows you to use a prespecified parameter file or save the parameters specified in setup as a parameter file on a removable media or Internal Flash Memory (if purchased optionally). For details on creating a parameter file, refer to <i>Chapter 1 (8 Windows OS Parameter File)</i>.

6.3.1 Setup flow



6.3.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- Operating system installation media (prepare one of the following)
 - Backup CD-ROM Windows Server 2003 R2, Standard Edition DISC 1 (hereafter referred to as Backup CD-ROM DISC 1), and Microsoft Windows Server 2003 R2 Standard Edition DISC 2 (x2) (hereafter referred to as Windows Server 2003 R2 DISC 2)
 - Backup CD-ROM Windows Server 2003 R2, Enterprise Edition DISC 1 (hereafter referred to as *Backup CD-ROM DISC 1*), and Microsoft Windows Server 2003 R2 Enterprise Edition DISC 2 (x2) (hereafter referred to as *Windows Server 2003 R2 DISC 2*)
 - Microsoft Windows Server 2003 R2, Standard Edition DISC 1 (hereafter referred to as Windows Server 2003 CD-ROM), and Microsoft Windows Server 2003 R2 Standard Edition DISC 2 (x2) (hereafter referred to as Windows Server 2003 R2 DISC 2)
 - Microsoft Windows Server 2003 R2, Enterprise Edition DISC 1 (hereafter referred to as *Windows Server 2003 CD-ROM*), and Microsoft Windows Server 2003 R2 Enterprise Edition DISC 2 (x2) (hereafter referred to as *Windows Server 2003 R2 DISC 2*)
- Windows Server 2003 Service Pack (CD-ROM)
- > First Steps Guide
- Either of the following EXPRESSBUILDER
 - EXPRESSBUILDER DVD
 - Internal Flash Memory (If "Internal Flash Memory " is installed)
- Prepare if needed:
 - Removable media for Windows OS parameter file
 - Flash FDD for creating OEM drivers (Windows Server 2003)

server.

Note	OEM drivers are is necessary if a RAID Controller or optional board is connected. Use a Flash FDD as the removable media to create OEM drivers.
Tips	• EXPRESSBUILDER may be distributed in Internal Flash Memory. EXPRESSBUILDER can be run from Internal Flash Memory if it is installed in the

If you are using a server with Internal Flash Memory installed, you can install the

OS without using EXPRESSBUILDER DVD.

6.3.3 Setup procedure

This section describes the procedure for installing Windows Server 2003 using the OS standard installer.

Note Before starting setup, refer to *6.1 Before Starting Setup*. It describes how to make partitions.

- 1. Turn peripheral device power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select **Os installation** *** default ***.

Os instal	- Boot sele	ction default ***			
Tool Menu	(Redirecti	on mode)			
		Automatic s	elect at 1	0 seconds	

4. Select English on the language selection menu, and then click [OK].

?	Qu	estior	n			
	EXPRESSBUILDERで使用する言語を選択してください。					
	Se	elect a	α language to ι	use for the	EXPRESSBUILD	ER.
		0	日本語	۲	English	
		0	Français	0	Italiano	
		0	Deutsch	0	Español	
			_			
				ОК		

5. When the Windows PE software license agreement window appears, click [Yes].

Confirm the following End-User License Agreement.	_
To use this software, agree this license.	
END-USER LICENSE AGREEMENT FOR MICROSOFT® WINDOWS® PREINSTALLATION ENVIRONMENT IMPORTANT-READ CAREFULLY:	-
This End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and the manufacturer ("Manufacturer2) of the special purpose computing device or software ("SYSTEM") you acquired which includes certain Microsoft software product(s) installed on or for use with the SYSTEM "SOFTWARE".	
The SOFTWARE includes computer software, and may include associated media, printed materials, and "online" or electronic documentation.	
Any software provided along with the SOFTWARE that is associated with a separate end-user license agreement or separate terms of use is licensed to you under the terms of that license agreement or terms of use rather than this EIL is	
By installing, copying, downloading, accessing or otherwise using the SOFTWARE, you agree to be bound by the terms of this EULA.	
If you do not agree to the terms of this EULA, Manufacturer and Microsoft Licensing, GP ("MS") are unwilling to license the SOFTWARE to you.	•
Vez	

Note

Unless you agree these terms, you cannot use EXPRESSBUILDER.

6. Select Setup this computer from Top Menu of EXPRESSBUILDER, and then click [Next].

NEC	2	EXPRESSBU Version 6. xx-3	
To invoke each	function, select a radio button, and then click [Next].	-fab.	
in [Remove] is t	inckeu, you can remove OSB devices inserved into this computer si	nery.	
	Set up this computer		
	C Invoke various utilities		
	C Configure EXPRESSBUILDER settings		
	C Exit EXPRESSBUILDER		
	→ Next		Remove

7. Set parameters on this menu according to your requirement.
When not using parameter file: Go to Step 8.
When using a parameter file: Go to Step 9.

Note

When setting up again, an already saved parameter file can be read, so that you can skip inputting parameters in the wizard

 If you do not use a parameter file, select an OS from the pull-down menu in [Install Windows], and click [Next]. On this dialog, select "Windows Server 2003 R2" from the pull-down menu. → Go to Step 10.

NE	C	EXPRESSBUILDER Version 6. xx-xxx. (xxx)
To install an o If [Configure F If [Load a par	perating system, select an item in the listbox, and AID system only] is selected, EXPRESSBUILDER (ameter file] is selected, you can set up the compu	l then dick [Next]. nly configures RAID system without OS installation. ter according to the parameter file.
	© Install Windows	Windows Server 2003 R2
	C Configure RAID system only	
	C Load a parameter file	
	Back 🗲 🔶	Next USB Remove

9. If you use a parameter file, select [Load a parameter file] and click [Next]. Load a parameter file according to on-screen instructions.

NEC	E EXPRESSE Version 6.	
To install an ope If [Configure RA If [Load a paran	erating system, select an item in the listbox, and then click (Next). ND system only) is selected, EXPRESSBUILDER only configures RAID system without OS install meter file] is selected, you can set up the computer according to the parameter file.	ation.
	C Install Windows Windows Server 2003 R2 III	
		1
ſ	C Configure RAID system only G Load a parameter file	
	Back - Next	Remove

Confirm settings on Parameter Setup Menu as needed, then click [Next]. \rightarrow Go to Step 16.

NEC			EXPRESS Version	BUILDE
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you can *** If "!" is displayed, you	up. can change the paramete n save the parameter to a cannot proceed to the nex	rs of the category. file. t step. Click [Settings] to	set the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB)		0	Default values Default Settings Skip
Windows settings Skip	User information	Network settings Default settings	Windows Components Default settings	Default Settings
Application settings Skip	Applications installation Default settings	*		Default Settings
	Back	→ Next	Save	Remov

10. Set parameters required for setup.

Click [Settings] of the relevant category to change parameters.

NEC			EXPRESS Version	6.xx-xxx .xx (xxx)
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. I can change the paramete In save the parameter to a cannot proceed to the nex	rs of the category. file. t step. Click [Settings] to se	t the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (12GB)	0	Default values Default Settings Skip
		+		
Windows settings	User information	Network settings Default settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	Next	💽 Save	Remove

Click [Default] to restore the default values.

You can see the default values by clicking [Default values].

EXF	PRESSBUILDER Version 6. xx - xxx (xxx)
) set the parame	Cers.
	Default

10-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically.

Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	6. XX - XXX . XX (XXX)
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you can *** If "!" is displayed, you	up. can change the parameter 1 save the parameter to a cannot proceed to the nex	rs of the category. file. t step. Click [Settings] to se	t the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (12GB)	0	Default values Default Settings Skip
		-		
Windows settings	User information	Network settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	💽 save	Remove

When creating new logical drives

- (1) Click [Settings] in RAID settings.
- (2) Use the wizard to set up logical drives.

Important If you proceed with wizard, the existing RAID system is destructed and the contents of hard disk drive will be erased.

When skipping the creation of new logical drives

Click [Skip] in RAID settings.

TipsUse the [Skip] button if, after modifying the settings with the RAID settings wizard,
you want to install the existing configurations without modifying them.

When the RAID settings wizard is terminated, return to Parameter Setup Menu.

11. Click [Settings] in Windows settings.

NEC			EXPRES: Version	BUILDER
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you can *** If "!" is displayed, you	up. can change the parameter n save the parameter to a l cannot proceed to the next	s of the category. file. t step. Click [Settings] to se	et the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (12GB)	Ø	Default values Default Settings Skip
		+		
Windows settings	User information User settings	Network settings	Windows Components Default settings	Default Settings
		-		
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	💽 Save	USB Remove

12. Click [Next] in the Windows settings wizard.



13. Specify the Windows basic settings

The basic information window appears. Select Use OS standard installer, and then click [Next].

•		
🕜 Wizard		
If [Use OS standard installer] is sele media, and applications such as ESM If [Setup with EXPRESSBUILDER] is	ected, Windows is installed by us MPRO must be installed separate is selected, both Windows and app	ing the standard installer contained in the OS ly after Windows installation. plications can be installed easily.
- Basic information		
Operating System	: Windows Server 2003	R2
 Use OS standard in Copy OEM driv 	nstaller vers into a removable media	
Setup with EXPRES	SBUILDER	
Edition		
Language		
Time zone	💌	
		2 / 9 Page
Back Next	t.	Cance I

If copying the OEM drivers to the removable media, select **Copy the OEM drivers into the removable media**.

Tips

If you copied the OEM drivers to a Flash FDD, format it to FAT16.

14. After clicking [Finish] on the confirmation window, click [Next] in Parameter Setup Menu.

: Windows Server 2003 R2	
: Act	
	9 / 9 Page
	: Windows Server 2003 R2

15. Click [Next] on Parameter Setup Menu.

NEC		EXPRESS Version	BUILDER 6. XX - XXX . XX (XXX)
Set parameters for the setup. If [Settings] is clicked, you can change the p If [Save] is clicked, you can save the parame *** If "1" is displayed, you cannot proceed to	arameters of the category. eter to a file. o the next step. Click [Settings] to	o set the parameters.	
RAID settings OK Logical drive1 (1	48GB)	0	Default values Default Settings Skip
Windows settings User information	tion Network settings	Windows Components	Default
Skip Default setti	ngs Default settings	Default settings	Settings
Application settings Skip Default settin	Illation Igs		Default Settings
Back	+ → _{Next}	G Save	Remove

16. Confirm the summary of setup on the screen below, and click [Perform]. The server automatically restarts.

NEC	EXPRESSBUILDER Version 6. xx - xxx .xx (xxx)	
Ready to setup the computer. To start the setup, click [Perform].		
Steps	Summary of setup	
 Configuring the RAID system 	RAID configuration	
* Copying the OEM drivers	* All data is deleted.	
Changing a media	Installed OS Windows Server 2003 R2	
 Installing the Operating System 	Copy the OEM drivers	
	Act	
Back	Perform	_
Note	• If you select the Copy	the OEM drivers into the removable media c
	insert a Flash FDD into	the server and then click [Perform].
	Do not remove the mer	dia while copying OEM drivers

17. Continue setup according to on-screen message.

If the **Copy the OEM drivers to the removable media** checkbox is selected in step 13, the following window appears. Follow the onscreen instructions and continue the operation.

Question	
	OEM drivers(XXXXXXXXXXXXXXXXXXXXXX) are copied. All data on Flash FDD is deleted.
?	If [Yes] is selected, the copying starts.
	[Message ID : F2000]
	(minimum minimum minim
	Yes No
	Question

When the following message appears, set OS installation media, and click [OK].

?	Question	
		Insert the Backup OS disk into the drive.
	?	
		[Message ID : H2×××]
		OK Cance I

18. The server automatically restarts.

To use OEM driver, change boot priority of Flash FDD on BIOS settings, after restarting the server. Select **Boot**, **Floppy Drive BBS priorities**, **Boot Option #1**, and then specify the Flash FDD used.

19. Run from the OS installation media.

If a bootable operating system is already installed on the hard disk drive, press <Enter> key while the message "Press any key to boot from CD or DVD..." is displayed on the top of the screen.

The boot sequence proceeds and the following message appears.

Windows Setup	
Note	If this message does not appear, reboot the server and retry.

This step is unnecessary if no bootable operating system exists.

20. If a RAID Controller or optional SCSI Controller is used, press <F6> key while either of the following messages is displayed. If not, go to step27 without pressing <F6> key.

"Setup is inspecting your computer's hardware configuration" (on the top of the screen) "Press F6 if you need to install a third party SCSI or RAID driver..." (on the bottom of the screen)

Tips

Note that nothing changes on the screen even when the <F6> key is pressed.
If the OEM drivers list is not displayed at step 22, 24 or 26, check the boot order of the Flash FDD on BIOS settings.

21. The following message appears.



If N8103-149/150/151 RAID Controller is connected, press <S> key and go to step 22. If not, go to step 23.

22. Select the following from the driver list, and then press <Enter> key.

LSI MegaRAID SAS RAID Controller Driver

Note

The screen shown in step 21 appears. Go to step 23.

- 23. If N8103-107 is connected, press <S> key and go to step 24. If not, go to step 25.
- 24. Select Adaptec Ultra320 SCSI Cards (Windows 32-bit), and then press <Enter> key.

If the following message appears, press <S> key to proceed.
The driver you provided seems to be newer than the Windows
default driver.
Windows already has a driver that you can use for "Adaptec
Ultra 320 SCSI Cards (Windows 32-bit)"
Unless the device manufacturer prefers that you use the
driver on the floppy disk, you should use the driver in
Windows.

The screen shown in step 21 appears again. Go to step 25.

- 25. If N8103-104A is connected, press <S> key and go to step 26. If not, press <Enter> key and go to step 27.
- 26. Select LSI Fusion-MPT SAS Driver (Server 2003 32-bit), and then press <Enter> key. The screen shown in step 21 appears again. Press <Enter> key and go to step 27.

27. When the following message appears, press <Enter> key to start Windows setup.



The following screen is displayed for setting the partition of Windows.

If the partition created is shown as "G:", delete the partition "G:". If it is shown as "C:", you do not need to delete the partition.

Important Pay attention to a partition you are going to delete.



Create a partition again by pressing <C> key.

The creation of partition completes when the new partition is created in drive "C:", as shown below.



Important	A partition in which you install Windows must be created in drive "C:".		
	 When installing Windows Server 2003 to a disk of over 2,097,152 MB (2 TB), the partition size can only be set to 2,097,152 MB or less. 		
Tips	The server automatically restarts after copying files. Do not remove the CD-ROM and the Flash FDD.		

After this, follow the onscreen instructions to continue setup. For details, refer to "*First Step Guide*" supplied with the OS.

Tip	s

When a driver is selected from the drive list, a message indicating that the driver has not passed logo testing might appear, but this does not affect the setup. Click [OK] to continue setup.

28. The server automatically restarts after installing Windows Server 2003 R2.

29. The Windows Setup dialog box appears after log on.



Important Be sure to install the Windows Server 2003 R2 DISC 2 according to the following steps even if the dialog box does not appear.

- Insert the Windows Server 2003 R2 DISC 2 into the optical disk drive. Check the settings, and then click [OK].
- 31. When the installation procedure completes, remove the Windows Server 2003 R2 Edition DISC 2 from the optical disk drive and then restart the server.
- 32. Install Starter Pack by referring to Chapter 1 (6.3 Installing Starter Pack (Service Pack)).
- 33. Install drivers and specify detailed settings by referring to Chapter 1 (6.4 Setting Up Device Drivers).
- 34. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 35. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with OS standard installer is now complete.

6.4 Installing Starter Pack

After installing Windows Server 2003, be sure to install Starter Pack and Windows Server 2003 hotfix: knowledge base (KB) 921411.

Starter Pack contains drivers customized for this server. Be sure to apply Starter Pack before running the system.

Important	Starter Pack and Windows Server 2003 hotfix: KB921411 must also be
	installed in the following cases. Be sure to install Starter Pack and Windows x64 hotfix: KB921411 in the following cases:
	 The system configurations have changed (when internal option devices have been added or removed)
	If a dialog box prompting you to restart appears after changing system configurations, click [No] and then update the system.
	 If the system was restored using a restore process
	 If a system has been restored using the backup tool
	 Be sure to install Service Pack 2 (CD-ROM) from Starter Pack.
	 If you used a Windows Server 2003 CD-ROM including Service Pack 2 for installation, you do not have to install Service Pack 2 again.
Note	For Windows Server 2003 R2, make sure that Windows Server 2003 R2 is displayed in the system properties window before applying a Service Pack.
Tips	If you used the Windows Server 2003 CD-ROM including Service Pack 2 for installation, you do not have to install Windows Server 2003 hotfix: KB921411.

Express5800/R120d-1M, R120d-2M Installation Guide (Windows)

6.4.1 Procedure to apply Windows Server 2003 hotfix: KB921411

(1) When using EXPRESSBUILDER DVD

- 1. Log on to the system with a user account that has administrative privileges (such as Administrator).
- Insert EXPRESSBUILDER DVD into the optical disk drive. If you installed the Windows Server 2003 with Service Pack 2, go to step 9.
- 3. When the menu appears automatically, close it.
- 4. Select Run from the Start menu, and then execute the following command: *Optical disk drive*:\021\win\winnt\dotnet\qfe\enu\kb921411.exe
- 5. When the following message appears, click [Next].

Software Update Installation	n Wizard	×
Ð	Use this wizard to install the following software update: Hotfix for Windows Server 2003 (KB921411)	
	Before you install this update, we recommend that you: - Back up your system - Close all open programs You might need to restart your computer after you complete this update. To continue, click Next.	
	< Back Next > Cancel	

After this, continue installation according to the onscreen messages.

6. When the following message appears, click [Finish] and remove EXPRESSBUILDER DVD before restarting.

Software Update Installation	Wizard
Ð	Completing the Hotfix for Windows Server 2003 (KB921411) Installation Wizard
	You have successfully completed the KB921411 Setup Wizard.
	To apply the changes, the wizard has to restart Windows. To restart Windows automatically, click Finish. If you want to restart later, select the Do not restart now check box, and then click Finish.
	K Back. Finish Cancel

- 7. Log on to the system with a user account that has administrative privileges (such as Administrator).
- 8. Insert EXPRESSBUILDER DVD into the optical disk drive.

9. When the following menu appears, click **Setup Windows** to open the short-cut menu and then select **Install Starter Pack**.



10. Read the setup message, and then click [OK].



Wait until the message appears without attempting any further operation. This may take several minutes.

Starter Pack installation starts.



Express5800/R120d-1M, R120d-2M Installation Guide (Windows)



11. When the following message appears, Starter Pack installation is complete.

Starter P	ack 🔀
2	Installing Starter Pack was finished. The setup will install Service Pack continuously.
	If you want to continue installing, click [Yes]. If you want to stop installing, click [No].
	Yes No

To apply the Service Pack, click [Yes] and go to step 12.

To not apply the Service Pack, click [No] and go to step 14.

ImportantIf you are using OS installation media that does not contain Service Pack 2,
click [Yes]. You must apply Service Pack 2.If Starter Pack is being reinstalled in an environment where Service Pack 2
has already been installed, you do not need to reinstall Service Pack 2.

12. When the following message appears, click [Yes].

Installing	j Service Pack 🔀
2	Installing Service Pack.
~	If you want to continue installing, click [Yes] and select Service Pack (browse the file like an "e.g."). If you want to stop installing, click [No].
	e.g. XXXXXXXXXXXXXXXXXXXXXENU.EXE
	Yes No

13. When the following dialog box appears, specify the Service Pack to apply and then click [Open].



Tips

If you use a Service Pack CD-ROM, when the dialog box above appears, remove EXPRESSBUILDER DVD from the optical disk drive and then insert the Service Pack CD-ROM.
The extension of the Service Pack applicable to Starter Pack is *.exe or *.msu. No other Service Pack files can be installed.

Installation of the specified Service Pack starts.

When the Service Pack installation completion window appears, restart the system.

14. When the following message prompts you to restart the server, click [Yes] and remove media from the optical disk drive before restarting.

Starter P	ack	×
?	The setup doe Do you want to	s not install Service Pack. o reboot?
	<u>Y</u> es	No

Installation of Starter Pack is now complete.

- (2) When using Internal Flash Memory (Required only when optional "Internal Flash Memory" is installed)
 - 1. After installing the operating system, restart the server.
 - 2. When "Press <F2> Setup, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network" appears during POST, press <F3> key.

• Be sure to remove bootable media from the optical disk drive.

3. When the following message appears, select Os installation *** default ***.



4. Select English on the language selection menu, and then click [OK].

?	Qu	estior	ı					
EXPRESSBUILDERで使用する言語を選択してください。								
	Se	elect a	language to	use for t	he	EXPRESSBUIL	.DER	
		0	日本語	œ	,	English		
		0	Français	C	,	Italiano		
		0	Deutsch	C	;	Español		
				OK				

5. When the Windows PE software license agreement window appears, click [Yes].



Note

Unless you agree these terms, you cannot use EXPRESSBUILDER.

6. Select Invoke various utilities from Top Menu of EXPRESSBUILDER, and then click [Next].

NEC	2	EXPRESSBUILDER Version 6. xx- xxx . xx (xxx)
To invoke each	function, select the radio button, and then click [Next].	
If [Remove] is a	dicked, you can remove USB devices inserted into this computer sa	fely.
	© Setup this computer	
ſ		
U U	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ Next	USB Fremove

7. Select Install Starter Pack to installed Windows and then click [Next].

NEC	EXPRESSBUILDER Version 6.xx-xxx.xx (xxx)
Various utilities can be individually invoked from this menu. Select a utility, and then click [Next].	
Install Starter Pack to installed Windo Sopra Party and The Starter Pack	ws
C Run a file directly	
Back	ext USB Remove

8. Select the installed Windows from the drop-down list, and then click [Perform].



9. Read the message and then click [Yes].

tarter Pack into the as been installed.
MB
No



The following window will appear if Starter Pack is already installed. Read the message, and then click [Yes].

	Starter Pack is already stored in the partition.
?	If [OK] is selected, delete the stored Starter Pack and install the new one.
	[Message ID : M2001]

10. After copying the files, the following window appears. Click [Close].

1	Informati	on
		EXPRESSBUILDER completed copying Starter Pack into the partition where Windows has been installed.
(1	If [Close] is selected, this computer reboots. After logging in Windows, install Starter Pack following the message.
		[Message ID : M1000]
		Close

The server restarts.

Note

You do not need to press <F3> key at this time.

11. Log on to the system with a user account that has administrative privileges (such as Administrator).

Important	The screen as shown below appears when Windows starts. Do no	ot click [OK]
	on this screen. Proceed to Step 12.	
	Installing Starter Pack.	
	Preparation of Starter Pack was completed.	
	Click [OK] to continue installing Starter Pack.	
	ок	
	If you click [OK], "KB921411" will not be applied.	
	Go to Step 16, and click [Cancel] on the screen to install Starter perform from Step 1 of (2) When using Internal Flash Memory.	Pack. Then,

If you installed the Windows Server 2003 with Service Pack 2, go to step 15.

12. Select **Run** from the **Start** menu, and then execute the following command: *System drive*:\StartPKG\dotnet\qfe\enu\kb921411.exe

13. When the following message appears, click [Next].

Software Update Installation	Wizard	×
Ð	Use this wizard to install the following software update: Hotfix for Windows Server 2003 (KB921411)	
	Before you install this update, we recommend that you: - Back up your system - Close all open programs You might need to restart your computer after you complete this update. To continue, click Next.	
	< <u>B</u> ack Next> Cancel	



14. When the following message appears, click [Finish] to restart the system.



15. After Windows starts, the following window appears. Click [OK].

Installing Starter Pack.	
Preparation of Starter Pack was completed.	
Click [OK] to continue installing Starter Pack.	
	ОК

16. Read the message, and then click [OK].



Although it may take several minutes for the above window to appear, wait for the window to appear without attempting any further operation.

Installation of Starter Pack starts.



Note

The following progress message appears while Starter Pack is being installed. Wait a moment until the update is complete.

installing Starter Pack.	
Please wait for a while	
Checking the OS information. >> Updating drivers. Ferforming the end process of Starter Pack.	

When the following message appears, Starter Pack installation is complete.

Starter P	ack 🔀					
?	Installing Starter Pack was finished. The setup will install Service Pack continuously.					
If you want to continue installing, click [Yes]. If you want to stop installing, click [No].						
	<u>Yes</u> <u>N</u> o					

To apply the Service Pack, click [Yes] and go to step 17.

To not apply the Service Pack, click [No] and go to step 19.

ImportantIf you are using OS installation media that does not contain Service Pack 2,
click [Yes]. You must apply Service Pack 2.If Starter Pack is being reinstalled in an environment where Service Pack 2
has already been installed, you do not need to reinstall Service Pack 2.

17. When the following message appears, click [Yes].

Installing	Service Pack 🔀
2	Installing Service Pack.
~	If you want to continue installing, click [Yes] and select Service Pack (browse the file like an "e.g."). If you want to stop installing, click [No].
	e.g. XXXXXXXXXXXXXXXXXXXXX-ENU.EXE
	<u>Yes</u> <u>N</u> o

18. When the following dialog box appears, specify the Service Pack to install and then click [Open].

Open					? ×
Look in:	🍛 Local Disk (C:)		• +	E 💣 🎟 -	
My Recent Documents Desktop My Documents My Computer	Documents and Sett Intel Program Files WINDOWS wmpub	ings			
My Network	ile <u>n</u> ame:			•	<u>O</u> pen
Places	iles of type: Exe	ecute file(*.exe)		•	Cancel



Installation of the specified Service Pack starts. When the Service Pack installation completion window appears, restart the system.

19. When the following message prompts you to restart the system, click [Yes].

Starter F	Pack		×
?	The setup doe: Do you want to	s not install Service o reboot?	Pack.
	Yes	No	

Installation of Starter Pack is now complete.

6.4.2 Recovery process

If Windows Server 2003 hotfix: KB921411 is not applied before installing Starter Pack, "!" might be displayed on the USB root hub in the Device Manager window.

In this case, apply Windows Server 2003 hotfix: KB921411 and install Starter Pack according to the procedure below.

- 1. Start Windows Explorer, and then select Folder Options from the Tool menu.
- 2. In the Advanced settings area on the View tab, select the Show hidden files and folders option button for Hidden files and folders under Files and Folders.
- 3. Clear the following check boxes under Files and Folders, and then click [OK].
 - Hide extensions for known file types
 - Hide protected operating system files (recommended)

When the message "You have chosen to display protected operating system files..." appears, click [Yes].

4. Check the files.

Open the drivers folder under *System drive*: \WINDOWS\system32, and make sure that usbhub.sys and usbport.sys are stored in the folder.

If a file is missing, copy the target file(s) according to the procedure below.

- (1) Open the dllcache folder under System drive:\WINDOWS\system32.
- (2) Copy the usbhub.sys and/or usbport.sys to the drivers folder under *System* drive:\WINDOWS\system32.
- 5. Restart the system.
- Refer to Chapter 1 (6.3.1 Procedure to apply Windows Server 2003 hotfix: KB921411) to install Starter Pack.
- 7. Restart the system.

The recovery process is now complete.

Note

If the system files and hidden files still do not display, select the check boxes that were cleared in step 3.

6.5 Setting Up Device Drivers

Install and set up device drivers provided for the standard configuration. For details regarding the installation and setup of an optional device driver, refer to the manual supplied with the optional device.

6.5.1 Installing the LAN and BACS (teaming) drivers

(1) LAN and BACS drivers

If EXPRESSBUILDER is used for setup, the LAN and BACS driver will automatically be installed. If the OS standard installer is used for setup, install Starter Pack to install the LAN and BACS driver.

Important	 To use the BACS, Microsoft .NET Framework Version 2.0 must be installed. To install Microsoft .NET Framework 2.0, insert EXPRESSBUILDER DVD to the optical disk drive, select Setup Windows and then Install the .NET Framework Ver2.0 Redistributable Package(x86) from the autorun menu. WOL is supported by the standard network adapters only.
Note	 To change the LAN or BACS driver settings, log on to the system from a local console using an administrator's account. Remotely changing the settings by using the operating system's remote desktop feature is not supported. Be sure to select the Internet Protocol (TCP/IP) check box when specifying an IP address.

(2) Optional LAN board / Riser Card

This server supports the following optional LAN boards / Riser Card. The drivers for LAN boards / Riser Card are automatically installed using the OS plug-and-play function.

Optional LAN boards: N8104-132/138

Optional Riser Card: N8104-135

If [! Ethernet Controller] is displayed in Device Manager after LAN card or riser card has been installed, you need to install the driver in the following procedure.

1. Set EXPRESSBUILDER DVD in optical disk drive.

When the Autorun menu appears, close the window.

Tips

If you apply Starter Pack from Internal Flash Memory, you do not need to set EXPRESSBUILDER DVD.

2. Launch Device Manager, and double-click [! Ethernet Controller].

The [Ethernet Controller Properties] appears.

3. Click [Update Driver] in [Driver] tab.

[Hardware Update Wizard] appears.

- 4. Select [No, do not connect now.], and click [Next].
- 5. Select [Install from a list or specific location], and click [Next].

6. Select [Search for the best driver in these locations], and [Include this location in the search]. Enter the following location and click [Next].

• When using EXPRESSBUILDER DVD:

Optical diskdrive:\021\win\winnt\dotnet\lan\bcom\drvinst\14060401\ia32\win2003\ia32

• When applying Starter Pack from Internal Flash Memory:

System drive: \StartPKG\dotnet\lan\bcom\drvinst\14060401\ia32\win2003\ia32

Note Be sure to uncheck the [Search removable media (floppy, CD-ROM...)] check box, if checked.

- 7. Click [Finish].
- 8. When you have applied LAN driver to every [! Ethernet Controller], remove EXPRESSBUILDER DVD from the optical disk drive, and restart the system.

Installing Starter Pack now completes.

Important [! Ethernet Controller] may not be displayed in Device Manager after LAN card or riser card has been installed. In such a case, the LAN driver is installed automatically. Make sure that the network adapter name for LAN card/riser card is found on [(Network Adapter Name)] under [Network Adapters] tab.

(3) Network adapter name

After installing the LAN drivers, the following network adapter names will be displayed by the Device Manager or BACS.

Network adapters for the standard configuration

Broadcom NetXtreme Gigabit Ethernet #xx*

If connecting with an optional LAN board:

[N8104-132/138] Broadcom NetXtreme Gigabit Ethernet #xx*

If connecting with an optional Riser Card:

[N8104-135] Broadcom NetXtreme Gigabit Ethernet #xx*

* If there are adapters with the same name, a different identification number will be assigned to xx.

6.5.2 Setting up LAN drivers

(1) Setting link speed

The transfer rate and duplex mode of the network adapter must be the same as those of the switching hub. Follow the procedure below to specify the transfer rate and duplex mode.

- 1. Open the **Device Manager**.
- 2. Expand **Network Adapters**, and then double-click the name of the network adapter you want to set. The properties of the network adapter will be displayed.
- 3. Select the **Advanced** tab, and then set the **Speed & Duplex** values to the same as those of the switching hub.
- 4. Click [OK] in the Network Adapter Properties dialog box.
- 5. Restart the system.

The link speed setting is now complete. Proceed to set up WOL.

6.5.3 Setting up team/LiveLink

Note

- You must set up LiveLink when setting up a team. Teams that are not configured for LiveLink are not supported.
 - When deleting the team, refer to *Chapter 1 (6.4.3 Setting up team/LiveLink) (4) Procedure for deleting team*. When replacing the motherboard or a LAN board, follow these steps to remove the team and create it again after replacement.
 - Be sure to specify the same Jumbo Mtu (Jumbo Packet) setting to all the adapters that compose a team.

(1) Team types

The following team types are supported.

- Smart Load Balancing and Failover (without Standby Member) All adapters that compose the team perform communication.
 If a communication failure occurs on an adapter, other adapters that compose the team continue the communication.
 When the adapter on which the communication failure occurred recovers, it joins the team again and
 - resumes the communication.
- Smart Load Balancing (Auto-Failback Disable) (with Standby Member) Among the adapters that compose the team, primary adapters except the standby member perform communication.
- If a communication failure occurs, the standby member continues the communication.

When the adapter on which the communication failure occurred recovers, it joints the team again and the standby adapter returns to the standby state.

(2) LiveLink

LiveLink is a function that detects communication route failures of adapters. It periodically investigates the communication status of specified destinations (IP address).

Link packets are sent from each adapter within a team.

If a response to the transmission of a link packet within the specified range is not detected, it is identified as a communication route failure and adapter communication is stopped.

When a response to the submission of a link packet is detected, communication LiveLink identifies communication as having been recovered, and communication using that adapter automatically resumes.

Note

You must set up LiveLink when you create a team.

(3) Setting up team/LiveLink

Note	The team must be composed of two adapters.
	Possible combinations of network adapters that compose the team are as
	follows.
	 Between standard network adapters.
	 Between LAN board and Riser Card
	 A standard network adapter and LAN boards / Riser Card
Tips	To edit a team, right-click on the BACS team, and then select Edit TEAM.
	Then refer to step 3 and later in <i>Chapter 1 (6.4.3 Setting up team/LiveLink) - (3)</i> Setting up team/LiveLink to edit the team.

- 1. Double-click the **Broadcom Control Suite3** icon on the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Select **Team Management** from the left menu, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.

Like View Tools Tgams Help Configurations Statistics Information Team Management Vital Signs CF-0-49-56-97-8A Orbising nethradapters Orbisin	Broadcom Advanced Control Suite 3						-
Statistics Information Team Management Vital Signs MAC Address 6C-F0-49-56-97-8A Image: Statistics CF0-49-56-97-8A Image: Statistics Up Image: Statistics Up </th <th><u>F</u>ile <u>V</u>iew <u>T</u>ools T<u>e</u>ams <u>H</u>elp</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	<u>F</u> ile <u>V</u> iew <u>T</u> ools T <u>e</u> ams <u>H</u> elp						
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	Teams	MA	C Address		6C-F	0-49-56-97-8A	
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[0018] Broadcom NetXtreme Gigabit Ethe Create a Team https://www.sciences.com Full Marginger Create a VLAN Create a VLAN Contract Com Full Offread Capabilities LSO,CO,RSS Mu 1500 Driver Information Driver Information Driver Name b57/nd60a.sys Driver Name b57/nd60a.sys Driver Name b7/refo80a.sys Driver Name 1/26/2011 Bas Type PCLE (1X) Bus Type PCLE (1X) Bus Type 4 Vital Signs The Vital Signs section of the Information ab network address that are installed in your system, such as the link state adapter and general network connectivity.	Add to a T	eam 🚺	IP Address		fe80:	::54ec:8ea0:93	30:9e6e
Menace Teams Full Create a VLAN Part (n (Mbps)) Diver Information 1000 Driver Information Driver Information Driver Status Loaded Driver Status Loaded Driver Version 14.6.0.7 Driver Date 1/26/2011 Bus Type PCLF (1X) Bus Type PCLF (1X) Device Management The Vital Signs section of the Information ab network adapters that are installed in your system, such as the link state adapter and general network connectivity.	[eam n	Status		Up		
Create a VLAN Used (n Mbps) 1000 Offwad Capabilities LSO,CO,RSS Mtu 1500 Driver Information Driver Status Driver Vame 557nd50a.sys Driver Version 14.6.0.7 Driver Vame 1/26/2011 B Resources 1/26/2011 B us Type PCLE (1X) Bus Type PCLE (1X) Bus Type A Vital Signs section of the Information tab has useful information ab network adgeters that are instaled in your system, such as the link state adgeter and general network connectivity.	Manage Te	ams	ex 🕹		Full		
Device Management Coffsad Capabilities LSD, CO,RSS Mbu 1500 Mbu 1500 Driver Information Driver Status Driver Name b57xd60a.sys Driver Variance 126,2011 B Resources Bus Type PCI-E (1X) Bus Type Bus Type PCI-E (1X) Bus Type 4	Create a V	'LAN 🙀	d (in Mbps)		1000		
Mu 1500 Driver Information Driver Status Driver Name 557nd50a.sys Driver Version 14.6.0.7 Driver Date 1/26/2011 Driver Date 1/26/2011 Desceree PCL-E (1X) Bus Type PCL-E (1X) Bus Number 4 Vital Signs The Vital Signs section of the Information tab has useful information ab network adapters that are installed in your system, such as the link status Device Management adapter and general network connectivity.			ad Capabilities		LSO,	CO,RSS	
Driver Information Driver Status Loaded Driver Name b57nd60a.sys Driver Vane b57nd60a.sys Driver Vane 14.6.0.7 Driver Date 1/26/2011 Executes Bus Type Bus Type PCI-€ (X) Bus Number 4 Vital Signs The Vital Signs section of the Information ab network adapters that are installed in your system, such as the link stat adapter and general network connectivity.		Mti	1		1500		
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Bus Type PCI-E (1X) Bus Number 4 Vital Signs section of the Information tab has useful information ab network adopters that are installed in your system, such as the link sta adapter and general network connectivity.		Dri	ver Date		1/26	/2011	
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Bus Number 4 Vital Signs 4 Vital Signs section of the Information tab has useful information ab network adapters that are installed in your system, such as the link state adapter and general network connectivity. 4		Bus	Type		PCI-E	E (1X)	
Vital Signs The Vital Signs section of the Information tab has useful information ab network adapters that are installed in your system, such as the link sta adapter and general network connectivity.		Bus	Number		4		
Team Management	Device Management Team Management	Vital S The Vit netwo adapte	Figns al Signs section rk adapters that rr and general no	of the Informa are installed ir atwork connec	ation tab has u n your system tivity.	useful informat a, such as the li	ion abo nk stati

The Broadcom Teaming wizard appears.

3. Click [Next].



Note

Do not use Expert Mode.

4. Enter any name into the team name entry column, and then click [Next].



5. Make sure that the following team type is selected, and then click [Next]. Team type: Smart Load Balancing (TM) and Failover (SLB)



6. Select the adapters that compose the team, click [Add] to add them to the **Team Members** area, and then click [Next].

Broadcom Teaming Wizard				?
Creating/Modifying a Team: Assigning Te Specify which adapters to include in the t Include adapters that you wish to set for t	eam Men team. the stand	nbers dby role.		BROADCO
Available Adapters	TOE	LSO	CO	RSS
[0018] Broadcom NetXtreme Gigabit Eth	No	Yes	Yes	Yes
Add 🖡 🗌	Remove	」 î		
Team Members	TOE	LSO	CO	RSS
[0017] Broadcom NetAtreme Gigabit Eth_	. NO	tes	res	res
•				Þ
Team Offload Capabilities		LSO, CO), RSS	
Team Mtu	150	10		
Click here for more information about confi	iguring tea	aming.		
			Prev	iew 🚺
<u>C</u> ancel		< Ba	ck	Next >

- 7. Proceed according to your desired team type.
 - Smart Load Balancing and Failover (without Standby Member)
 - (1) Select **Do not configure a standby member**.
 - (2) Click [Next].

eating/Modifying a Team: Designating a Standby Member you want to designate an available adapter as a standby mber?	BROADCOM	
-Optionally select if you want a standby member for the team.		
 Do not configure a standby member. Use the following member as a standby member: 		
[0017] Broadcom NetXtreme Gigabit Ethernet	<u>-</u>	
Enable Auto-Fallback Disable mode		
Click here for information about designating a standby member and en Auto-Fallback Disable mode.	abling_	
-		
Gancel K Back	Next >	10
	• you want to designate an available adapter as a standby member? • Optionally select if you want a standby member for the team. • Do not configure a standby member. • Use the following member as a standby member: [0017] Broadcom Net/Kreme Gigabit Ethernet • Enable Auto-Fallback Disable mode 2lick here for information about designating a standby member and en Auto-Fallback Disable mode. Pre	you want to designate an available adapter as a standby metr? Optionally select if you want a standby member for the team. Optionally select if you want a standby member for the team. Out configure a standby member. Use the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member as a standby member. Out of the following member and enabling. Out of the following member and enabling. Preview Qancel Cancel Cancel

- Smart Load Balancing (Auto-Failback Disable) (with Standby Member)
 - (1) Select Use the following member as a standby member.
 - (2) Select the adapter that is to be a standby member from the drop-down list.
 - (3) Select Enable Auto-Failback Disable mode.
 - (4) Click [Next].

🔛 Broadcom Teaming Wizard	? ×	
Creating/Modifying a Team: Designating a Standby Member Do you want to designate an available adapter as a standby member?	BROADCOM	
Cptionally select if you want a standby member for the team. C Do not configure a standby member. (1) C Use the following member as a standby member: (2) [[0017] Broadcom NetXireme Gleabit Ethernet (3) IV Enable Auto-Faliback Disable mode		
Click here for information about designating a standby member and er Auto-Fallback Disable mode.	nabling	
<u>Q</u> ancel < Back	eview	(4

Note

Enable Auto-Failback Disable mode is cleared while editing the team. Select it again.

8. Select Yes for Configure LiveLink?, and then click [Next].

🔡 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Configuring LiveLink Do you want to configure LiveLink?	BROADCOM.
Configure LiveLink?	
LiveLink detects loss of network connectivity beyond the survive routes traffic only through team members that have a live li	vitch and nk.
Click here for more information about configuring teaming,	
Prev Cancel Sack	view Next >

You can use the default setting for Probe interval and Probe maximum retries. If you change these values, select a value from each drop-down list, click the target probe (Probe Target xx), and then click [Edit Target IP Address...].

Creating/Modifying a Team: Configu Configure LiveLink(TM) attributes.	ing LiveLink (continued)	DCO
Probe interval (seconds): Probe maximum retries: Probe VLAN ID (Optional: 0 -	2 V 5 V	
Target Probe Target 1 Probe Target 2 Probe Target 3 Probe Target 4	IP Address	-
Edit Tr At least one LiveLink probe Click here for more information about	rget IP Address	
Cance	Preview	

Tips

- The setting range of Probe interval (link packet transmission interval) is 1 to 60 (units: seconds).
- The setting range of Probe maximum retries (link packet retry count) is 1 to 10 (times).
- Switching a path upon detection of a communication path error by LiveLink takes (Probe maximum retries + 1) x Probe interval (seconds) at maximum.
 If an optional LAN board detects that a link is down, failover occurs immediately after the link goes down. It takes the time specified for Probe interval (seconds) to recover from the link going down.
- 10. In the Target xx text box, enter the IP address of the alive monitoring server, and then click [OK].



Note

- Target xx must be the same broadcast domain as that specified for the data communication IP and LiveLink communication IP (described in step 13). Specify an IP address that exists on the network and with which communication is possible.
- If communication with the IP address specified in *Target xx* is not possible, the team will also be unable to communicate. It is therefore recommended that you specify multiple IP addresses using *Probe Target*. Up to four IP addresses can be specified.
11. Click [Next].



12. Select an adapter from the Team Members area, and then click [Edit Member IP Address...].

🔜 Broadcom Teaming Wizard	? ×
Creating/Modifying a Team: Configuring LiveLink (continued) Configure the IP address for each team member.	BROADCOM.
Teän mehoefs IPv4 Addre IPv4 Addre I0017] Broadcom NetXtreme Gigabit Ethernet #2 I0018] Broadcom NetXtreme Gigabit Ethernet #2 Edit Member IP Address	IPv6 Addr
Every member must have a static IP address. Olick here for more information about configuring teaming. Pre Qancel < Back	view 💽

13. Enter the IP address used for LiveLink communication, and then click [OK].

LiveLink Co	nfiguration	•			×
-IP Setting					
Name:	[0017] Broa	adcom NetX	itreme Giga	bit Ethernet	
IP∨4 Addre	SS				
IP∨6 Addre	ss				
C	OK		<u>C</u> ance		

Note

Be sure to specify an IP address for LiveLink communication for all the adapters that compose the team. The address specified here is the IP address for LiveLink communication. Specify a different IP address for data communication.
For *Target xx*, specify an IP address that is unique on the network and with which communication is possible.

14. Click [Next].



15. Make sure that Skip manage VLAN is selected under Manage VLAN, and then click [Next].

Broadcom Teaming Wizard	<u>? ×</u>
Creating/Modifying a VLAN: Configure VLAN Support Specify whether you want to create or delete a VLAN.	BROADCOM
Manage VLAN	
C Add VLAN	
🔿 Edit VLAN	
Skip manage VLAN	
	Preview
<u>C</u> ancel < Back	Next >

16. Make sure that **Commit changes to system and Exit the wizard** is selected under **Commit changes**, and then click [Finish].

👺 Broadcom Teaming Wizard	? ×		
Congratulations! The Teaming Wizard has finished information. How would you like to proceed?	d collecting		
Commit changes C Commit changes to system and Exit the wizarc C Save changes and continue to manage more te	ams		
Applying the changes will temporarily inte The process may take several minutes an afterwards.	rrupt the network connection. d the connection will resume		
Qancel	Preview Finish		
Note	When the message "Applying th connection. connection w	e below appears, select [Yes]. Ne changes will temporarily interrupt the The process may take several minutes will resume afterwards. Do you want to c	ne network s and the continue?"
Tips	After creating a te perform steps 8 thr	am, if the teaming adapter displays like the follo ough 14 again and correct the LiveLink settings.	wing image,
	Broa	adcom Advanced Control Suite 3	
	Explore	r View	
	Team N	fanagement	
		lo reams	
		BASP Virtual Adapters Team 1 ([0021] BASP Virtual Adapter) Commercy Adapters [0007] Broadcom NetXtreme Gigabit Ethernet	
		[0010] Broadcom NetXtreme Gigabit Ethernet #2	

17. Restart the system.

- 18. After the system starts, follow step 1 to start **Broadcom Control Suite3** and confirm that a team has been created. Confirm the team settings on the **Information** window to the right.
 - Broadcom Advanced Control Suite . . X <u>File View T</u>ools T<u>e</u>ams <u>H</u>elp Information
 Configurations
 Statistics
 Team Properties Explorer View Team Managemen E Team 1 Team Name Team Type Team 1 Smart Load Balancing(TM) and Failove View Virtual Adapters Team Type Team Offload Capabilities Team Mtu Driver Name Driver Version Driver Date LSO, CO, RSS Team 1 ([0021] BASP Virtual Adapter) 1500 Basp.sys 1.4.6 🐞 [0007] Broadcom NetXtreme Gigabit Ethernet 2010/12/21 [00 10] Broadcom NetXtreme Gigabit Ethernet # Probe Interv Probe Max Ret signed A ters Probe Vlan ID 100.100.100.10 Probe Target 1 Probe Target 2 100.100.100.20 Probe Target 3 Probe Target 4 100.100.100.30 100.100.100.40 Probe Max Retrie Device Management Team Ma 27153 ROADCO
- Smart Load Balancing and Failover (without Standby Member)

- Smart Load Balancing (Auto-Failback Disable) (with Standby Member)



Team setup is now complete.

(4) Procedure for deleting team

Note

You must delete teams from Broadcom Control Suite3. You cannot delete the team from the team adapter displayed in the Device Manager.

- 1. Double-click **Broadcom Control Suite3** in the Control Panel window. **Broadcom Advanced Control Suite3** starts.
- 2. Click **Team Management** from the left menu, right-click the team name under **Teams**, and then select **Delete Team** from the short-cut menu.

Eile <u>V</u> iew <u>T</u> ools T <u>e</u> ams <u>H</u> elp Explorer View 1	Information Configurations	
Team Management		
Reams	Team Properties	3
Dee Team 1	Team Name Tea	am 1 🛛 🖁
Edit Team	Team Type Sm	art Load 🗧
🗖 📥 📂 🗛 🛛 Delete Team	Team Offload Capabilities LSG	D, CO, R 🕒
Add VLAN P Virtual Adapter)	Team Mtu 15	00
Fallback	Driver Name Bas	sp.sys
	Driver Version 1.4	1.6
[00 18] Broadcom NetXtreme Gigabit Ethernet	Driver Date 20	10/12/21
Device Management	Team Properties Displays information about the team.	
Team Management		
Team Management		

Note

When the message below appears, select [Yes].

"The selected team will be deleted from system, do you want to proceed? NOTE: Applying the changes will temporarily interrupt the network connection. The process may take several minutes and the connection will resume afterwards."

3. Insert EXPRESSBUILDER DVD into the optical disk drive. If an autorun menu appears, close the menu window.



- $\mbox{ 4. } \mbox{ Double-click} \mbox{ addlvlanstats.vbs} \mbox{ in the following folder}.$
 - When using EXPRESSBUILDER DVD: Optical disk drive:\021\win\winnt\dotnet\lan
 - If Starter Pack was installed from Internal Flash Memory: *System drive*:\StartPKG\dotnet\lan
- 5. When the following message appears, click [OK].

LegacyVlanStats	×
Registry Addition Completed, Reboot	the system
	OK

6. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Team deletion is now complete.

6.5.4 Graphics accelerator driver

The graphics accelerator driver for standard configurations is installed when Starter Pack is installed from EXPRESSBUILDER.

To reinstall drivers separately, complete the following steps.

1. Insert EXPRESSBUILDER DVD into the optical disk drive.

If an autorun menu appears, close the menu window.

Tips

You do not have to insert EXPRESSBUILDER DVD if Starter Pack was installed from Internal Flash Memory.

- 2. From the Start menu, point to All programs, Accessories, and then select Explorer.
- Double-click the install.bat icon in the following folder. When using EXPRESSBUILDER DVD: Optical disk drive: \021\win\winnt\dotnet\video

If Starter Pack was installed from Internal Flash Memory: *System drive*:\StartPKG\dotnet\video

You will be prompted to confirm the End User License Agreement during this process. Click the [ACCEPT] button and continue.

4. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

6.5.5 When using a SCSI controller (N8103-107)

The driver for SCSI controller is installed when you apply "Starter Pack".

If you setup the server using EXPRESSBUILDER while the SCSI controller N8103-107 is connected, the driver for SCSI controller is installed automatically.

6.5.6 When using a SAS controller (N8103-104A/142)

The driver for SAS controller is installed when you apply "Starter Pack".

If you setup the server using EXPRESSBUILDER while the SAS controller N8103-104A/142 is connected, the driver for SAS controller is installed automatically.

6.5.7 When using a RAID Controller (N8103-160)

The driver for RAID Controller is installed when you apply "Starter Pack".

If the server is setup with EXPRESSBUILDER, the driver for RAID Controller is installed automatically.

Also if RAID Controller (N8103-149/150/151/160) is already used, the driver is automatically installed.

6.6 Specifying PAE Option

If the server can mount a memory of more than 4 GB in a 32-bit system, specify the PAE option settings to use that memory.

ImportantThe PAE option is not supported by all products.
Refer to the following knowledge base to confirm whether your product
supports the PAE option:KB291988
A description of the 4 GB RAM Tuning feature and the Physical Address
Extension parameter

For Windows Server 2003, the PAE option can be specified by editing the Boot.ini file. The following shows an example of editing the Boot.ini file.

- 1. From the Start menu, point to Settings and then click Control Panel.
- 2. Double-click the **System** icon in the Control Panel window. The System Properties dialog box appears.
- 3. Select the Advanced tab, and then click [Settings] under Startup and Recovery.
- 4. Click [Edit] in the System startup area on the Startup and Recovery dialog box, and then open the Boot.ini file.
- Add /PAE to operating systems, and then save the Boot.ini file. Boot.ini example:

```
[boot loader]
timeout=30
default=multi(0)disk(0)rdisk(0)partition(2)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(2)\WINDOWS="Windows Server 2003"
/fast detect
multi(0)disk(0)rdisk(0)partition(2)\WINDOWS="Windows Server 2003,
PAE" /fastdetect/PAE
C:\CMDCONS\BOOTSECT.DAT="Microsoft Windows Recovery Console" /cmdcons
```

Editing of the Boot.ini file is now complete.

Tips

You can specify an OS to start up automatically from the **Default operating system** drop-down list in the Startup and Recovery dialog box.

6.7 Installing the Bundled Software

The supplied EXPRESSBUILDER DVD contains the server monitoring software NEC ESMPRO Agent and system management software NEC ESMPRO Manager. Refer to *Chapter 2 Installing the Bundled Software* to install the software separately.

Tips

Some utilities should be installed into PC for Management on the network. For details, refer to *Chapter 2 Installing the Bundled Software*.

6.8 License Authentication

To use Windows Server 2003, the license must be authenticated in advance. The following describes the license authentication procedure.

- Following this procedure is not required if you use Backup CD-ROM for installation.
- Select Run from the Start menu. Enter the following to the Open text box, and then click [OK]. oobe/msoobe /a



Tips

2. When the following message appears, click [Next].



The following message appears.

Generating new Installation ID...

3. Follow the instructions in the following message to start the license authentication process.



License authentication is now complete.

6.9 Reinstallation When Multiple Logical Drives Exist

Before starting reinstallation, backup data for future use in case of data loss.

Important Before starting setup, be sure to disconnect hard disk drives from the RAID Controller that is not to be setup. Install those hard disk drives after setup has completed. Conducting setup with hard disk drives being connected with RAID Controller may cause existing data to be erased unintentionally.

(1) Reinstallation process

Setup with EXPRESSBUILDER

Refer to *Chapter 1 (6.2 Setup with EXPRESSBUILDER*), and proceed with setup. In this case, EXPRESSBUILDER installs the Windows on the first detected hard disk drive or logical drive.

Setup with OS standard installer

- 1. Refer to Chapter 1 (6.3 Setup with OS Standard Installer), and start setup.
- 2. When the following message appears, select the partition to which you want to set up the operating system.

The following list shows the existing partitions and unpartitioned space on this computer. Use the UP and DOWN ARROW keys to select an item in the list.

Important You cannot edit the drive letters for the system volume or boot volume after setup is complete. Make sure that the drive letters assigned in this window are correct, and then proceed with setup.

3. Follow the steps to proceed with Setup with OS standard installer.

Reinstallation is now complete.

Tips

The drive letter might change after reinstallation. If you want to change the drive letter, use the procedure shown in *Changing drive letter assignments* below.

(2) Changing drive letter assignments

To change the drive letter, follow the steps below. But these steps cannot change drive letter assignments for the system volume or boot volume. If you want to change them, re-install the Windows.

- 1. From the Start menu, right-click My Computer and then select Management. Next, launch Computer Management.
- 2. From the window on the left, select **Disk Management**.
- 3. Right-click the volume whose drive letter you want to change, and then select **Change drive letter and path**.
- 4. Click [Change].
- 5. Click [Assign next drive letter], and then select the drive letter you want to assign.

- 6. Click [OK].
- 7. When the following message appears, read the contents and then click [OK].

Changing the drive letter of a volume might cause programs to no longer run. Are you sure you want to change this drive letter?

8. Close the Computer Management window.

Changing drive letter assignments is now complete.

7. Setup for Solving Problems

This section describes the features that must be set up in advance so that the server can recover from any trouble immediately and precisely.

7.1 Specifying Memory Dump Settings (Debug Information)

This section describes the procedures for collecting a memory dump (debug information) in the server.

Important	Cautions concerning memory dumps
	Memory dumps must be collected by a staff member from the maintenance
	service company. Customers only need to specify the settings for the memory dump.
	 If any trouble occurs after specifying the settings below and you attempt to
	restart the system to save the memory dump, a message informing you
	that the system is short of virtual memory might appear. However, this
	message can be ignored and you can proceed with the restart. If you
	restart the system a second time, the memory dump might not be stored
	normally.

7.1.1 For Windows Server 2008 R2

Follow the procedure below to specify the memory dump settings.

- 1. Select **Control Panel** from the **Start** menu. The Control Panel window appears.
- 2. Click System and Security on the Control Panel window.

Tips If View by is not Category, select System from Control Panel directly.

- 3. Click System.
- 4. Click **Advanced system settings**. The System Properties dialog box appears.
- 5. Select the Advanced tab, and then click [Settings] under Startup and Recovery.
- 6. Specify the folder to store the debug information in the Dump file: text box.

Example: To store the debug information in D drive under the file name MEMORY.DMP: D:\MEMORY.DMP

Note the following when specifying a dump file.

- For the Write debugging information drop-down list, we recommend specifying Complete memory dump. If the mounted memory size is greater than 2 GB, however, Complete memory dump cannot be specified because it is not displayed on the drop-down list. In this case, specify Kernel memory dump instead.
- Specify a drive that has a free space of at least "the memory capacity mounted on the server + 300 MB".
- If you attempt to add memory that will cause the mounted memory size to exceed 2 GB, specify Kernel memory dump from the Write debugging information drop-down list before adding the memory. The size of the debug information (memory dump) to be collected

changes if memory is added. Make sure that the free space of the drive to store the debug information (memory dump) is sufficient.

7. Click [Settings] under Performance.

The Performance Options dialog box appears.

- 8. Click the Advanced tab on the Performance Options dialog box.
- 9. Click [Change] under Virtual memory.
- 10. Clear the Automatically manage paging file size for all drives check box, and then select the Custom size option button.
- 11. In the Paging file size for each drive group box, specify as follows:

For the **Initial size** text box, specify a value equal to or greater than the **Recommended** value shown in the **Total paging file size for all drives** area.

For the **Maximum size** text box, specify a value equal to or greater than the value specified in the **Initial size** text box.

After specifying the above values, click [Set].

Note the following when specifying a paging file size.

- The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the Windows partition paging file must be large enough to store dump files. Make sure to set a sufficient paging file size. If the paging file size is insufficient, correct debug information might not be able to be collected due to a shortage of virtual memory.
- For details about the Recommended value in the Total paging file size for all drives area, refer to System partition size in Before Starting Setup. When memory is added, re-specify the paging file according to the increased memory size.

12. Click [OK].

A message to restart the system might appear, depending on the modifications made. In this case, restart the system.

Specification of the memory dump settings is now complete.

7.1.2 For Windows Server 2008

Follow the procedure below to specify the memory dump settings.

- 1. Select **Control Panel** from the **Start** menu, and then click **System**. The System dialog box appears.
- Click Advanced system settings. The System Properties dialog box appears.
- 3. Select the Advanced tab, and then click [Settings] under Startup and Recovery.
- 4. Specify the folder to store the debug information in the **Dump file:** text box.

Example: To store the debug information in D drive under the file name MEMORY.DMP: D:\MEMORY.DMP

Note the following when specifying a dump file.

For Windows Server 2008 64-bit (x64) Edition

- For the Write debugging information drop-down list, we recommend specifying Complete memory dump. If the mounted memory size is greater than 2 GB, however, Complete memory dump cannot be specified because it is not displayed on the drop-down list. In this case, specify Kernel memory dump instead.
- Specify a drive that has a free space of at least "the memory capacity mounted on the server + 300 MB". If you attempt to add memory that will cause the mounted memory size to exceed 2 GB, specify Kernel memory dump from the Write debugging information drop-down list before adding the memory. The size of the debug information (memory dump) to be collected changes if memory is added. Make sure that the free space of the drive to store the debug information (memory dump) is sufficient.

For Windows Server 2008 32-bit (x86) Edition

- For the Write debugging information drop-down list, we recommend specifying Complete memory dump. If the mounted memory size is greater than 2 GB, however, Complete memory dump cannot be specified because it is not displayed on the drop-down list. In this case, specify Kernel memory dump instead.
- Specify a drive that has a free space of at least "the memory capacity mounted on the server + 300 MB" (or 2048 MB + 300 MB if the memory size exceeds 2 GB). If you attempt to add memory that will cause the mounted memory size to exceed 2 GB, specify Kernel memory dump from the Write debugging information drop-down list before adding the memory. The size of the debug information (memory dump) to be collected changes if memory is added. Make sure that the free space of the drive to store the debug information (memory dump) is sufficient.
- Click [Settings] under **Performance**. The Performance Options dialog box appears.
- 6. Click the Advanced tab on the Performance Options dialog box.
- 7. Click [Change] under Virtual memory.
- 8. Clear the **Automatically manage paging file size for all drives** check box, and then select the **Custom size** option button.

9. In the Paging file size for each drive group box, specify as follows:

For the **Initial size** text box, specify a value equal to or greater than the **Recommended** value shown in the **Total paging file size for all drives** area.

For the **Maximum size** text box, specify a value equal to or greater than the value specified in the **Initial size** text box.

After specifying the above values, click [Set].

Note the following when specifying a paging file size.

- The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the boot volume paging file must be large enough to store dump files. Make sure to set a sufficient paging file size. If the paging file size is insufficient, correct debug information might not be able to be collected due to a shortage of virtual memory.
- For details about the Recommended value in the Total paging file size for all drives area, refer to System partition size in Before Starting Setup.
- When memory is added, re-specify the paging file according to the increased memory size.
- 10. Click [OK].

A message to restart the system might appear, depending on the modifications made. In this case, restart the system.

Specification of the memory dump settings is now complete.

7.1.3 For Windows Server 2003

Follow the procedure below to specify the memory dump settings.

Tips

- Although the procedure below uses Windows Server 2003 as an example, Windows Server 2003 R2 x64 Edition can be set up using the same procedure.
- 1. Select **Control Panel** from the **Start** menu, and then click **System**. The System Properties dialog box appears.
- 2. Click the Advanced tab.
- 3. Click [Settings] under Startup and Recovery.
- 4. Specify the folder to store the debug information in the **Dump file:** text box.

Example: To store the debug information in D drive under the file name MEMORY.DMP: D:\MEMORY.DMP

Note the following when specifying a dump file.

For Windows Server 2003 R2 x64 Edition

- For the Write debugging information drop-down list, we recommend specifying Complete memory dump. If the mounted memory size is greater than 2 GB, however, Complete memory dump cannot be specified because it is not displayed on the drop-down list. In this case, specify Kernel memory dump instead.
- Specify a drive that has a free space of at least "the memory capacity mounted on the server +
 1 MB". If you attempt to add memory that will cause the mounted memory size to exceed 2 GB,
 specify Kernel memory dump from the Write debugging information drop-down list before
 adding the memory. The size of the debug information (memory dump) to be collected
 changes if memory is added. Make sure that the free space of the drive to store the debug
 information (memory dump) is sufficient.

For Windows Server 2003

- For the Write debugging information drop-down list, we recommend specifying Complete memory dump. If the mounted memory size is greater than 2 GB, however, Complete memory dump cannot be specified because it is not displayed on the drop-down list. In this case, specify Kernel memory dump instead.
- Specify a drive that has a free space of at least "the memory capacity mounted on the server + 12 MB" (or 2048 MB + 12 MB if the memory size exceeds 2 GB). If you attempt to add memory that will cause the mounted memory size to exceed 2 GB, specify Kernel memory dump from the Write debugging information drop-down list before adding the memory. The size of the debug information (memory dump) to be collected changes if memory is added. Make sure that the free space of the drive to store the debug information (memory dump) is sufficient.
- Click [Settings] under **Performance**. The Performance Options dialog box appears.
- 6. Click the Advanced tab on the Performance Options dialog box.
- 7. Click [Change] under Virtual memory.

8. For the **Initial size** text box in the **Paging file size for selected drive** group box, specify a value equal to or greater than the **Recommended** value shown in the **Total paging file size for all drives** area, and then click [Set].

Note the following when specifying a paging file size.

- The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the boot volume paging file must be large enough to store dump files. Make sure to set a sufficient paging file size. If the paging file size is insufficient, correct debug information might not be able to be collected due to a shortage of virtual memory.
- For details about the Recommended value in the Total paging file size for all drives area, refer to System partition size in Before Starting Setup. When memory is added, re-specify the paging file according to the increased memory size.
- 9. Click [OK].

A message to restart the system might appear, depending on the modifications made. In this case, restart the system.

Specification of the memory dump settings is now complete.

7.2 How to Create a User-mode Process Dump File

7.2.1 For Windows Server 2008 R2 and Windows Server 2008

The user-mode process dump file records information when an application error occurs.

If an application error occurs, obtain user-mode process dump information using the following procedures without closing the pop-up window that reported the error:

- 1. Right-click an empty area of the taskbar and then click **Task Manager**, or press <Ctrl> + <Shift> + <Esc> keys to start **Task Manager**.
- 2. Click the Processes tab.
- 3. Right-click the name of the process that you want to obtain dump information for, and then click **Create Dump File**.
- 4. A dump file for the process is created in the following folder:
 - C:\Users\user name\AppData\Local\Temp

Tips

The folder above may be treated as a hidden folder.
If the folder is not displayed, perform the following:
For Windows Server 2008 R2:
Open Explorer, click Organize and then Folder and search options. Click the
View tab and then select the Show hidden files, folders, and drives check box.
For Windows Server 2008:
Open Explorer, select Folder and search options from the Tools menu. Click
the View tab and then select the Show hidden files and folders option button.

Once the user-mode process dump file has been created, obtain the file from the folder shown in step 4.

For details about how to create a user-mode process dump file, visit the following Microsoft Support web page:

How to create a user-mode process dump file in Windows Server 2008 http://support.microsoft.com/kb/949180

Tips

For Windows Server 2008 R2 and Windows Server 2008, because Dr. Watson is replaced by Problem Reports and Solutions, it is not possible to obtain a crash dump file by executing Dr. Watson. Use the procedure above to obtain information equivalent to a crash dump file.

User-mode process dump file creation is now complete.

7.2.2 For Windows Server 2003 (setting up Dr. Watson)

Dr. Watson for Windows is a debugger for application errors. If an application error is detected, Dr. Watson analyzes the system and records the diagnostic information (log). Follow the procedure below for collecting diagnostic information.

- 1. Select Run from the Start menu.
- 2. Enter drwtsn32.exe in the **Open** text box, and then click [OK]. The Dr. Watson for Windows dialog box appears.
- 3. Specify the path to save the diagnostic information file in the Log File Path text box. The diagnostic information file is saved under the file name DRWTSN32.LOG.

Note A network path cannot be specified. Specify a path on the local computer.

4. Specify the path to save the crash dump file into the Crash Dump text box.

Tips A crash dump file is a binary file that can be read by Windows Debugger.

- 5. For **Crash Dump Type**, select the **Full** option button.
- 6. In the **Options** group box, select the following check boxes:
 - Dump Symbol Table
 - Dump All Thread Context
 - Append To Existing Log File
 - Create Crash Dump File

For details about the function of each option, refer to the online help.

- 7. Click [OK].
- Dr. Watson setup is now complete.

7.3 Installing Network Monitor

Utilizing Network Monitor helps you investigate and manage network troubles.

7.3.1 For Windows Server 2008 R2 and Windows Server 2008

(1) Setting up Network Monitor

Tips

Windows Server 2008 R2 and Windows Server 2008 do not provide Network Monitor.

To capture network traces on Windows Server 2008 R2 or Windows Server 2008, Microsoft Network Monitor must be installed using the procedure described below.

- Download Network Monitor from the following Microsoft web page: http://support.microsoft.com/kb/933741/en-us
- Run the downloaded file to start the installer.
 Follow the onscreen instructions to install Network Monitor.

Tips

If the Security Alert message appears, click [Run]. In the setup format selection window, select **Complete**.

Network Monitor installation is now complete.

Tips

To uninstall Network Monitor, use Programs and Features.

(2) Capturing network traces

- 1. Select Microsoft Network Monitor from the Start menu to start Network Monitor.
- 2. On the **Start Page** tab, click [Create a new capture tab...]. Or, select **New** from the **File** menu, and then click [Capture...].

A new tab for capturing network traces is created.

- 3. On the Select Networks pane, select the network whose traces are to be captured.
- 4. Select Start from the Capture menu to start capturing the network traces.
- 5. Select **Stop** from the **Capture** menu to stop capturing the network traces.
- Select Save As... from the File menu. The Save As dialog box appears. Select All captured frames from Frame selection, and then enter the folder and file names.

Tips

The default folder is as follows:

C:\Users\<User name>\Documents\Network Monitor 3\Captures

7. Click [Save].

The network trace file is created in the folder specified in step 6.

The setup for capturing network traces is now complete.

7.3.2 For Windows Server 2003

Utilizing Network Monitor helps you investigate and manage network failures.

- 1. From the **Start** menu, point to **Settings** and then click **Control Panel**. The Control Panel window appears.
- Double-click the Add/Remove Programs icon. The Add/Remove Programs dialog box appears.
- 3. Click the Add/Remove Windows Components icon. The Windows Components Wizard dialog box appears.
- 4. Select **Management and Monitoring Tools** under **Components**, and then click [Details]. The Management and Monitoring Tools dialog box appears.
- 5. Select the **Network Monitor Tools** check box under **Subcomponents of Management and Monitoring Tools**, and then click [OK].
- 6. The Windows Components Wizard dialog box appears again. Click [Next].
- 7. When a message prompting you to insert an installation disk appears, insert the required CD into the optical disk drive and then click [OK].

Tips

The message prompting insertion of the disk states that it is required to insert the CD with the label **Service Pack 1 CD-ROM**. For Windows Server 2003 R2, however, insert **Windows Server 2003 R2 DISC 1** into the optical disk drive.

- 8. Click [Finish] in the Windows Components Wizard dialog box.
- 9. Click the [Close] button in the Add/Remove Programs dialog box.
- 10. Close the Control Panel window.

Network Monitor installation is now complete. To start Network Monitor, point to **Programs** and then **Management Tools** from the **Start** menu, and then select **Network Monitor**. For details about how to operate Network Monitor, refer to the online help.

8. Windows OS Parameter File

This section describes a parameter file for Windows OS.

8.1 Creating Windows OS Parameter File

If a parameter file is used when performing Setup with EXPRESSBUILDER, a series of setup procedures from installing of the OS to installing several utilities can be executed automatically just by pressing keys for confirmation.

The settings from the previous installation can also be used when re-installing the system.

It is therefore recommended to use a parameter file to set up the server.

Tips

Windows can be installed without a parameter file. A parameter file can be created or modified during Setup with EXPRESSBUILDER.

8.1.1 How to create a parameter file

This section describes how to specify the setup information necessary for OS installation and how to create a parameter file.

Follow the procedure described below.

	а
Tips A parameter file can be created when using the following operating systems:	
 Windows Server 2008 R2 (Full installation) 	
 Windows Server 2008 (Full installation) 	
 Windows Server 2003 x64 Edition, Windows Server 2003 	
– Windows 7	
 Windows Vista 	
 Windows XP x64 Edition, Windows XP 	

- 1. Start the OS.
- 2. Insert the supplied EXPRESSBUILDER DVD into the optical disk drive. Autorun Menu automatically appears.
- 3. Right-click on the window or click **Set up Windows** to open the short-cut menu.

EXPRESSBUILDER	×
NEC	EXPRESSBUILDER
Menu items	
Read documents	
Setup Windows	
Setup software	
	🛞 Close Menu
	Version 6.xx-xxx.xx(xxx)

4. Select Create a parameter file for Windows OS.

EXPRESSBUILDER	×
NEC	EXPRESSBUILDER
Menu items	
🕞 Read docum	ents
Setup Windo	M/C
Setupftw:	Create a parameter file for Windows OS Install the .NET Eramework Ver2.0 Redistributable D:e(x86)
	Install the Microsoft Visual C++ 2005 SP1 Redistributable Package(x86)
	Install the Starter pack
	🔘 Close Menu
	Version 6.xx-xxx.xx(xxx)

The following window appears.



5. Specify the parameters according to the following procedure.

NE	EXPRESSBUILDER Version 5.xx-xxx.xx(xxx)
To install an oj If [Configure R If [Load a para	erating system, select an item in the listbox, and then click [Next]. AID system only] is selected, DXPRESSBULICER only configures RAID system without OS installation. meter file] is selected, you can set up the computer according to the parameter file.
	Install Windows Windows Server 2008 R2
	C Configure RAID system only
	C Load a parameter file
	Next



6. Set parameters required for setup.

Click [Settings] of the relevant category to change parameters.

🖪 Create a parameter file for	Windows 0S			×
NEC			EXPRESS Version	BUILDER
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. u can change the parameter in save the parameter to a u cannot proceed to the next	s of the category. file. t step. Click [Settings] to set	the parameters.	
RAID settings Skip	Disk array1 RAID1(2disk) Logical drive1 (2047GB)	: System Partition (40GB)		Default values Default Settings Skip
		+		
Windows settings	User information Default settings	Network settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back		Save	

Click [Default] to restore the default values.

You can see the default values by clicking [Default values].



6-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically. Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

Create a parameter file for	Windows OS			×
NEC			EXPRESS Version	6.xx-xxx.xx(xxx)
Set parameters for the se If [Settings] is clicked, you If [Save] is clicked, you ca *** If "!" is displayed, you	tup. u can change the parameter in save the parameter to a cannot proceed to the next	s of the category. file. t step. Click [Settings] to set	the parameters.	
RAID settings Skip	Disk array1 RAID1(2disk) Logical drive1 (2047GB)	: System Partition (40GB)		Default Default Settings Skip
Windows settings	User information Default settings	Network settings Default settings	Windows Components Default settings	Default Settings
Application settings	Applications installation Default settings	•		Default Settings
	Back		Save	

ImportantThe number of Physical Devices displayed on the RAID settings wizard is the
upper limit supported by the RAID Controller.
Make sure that the number of actually connected Physical Devices does not
exceed this value.

When creating new logical drives

- (1) Click [Settings] in RAID settings.
- (2) Use the wizard to set up the logical drives.

Important If you proceed with wizard, the existing RAID system is destructed and the contents of hard disk drive will be erased.

When skipping the creation of new logical drives

Click [Skip] in RAID settings.

Return to Parameter Setup Menu. Proceed to Windows setup.

6-2 Windows settings

Set up Windows by using the Windows settings wizard on Parameter Setup Menu.

	Wildows 05			
NEC			EXPRESS Version	6. xx - xxx .xx (xxx)
bet parameters for the se f [Settings] is clicked, you f [Save] is clicked, you ca *** If "!" is displayed, you	tup. u can change the parameter in save the parameter to a l i cannot proceed to the next	s of the category. file. : step. Click [Settings] to set	the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (2047GB)	: System Partition (40GB)		Default values Default Settings Skip
		+		
Windows settings	User information Default settings	Network settings	Windows Comporents Default settings	Default Settings
	-	+		
Application settings	Applications installation Default settings			Default Settings
			-	

- (1) Click [Settings] in Windows settings.
- (2) Click [Next] in the Windows settings wizard.

Wizard		-	
Follow the steps below If [Use OS standard in standard installer.	v to set the parameters necessary for Winde staller] is selected, you need to input param	ows setup. neters step by step without this	wizard by using the
	Start Set Windows preferences Set partition preferences Set partition preferences Set user preferences Set network preferences Set component preferences ↓ Check/Exit	Use OS standard installer	1 / 8 Page
	Next		Cancel

(3) Specify the Windows basic settings.

Change settings for "Edition" and "Time Zone" as needed, and click [Next].

sic information		
Operating System	: Windows Server 2008 R2	
C Use OS standar	d installer	
Copy the C	EM drivers into the removable media	
┌ [©] Setup with EXP	RESSBUILDER	
Edition	: Standard(Full Installation)	
Language	: English	
Time zone	: (UTC-08:00) Pacific Time (US & Canada)	

(4) Set up the partitions.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Set parameters about the partition o Windows is installed into the first har where 2TB is exceeded cannot be use	Windows system. disk drive or logical drive. The partition size can be set within 2TB.(The are j.)
Partitioning C Use the existing partiti C Create a new partition C Specify the maximum C Enter a value	n mount :(GB) *1TB=1024GB (15GB - 2047GB)
	3 / 8 Page

- Some data in the hard disk drive might be deleted depending on the system settings. Pay attention to input parameters. Backing up user data, as needed, is recommended.
 - Partition size
 - Specify a partition size larger than the minimum required for installing the operating system. (Refer to *Chapter 1 (Before Starting Setup)*.)
 - The maximum partition size is 2,097,152 MB.
 - If you select *Create a new partition* under *Partitioning*, the entire contents of the hard disk drive will be deleted.
 - If you select Use the existing partition under Partitioning, data in the boot partition (if it exists) and system partition is formatted and deleted. Data in other partitions will be kept.
 - The figure below shows in which partitions data will be deleted.

Boot partition	system partition	User data partition
Deleted	Deleted	Retained

- You cannot reinstall to an existing partition that has been upgraded to a Dynamic Disk (refer to *Chapter 1 (Before Starting Setup)*). Do not select Use the existing partition under Partitioning.
- The following message might be displayed when a created parameter file is loaded. In this event, installation using an existing partition cannot be executed. Select *Create a new partition* under *Partitioning* for installation. If there is a data partition, it will be deleted.



(5) Enter user information.

The user information window appears. Enter the user information, and then click [Next].

et parameters about user information. put Computer name within 15 characters. dministrator password requires more than 6 itegories(numbers / uppercase / lowercase /	characters, and must contain char signs).	acters from three of the followin
User information		
Computer name	: 7-383-635013540	(Required) 🗹 Auto
User name	: Administrator	
Administrator password	:	(Required)
Confirm Administrator password	:	(Required)
		4 / 8 Pane
		4 / 8 Page

Note	 For Windows Server 2008 R2/Windows 2008, you must enter a computer name and administrator password that satisfies the following conditions: Contains 6 or more characters Contains characters from at least three of the following categories: numbers, uppercase letters, lowercase letters, and symbols.
Tips	• The Computer name has been assigned by automatic assignment function. If
	you need to assign another computer name, remove the checkmark from
	"Auto", and enter the desired computer name.
	• Do not enter the same name for Computer name and User name fields.
	• Do not enter "Administrator" nor "Guest" in User name field.
	• If a parameter file is used for setup or if you return to a previous screen, ••••••
	is displayed in the Administrator password and Confirm Administrator
	password text boxes even if no value has been entered.

(6) Set up the network.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

-	
Wizard	
Set parameters about network protocol.	
If you input IP address, select [Custom settings], and then click [Adva	nced].
Notwork protocols	
- Network protocols	
 Standard setting 	
C Custom settings	
Standard adapter - Internat Protocol (IPv4)	Advanced
	5 / 8 Page
	5701090
Back Next	Cancel

Tips

The order of entry in **Custom settings** may differ from the numbering of LAN ports.

- Note Even when an optional network board is connected, the custom setting list only shows standard network boards. When an optional network board has been mounted, the optional network board may need to be configured for the custom settings. After finishing Setup with EXPRESSBUILDER, specify the network settings again.
- (7) Enter the domain or workgroup name to be used.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

ame : (ICERKGROUP) n	Join a workgroup		
n	Workgroup name	: WORKGROUP	
e :	Join a domain		
e :	Domain name	:	
e e e e e e e e e e e e e e e e e e e	Account name	:	
word :	Password	:	
	Confirm password	:	
			6 / 8 Page

(8) Select the Windows components for installation.

Confirm settings on the dialog shown below, change them as needed, and then click [Next].

Wizard	
Set parameters about Windows components.	
Select Windows features and Server roles to be enabled.	
Server roles	
Web server(IIS)	
DHCP server	
DNS server	
File services	
Print and Document services	
Windows features	
SNMP service	Advanced
Simple TCP/IP services	
WINS server	
	7 / 8 Page
Back Next	Cancel

(9) Confirm settings.

Confirm settings on the dialog shown below, and click [Finish].

nish this wizard, click [Finish].		
Installed OS	: Windows Server 2008 R2	
(Setup with EXPRESSBUILDER)		
Edition	: Standard(Full Installation)	
Language	: English	
Time zone	: (UTC-08:00) Pacific Time (US & Canada)	
Partition	: Create a new partition(40GB)	
	8 / 8 Page	

Return to Parameter Setup Menu.

Proceed to application setup.

6-3 Application settings

Set up applications using the Application settings wizard in Parameter Setup Menu.

Create a parameter file for Windows 05	×
NEC	EXPRESSBUILDER Version 6.xx-xxx, xx (xxx)
Set parameters for the setup. If [Settings] is clicked, you can change the parameters of the c If [Save] is clicked, you can save the parameter to a file. *** If "!" is displayed, you cannot proceed to the next step. Click is clicked.	ategory. ck [Settings] to set the parameters.
RAID settings Skip Logical drive1 (2047GB) : System	Partition (40GB) Partition (40GB)
Windows settings User information Network OK User settings Defe	vork settings Windows Components Default ault settings Default settings Settings
Application settings	Default Settings
Back	G Save

- (1) Click [Settings] in Application settings.
- (2) Confirm settings on the dialog shown below, change settings as needed, and click [Finish].

elect applications to install.				
or more information on each application, refer to [Description of Application] column.				
List of applications	Selected applications			
sply drivers for mass storage controller	Add >> Add >> KEC ESUMPRO Agent Universal RAD Unity Microsoft Visual C++ 2005 SP1 Redistributable KEC Belete			
Description of Application				

7. Save parameters on Parameter Setup menu.

Click [Save], and save the parameter file onto the removable media according to on-screen instructions.

Create a parameter file for Windows 05			×
NEC		EXPRESS	BUILDER
		Version	6.xx-xxx .xx (xxx)
Set parameters for the setup.			
If [Settings] is clicked, you can change the parameters If [Save] is clicked, you can save the parameter to a file	of the category. e.		
*** If "!" is displayed, you cannot proceed to the next s	step. Click [Settings] to set	the parameters.	
		0	Default values
RAID settings			Default
RAID1(2disk)	System Partition (40GB)	Ц	Settings
SKIP	, , ,		Skip
	+		
Windows settings User information	Network settings	Windows Components	Default
OK User settings	Default settings	Default settings	Settings
	+		
Application settings Applications installation			Default
OK Default settings			Settings
		0	
Back		Save Save	

When the following message appears, click [Yes] to complete parameter file creation.

Question	
	Do you quit creating a parameter file for Windows OS ?
?	
	[Message ID : D2003]
	Yes No

Parameter file creation is now complete.



NEC Express5800 Series Express5800/R120d-1M, R120d-2M

Installing the Bundled Software

This chapter provides brief explanation of bundled software and how to install them.

- 1. Bundled software for the server Describes the bundled software to be installed in the server system.
- Bundled software applied to PC for Management
 Describes the bundled software to be installed in "PC for Management" that is used to monitor and manage
 the server system.

I. Bundled Software for the Server

This section introduces the software bundled in the server package. For details, refer to the software documents.

I.I NEC ESMPRO Agent (for Windows)

NEC ESMPRO Agent (for Windows) is an application used to monitor the server.

It is automatically installed when a Windows OS is installed by using EXPRESSBUILDER.

When installing NEC ESMPRO Agent (for Windows) individually, refer to NEC ESMPRO Agent Installation Guide (Windows) in EXPRESSBUILDER.

1.2 NEC ESMPRO Agent Extension

NEC ESMPRO Agent Extension allows you to manage this server remotely by the server's BMC connecting with NEC ESMPRO Manager.

For details about how to install NEC ESMPRO Agent Extension, refer to "NEC ESMPRO Agent Extension Installation Guide" in EXPRESSBUILDER.

1.3 BMC Configuration

BMC Configuration enables you to specify configurations to this server's BMC.

For details about how to install BMC Configuration, refer to "BMC Configuration User's Guide" in EXPRESSBUILDER.

1.4 NEC ExpressUpdate Agent

NEC ExpressUpdate Agent enables you to manage and update the versions of the firmware and software installed in this server.

By using NEC ExpressUpdate, you can install the downloaded packages easily.

For details about how to install NEC ExpressUpdate Agent, refer to "NEC ExpressUpdate Agent Installation Guide" in EXPRESSBUILDER.

Tips

Updates are available for some firmware and software that do not support NEC ExpressUpdate. Refer to the following website to install these packages: http://www.nec.com/global/prod/express/index.html

1.5 Universal RAID Utility

Universal RAID Utility is an application used to manage and monitor the following RAID Controllers:

- N8103-149 RAID Controller (512 MB, RAID 0/1)
- N8103-150 RAID Controller (512 MB, RAID 0/1/5/6)
- N8103-151 RAID Controller (1GB, RAID 0/1/5/6)
- N8103-160 RAID Controller (1GB, RAID 0/1/5/6)

For details about how to install and operate Universal RAID Utility and its functions, refer to "Universal RAID Utility User's Guide" in EXPRESSBUILDER.

If the system requirements (such as the operating system) for Universal RAID Utility described in Universal RAID Utility User's Guide differ from User's Guide of the server, follow User's Guide of the server.

1.5.1 Setup of Universal RAID Utility

This section describes setup of Universal RAID Utility.

(1) Setup for BTO (Built To Order) models

If you purchased a BTO model configured with a RAID System, Universal RAID Utility is already installed. You do not need to install Universal RAID Utility for such models.

(2) Setup with EXPRESSBUILDER

You can easily install Universal RAID Utility by using EXPRESSBUILDER. When you execute Setup with EXPRESSBUILDER, Universal RAID Utility is installed along with Windows. Select **Universal RAID Utility** in the application selection dialog box during setup.

(3) Setup using Universal RAID Utility setup program

The Universal RAID Utility setup program can be launched from the autorun menu of EXPRESSBUILDER.

From the autorun menu, select Set up software and then Universal RAID Utility.

For Windows, the following runtime components are required:

- Microsoft .NET Framework 2.0 to 3.5
- Microsoft Visual C++ 2005 SP1 library runtime component

These applications can also be installed from the autorun menu.

To install Microsoft .NET Framework 2.0, select Set up Windows and then Install .NET Framework Ver2.0 Redistribution Package (x86) (Install .NET Framework Ver2.0 Redistribution Package (x64) in the case of x64) from the autorun menu.
To install the Microsoft Visual C++ 2005 SP1 library runtime component, select **Set up Windows** and then **Install Microsoft Visual C++ 2005 SP1 Redistribution Package (x86)** (use x86 regardless of the CPU architecture) from the autorun menu.

• Microsoft .NET Framwork

To use the RAID Viewer and Log Viewer, Microsoft .NET Framework Version 2.0 to 3.5 or later is required.

Windows Server 2008 and Windows Server 2008 R2 include .NET Framework 2.0 to 3.5. Therefore, .NET Framework does not need to be installed when using these operating systems.

• Microsoft Visual C++ 2005 SP1 library runtime component

To use the RAID Viewer, Microsoft Visual C++ 2005 SP1 library runtime component is required. Windows Server 2008 R2 includes Microsoft Visual C++ 2005 SP1 library. Therefore, Microsoft Visual C++ SP1 library runtime component does not need to be installed when using these operating systems.

1.5.2 Management by NEC ESMPRO Manager

NEC ESMPRO Manager Ver. 5.5 or later is used to remotely reference and monitor the RAID System that is managed by Universal RAID Utility.

For details about NEC ESMPRO Manager, refer to "NEC ESMPRO Manager Installation Guide".

1.6 NEC Product Info Collection Utility

NEC Product Info Collection Utility can collect various information related to the server all at once. This utility allows you to collect server information(Product Info) for maintenance.

1.6.1 Installation

You can install this utility by using the following steps.

- 1. Log on to Windows, and then insert EXPRESSBUILDER into the optical disk drive. The autorun menu appears automatically.
- From the autorun menu, select Set up Software and then Product Info Collection Utility. Installation of this utility starts. After this, follow the instructions in the dialog boxes until installation is complete. (By default, this utility is installed in the C: \ezclct folder.)

Tips

Log on to the system with an account that has administrator privilege.The installation drive requires a free space of at least 2.5 GB.

1.6.2 Uninstallation

• When the server is not in a Server Core configuration:

From **Control Panel**, select **Add/Remove Programs** and then **Product Info Collection Utility (Vx.x.x)**. After this, follow the instructions in the dialog boxes until uninstallation is complete.

• When the server is in the Server Core configuration:

Execute the following command at the command prompt: Wmic product where name="Product Info Collection Utility" call uninstall

2. Bundled Software to be applied to PC for Management

This section describes the bundled software required to configure PC for Management used to manage the server system.

2.1 NEC ESMPRO Manager

NEC ESMPRO Manager remotely controls and monitors the server hardware and RAID System.

To use these features, install the bundled software such as NEC ESMPRO Agent on the server.

For details about the system requirements of NEC ESMPRO Manager and how to install it, refer to "NEC ESMPRO Manager Installation Guide" in EXPRESSBUILDER.