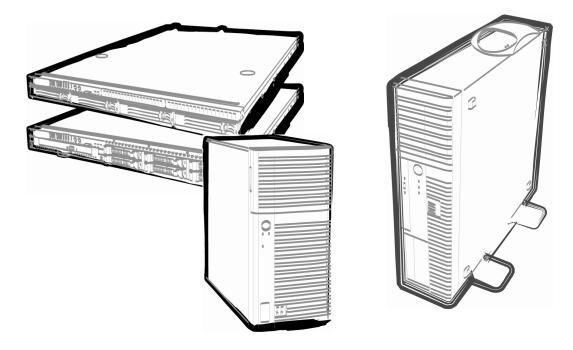
# Express 5800





NEC Express Server Express5800 Series

# Express5800/GT110e, GT110e-S, R110e-1E EXP280A, EXP281A, EXP282A Installation Guide (Windows)

Model Number: N8100-1890F/1891F/1892F/1894F/1932F/1933F

Chapter 1 Installing Windows

Chapter 2 Installing the Bundled Software

10.020.02-102.01 July 2012, First Edition © NEC Corporation 2012

# **Documents Provided with This Product**

Documents for this product are provided as accompanying booklets ( $\square$ ) and as electronic manuals ( $\blacksquare$ ) stored within the 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	
PDF		
	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
PDF	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
PDF	Other documents	
	Provides the detail of NEC ESMP	RO, Universal RAID Utility, and the other features.

# Contents

Doc	uments	Provided with This Product	2
Con	tents		3
Note	tional	Jsed in This Document	6
NOIS		ions used in the text	
		al disk drives	
	•	Disk Drives	
		ovable media	
		eviations of Operating Systems (Windows)	
	7,0010		
Trad	emark	S	8
Reg	ulatory	Notices	9
Mar	ainaa a	and Additions to This Document	11
wan		t editions	
	Lates		
Cha	pter 1 I	Installing Windows	12
		·	
1.	Before	e Starting Setup	
	1.1	Starting EXPRESSBUILDER	
	1.2	Supported Windows OS	
	1.3	Service Pack Support	
	1.4	Mass Storage Controllers Supported by EXPRESSBUILDER	
	1.5	When Using a Mass Storage Controller Not Supported by EXPRESSBUILDER	18
2.	Settin	g Up the Operating System	19
3.	Sattin	g Up Windows Server 2008 R2	20
9.	3.1	Before Starting Setup	
	3.2	Setup with EXPRESSBUILDER.	
	9.2	<i>3.2.1</i> Setup flow	
		<i>3.2.2</i> Requirements for Setup	
		3.2.3 Setup procedure	
	3.3	Setup with OS Standard Installer	
		3.3.1 Setup flow	
		3.3.2 Requirements for Setup	
		3.3.3 Setup procedure	41
	3.4	Installing Starter Pack	
		3.4.1 When using EXPRESSBUILDER DVD	
		3.4.2 When using Internal Flash Memory	
	3.5	Setting Up Device Drivers	
		3.5.1 Installing the LAN and BACS (teaming) drivers	
		3.5.2 Setting up LAN drivers	
		3.5.3 Setting up team/LiveLink	
		3.5.4 Graphics accelerator driver	
		3.5.5 When using a SAS controller (N8103-104A/142)	
		3.5.6 When using a RAID Controller (N8103-160)	
	9.0	3.5.7 When using a Fibre Channel controller (N8190-153/154)	
	3.6 9 7	Installing the Bundled Software	
	3.7 20	License Authentication	
	3.8 3.9	Applying Service Pack Installation When Multiple Logical Drives Exist	
	<b>J.</b> Y	Installation when multiple Logical Drives EXISt	

4.	Setting	g Up Windows Server 2008	84
	4.1	Before Starting Setup	
	4.2	Setup with EXPRESSBUILDER	
		4.2.1 Setup flow	
		4.2.2 Requirements for Setup	
		4.2.3 Setup procedure	
	4.3	Setup with OS Standard Installer	
		4.3.1 Setup flow	
		4.3.2 Requirements for Setup	
		4.3.3 Setup procedure	
	4.4	Installing Starter Pack	
		4.4.1 When using EXPRESSBUILDER DVD	
		4.4.2 When using Internal Flash Memory	
	4.5	Setting Up Device Drivers.	
		4.5.1 Installing the LAN and BACS (teaming) drivers	
		4.5.2 Setting up LAN drivers	
		4.5.3 Setting up team/LiveLink	
		4.5.4 Graphics accelerator driver	
		4.5.5 When using a SAS controller (N8103-104A/142)	
		<ul><li>4.5.6 When using a RAID Controller (N8103-160)</li><li>4.5.7 When using a Fibre Channel controller (N8190-153/154)</li></ul>	
	A (C		
	4.6 4.7	Specifying PAE Option Installing the Bundled Software	
	4.7 4.8	License Authentication	
	4.0 4.9	Applying Service Pack	
		Installation When Multiple Logical Drives Exist	
	4.10		
5.	Sottin	g Up Windows Server 2003 R2 x64 Edition	152
<i>.</i>	5.1	Before Starting Setup	
	5.2	Setup with OS Standard Installer	
	0.2	5.2.1 Setup flow	
		5.2.2 Requirements for Setup	
		5.2.3 Setup procedure	
	5.3	Installing Starter Pack	
		5.3.1 Procedures for applying Starter Pack and Windows x64 hotfix (KB) 921411	
		5.3.2 Recovery process	
	5.4	Setting Up Device Drivers	
		5.4.1 Installing the LAN and BACS (teaming) drivers	
		5.4.2 Setting up LAN drivers	
		5.4.3 Setting up team/LiveLink	
		5.4.4 When using a SAS controller (N8103-104A/142)	
		5.4.5 When using a RAID Controller (N8103-160)	
		5.4.6 Graphics accelerator driver	
	5.5	Installing the Bundled Software	196
	5.6	License Authentication	197
	5.7	Installation When Multiple Logical Drives Exist	198
6.	Setting	g Up Windows Server 2003	199
	6.1	Before Starting Setup	199
	6.2	Setup with OS Standard Installer	
		6.2.1 Setup flow	
		6.2.2 Requirements for Setup	204
		6.2.3 Setup procedure	205
	6.3	Installing Starter Pack	
		6.3.1 Procedure to apply Windows Server 2003 hotfix: KB921411	
		6.3.2 Recovery process	227

	6.4	Setting Up Device Drivers	
		6.4.1 Installing the LAN and BACS (teaming) drivers	
		6.4.2 Setting up LAN drivers	
		6.4.3 Setting up team/LiveLink	
		6.4.4 Graphics accelerator driver	
		6.4.5 When using a SAS controller (N8103-104A/142)	243
		6.4.6 When using a RAID Controller (N8103-160)	
	6.5	Specifying PAE Option	
	6.6	Installing the Bundled Software	245
	6.7	License Authentication	
	6.8	Reinstallation When Multiple Logical Drives Exist	247
7.	Setup	o for Solving Problems	
	7.1	Specifying Memory Dump Settings (Debug Information)	
		7.1.1 For Windows Server 2008 R2	248
		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	
		7.2.1 For Windows Server 2008 R2 and Windows Server 2008	
		7.2.2 For Windows Server 2003 (setting up Dr. Watson)	
	7.3	Installing Network Monitor	
		7.3.1 For Windows Server 2008 R2 and Windows Server 2008	
		7.3.2 For Windows Server 2003	257
8.	Windo	ows OS Parameter File	
	8.1	Creating Windows OS Parameter File	
		8.1.1 How to create a parameter file	259
Cha	oter 2 I	Installing the Bundled Software	
1.	Bundl	led Software for the Server	270
	1.1	NEC ESMPRO Agent (for Windows)	-
	1.2	NEC ESMPRO Agent Extension	
	1.3	BMC Configuration	
	1.4	NEC ExpressUpdate Agent	
	1.5	Universal RAID Utility	
		1.5.1 Setup of Universal RAID Utility	
		1.5.2 Management by NEC ESMPRO Manager	
	1.6	NEC Product Info Collection Utility	
		1.6.1 Installation	
		1.6.2 Uninstallation	
2.	Bundl	led Software for PC for Management	
	2.1	NEC ESMPRO Manager	275

# **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.

	Indicates critical items that must be followed when handling the hardware or operating software. If the procedures described are not followed, hardware failure, data loss, and other serious malfunctions could occur.
Note	Indicates items that must be confirmed when handling the hardware 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 refer 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	Windows Server 2008 R2 Standard
	Windows Server 2008 R2 Enterprise
	Windows Server 2008 R2 Foundation
Windows Server 2008 <sup>*1</sup>	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 <sup>*2</sup>	Windows Server 2003 R2 Standard Edition
	Windows Server 2003 R2 Enterprise Edition
Windows Server 2003 <sup>*2</sup>	Windows Server 2003 Standard Edition
	Windows Server 2003 Enterprise Edition
Windows 7	Windows 7 Professional 64-bit (x64) Edition
	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	Windows XP Professional x64 Edition
	Windows XP Professional
Windows PE <sup>*3</sup>	Windows Preinstallation Environment

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

- 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.

# **Trademarks**

EXPRESSSCOPE is a registered trademark of NEC Corporation.

Microsoft, Windows, Windows Server, Windows Vista, and MS-DOS are registered trademarks or trademarks of Microsoft Corporation in the United States and other countries. Intel, Pentium, and Xeon are registered trademarks of Intel Corporation of the United States. AT is a registered trademark of International Business Machines Corporation of the United States and other countries. Adaptec, its logo, and SCSI Select are registered trademarks or trademarks of Adaptec, Inc. of the United States. LSI and the LSI logo design are trademarks or registered trademarks of LSI Corporation. Adobe, the Adobe logo, and Acrobat are trademarks of Adobe Systems Incorporated. DLT and DLTtape are trademarks of Quantum Corporation of the United States. PCI Express is a trademark of Peripheral Component Interconnect Special Interest Group. Linux is a trademark or registered trademarks of Red Hat Enterprise Linux are trademarks or registered trademarks of Red Hat, Inc. in the United States and other countries.

All other product, brand, or trade names used in this publication are the trademarks or registered trademarks of their respective trademark owners.

# **Regulatory Notices**

### **FCC Statement**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### **Industry Canada Class A Emission Compliance Statement**

This Class A digital apparatus complies with Canadian ICES-003.

### Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

### **CE / Australia and New Zealand Statement**

This is a Class A product. In domestic environment this product may cause radio interference in which case the user may be required to take adequate measures (EN55022).

### **BSMI Statement**

警告使用者: 這是甲類的資訊產品,在居住的環境中使用 時,可能會造成射頻干擾,在這種情況下, 使用者會被要求採取某些適當的對策。



#### Disposing of your used product

### In the European Union

EU-wide legislation as implemented in each Member State requires that used electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes Information and Communication Technology (ICT) equipment or electrical accessories, such as cables or DVDs.

When disposing of used products, you should comply with applicable legislation or agreements you may have. The mark on the electrical and electronic products only applies to the current European Union Member States.

#### Outside the European Union

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority and ask for the correct method of disposal.

## Turkish RoHS information relevant for Turkish market

EEE Yönetmeliğine Uygundur

## CCC声明

声 明 此为A级产品,在生活环境中,该产品可能会造成无线电干扰。在这种情况下,可能需要用户对其干扰采取切实可行的措施。

	有毒有害物质或元素					
部件名称	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI) )	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷线路板	×	0	0	0	0	0
HDD、DVD等	×	0	0	0	0	0
机箱、支架	0	0	0	0	0	0
电源	$\times$	0	0	0	0	0
键盘	$\times$	0	0	0	0	0
其他(电缆、鼠标 等)	×	0	0	0	0	0
O:表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006标准规定的限量要求以下。 ×:表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。						

### Vietnam RoHS information relevant for Vietnam market

Complying with "CIRCULAR, No.30/2011/TT-BCT (Hanoi, August 10 2011), Temporary regulations on content limit for certain hazardous substances in electrical products"

# Warnings and Additions to This Document

- 1. Unauthorized reproduction of the contents of this document, in part or in its entirety, is prohibited.
- 2. The contents of this document may change without prior notice.
- 3. Do not make copies or alter the document content without permission from NEC Corporation.
- 4. Every effort has been made to ensure the completeness of this document. However, if you have any concerns, or discover errors or omissions, please contact your retailer.
- 5. Regardless of these 4 items, NEC Corporation assumes no responsibility for effects resulting from operations.
- 6. The sample values used in this document are not the actual values.

Keep this document nearby so that you may refer to it as necessary.

### Latest editions

This document was created based on the information available at the time of its creation. The screen images, messages and procedures <u>may differ from the actual screens, messages and procedures.</u> Substitute as appropriate when content has been modified.

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/GT-110e, GT-110e-S, R110e-1E

# **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
- Setting Up Windows Server 2003 R2 x64 Edition
   Describes how to set up Windows Server 2003 R2 x64 Edition
- 6. 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 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, <u>be sure to remove a</u> <u>bootable disc from the optical disk drive</u>.

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.

			Supported		
Name of Windows OS		GT110e	GT110e-S	R110e-1E	
	Windows Server 2008 R2 Standard	~	~	~	
Windows Server 2008 R2	Windows Server 2008 R2 Enterprise	~	~	~	
	Windows Server 2008 R2 Foundation	~	$\checkmark$	-	
	Windows Server 2008 Standard	~	$\checkmark$	~	
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	_	_	~	
	Windows Server 2003 R2 Standard	✓	✓	~	
Windows Server 2003 R2	Windows Server 2003 R2 Enterprise			~	
	Windows Server 2003 Standard	✓	✓	_	
Windows Server 2003	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	✓
NO Service Pack	✓

Service Pack	Windows Server 2008
Service Pack 2 Included	✓
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	$\checkmark$
NO Service Pack	_

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

Service Pack	Windows Server 2003
Service Pack 2 Included	_
Service Pack 1 Included + Service Pack 2	$\checkmark$
NO Service Pack + Service Pack 2	_
Service Pack 1 Included	_
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 (1.4 When Using a Mass Storage Controller Not Supported by EXPRESSBUILDER*).

#### Express5800/GT110e

OS	Windows Server 2008 R2	Windows Server 2008	Windows Server 2003 R2 x64 Edition	Windows Server 2003				
RAID Controllers supporting OS installation by EXPRESSBUILDER								
N8103-128 RAID Controller (128MB, RAID 0/1)	~	$\checkmark$	~	~				
N8103-149 RAID Controller(512MB, RAID 0/1)	~	$\checkmark$	~	~				
N8103-150 RAID Controller (512MB, RAID 0/1/5/6)	~	✓	~	~				
N8103-151 RAID Controller (1GB, RAID 0/1/5/6)	~	$\checkmark$	$\checkmark$	✓				
Onboard RAID Controller (LSI Embedded MegaRAID)	~	$\checkmark$	~	~				
Other options								
N8103-104A SAS Controller	~	$\checkmark$	$\checkmark$	$\checkmark$				
N8103-142 SAS Controller	~	✓	~	~				

#### Express5800/GT110e-S

OS	Windows Server 2008 R2	Windows Server 2008	Windows Server 2003 R2 x64 Edition	Windows Server 2003			
RAID Controllers supporting OS installation by EXPRESSBUILDER							
N8103-128 RAID Controller (128MB, RAID 0/1)	✓	~	$\checkmark$	$\checkmark$			
N8103-149 RAID Controller(512MB, RAID 0/1)	~	~	$\checkmark$	$\checkmark$			
N8103-150 RAID Controller (512MB, RAID 0/1/5/6)	~	~	~	$\checkmark$			
N8103-151 RAID Controller (1GB, RAID 0/1/5/6)	~	$\checkmark$	✓	~			
Onboard RAID Controller (LSI Embedded MegaRAID)	~	$\checkmark$	~	~			

### Express5800/R110e-1E

OS	Windows Server 2008 R2	Windows Server 2008	Windows Server 2003 R2 x64 Edition	Windows Server 2003			
RAID Controllers supporting OS installation by EXPRESSBUILDER							
N8103-128 RAID Controller (128MB, RAID 0/1)	✓	~	~	✓			
N8103-149 RAID Controller (512MB, RAID 0/1)	✓	~	~	✓			
N8103-150 RAID Controller (512MB, RAID 0/1/5/6)	✓	~	~	✓			
N8103-151 RAID Controller (1GB, RAID 0/1/5/6)	~	~	~	✓			
Onboard RAID Controller (LSI Embedded MegaRAID)	×	~	~	✓			
Other options							
N8103-104A SAS Controller	~	~	~	✓			
N8103-142 SAS Controller	~	~	~	✓			
N8103-160 RAID Controller (1GB, RAID 0/1/5/6)	✓	~	~	✓			
N8190-153 Fibre Channel Controller (1ch) (8Gbps/Optical)	✓	~	*	*			
N8190-154 Fibre Channel Controller (2ch) (8Gbps/Optical)	~	~	*	*			

✓: 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. Next, click [Next].
   Insert the media in which the driver for the mass storage controller is copied, select the destination, and then click [Perform].

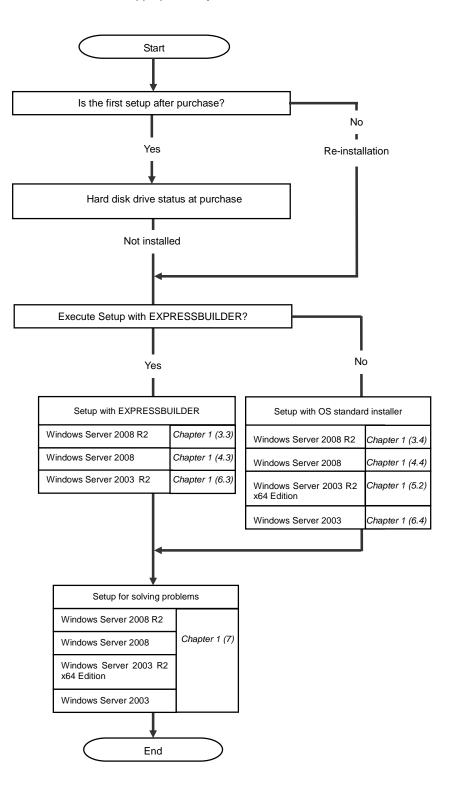
Tips

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 server 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.



Set up Windows Server 2008 R2.

3.

3.1

Read through the cautions explained here before starting setup.

- BTO : Setting up of Pre-installed model
- EB : Confirm during Setup with EXPRESSBUILDER
- **0S** : Confirm during Setup with OS standard installer

-					(1/4
	Setup	)			Items to confirm
_	EB	08	Windows family	• Wi • Wi • Wi Inquiries a	ng editions of the Windows Server 2008 R2 family may be installed. ndows Server 2008 R2 Standard ndows Server 2008 R2 Enterprise ndows Server 2008 R2 Foundation (for GT110e and GT110e-S only) bout installing other editions may be made at your sales representative. For about Service Packs, refer to <i>Chapter 1 (1.3 Service Pack Support</i> ).
			Hardware	The followi	ng hardware configurations require special procedures.
_	EB	OS	configuration	Disable again.	<b>ling to a mirrored volume</b> the mirroring and reset to the basic disk. After installation, enable the mirroring mputer Management] – [Disk Management] to create, disable, or remove the volume.
_	EB	OS		Remove before in	an MO devices such as RDX/MO an MO device before installing an OS. Some peripheral devices need to be halted stallation. Refer to the manual provided with the peripheral devices for how to set appropriate to installation.
_	EB	OS			<b>O, and similar media</b> et media that is unnecessary to installation during setup.
_	EB	OS		If the hai be reinst	<b>ling to hard disk drives that have been upgraded to dynamic disks</b> rd disk drive has been upgraded to a dynamic disk, the operating system cannot alled to it with the existing partitions. e operating system with the OS standard installer.
	EB	OS		Connect	ing to multiple hard disk drives (logical drives)
_	CD	03			ails on installing operating systems to a system in which multiple logical drives fer to <i>Chapter 1</i> (3.8 Applying Service Pack).
_	EB	OS		Setup w	hen mass memory is installed
				installation secured. If you fai required 1. Se 2. Sp siz If the ha partition	memory is installed in your system, the large size of paging file is required at on. Thus, the partition size for storing debug information (dump file) may not be I to secure the dump file size, use OS standard installer for setup, and allocate the file space to multiple disks by performing the following steps. It the system partition size to a size sufficient to install the OS and paging file. ecify another disk as destination to store the debug information (required dump file e) by referring to <i>Chapter 1 (7. Setup for Solving Problems)</i> . rd disk drive does not have enough space to write the debug information, set the size to a size sufficient to install the OS and paging file, and then add another k drive for the dump file.
				Note	If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.

Setting Up Windows Server 2008 R2



1414

(2/4)

	Setup			Items to co	onfirm	
-	EB	OS	System partition size	The system partition size can be calcula Size required to install the OS + pagir Full installations	ated by using the following formula. ng file size + dump file size + application size	
				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)	
				Paging file size (recommended)	= installed memory size × 1.5	
				Dump file size Application size Server Core installations	= installed memory size + 300 MB = as required by the application	
				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 Application size	= installed memory size + 300 MB = as required by the application	
				<ul> <li>For example, if the installed memory size is 1 GB (1,024 MB) and Full in selected, the partition size is calculated as follows:</li> <li>8,000 MB + (1,024 MB × 1.5) + 1,024 MB + 300 MB + application size = 10,860 MB + application size</li> <li>The above mentioned partition size is the minimum partition size required installation.</li> <li>Ensure that the partition size is sufficient for system operations.</li> <li>The following partition sizes are recommended.</li> <li>Full installations : 32,768 MB (32 GB) or more Server Core installations : 10,240MB (10 GB) or more *1 GB = 1,024 MB</li> </ul>		
				<ul> <li>information (dump file). T must be large enough to Make sure you set a sinsufficient, there will be inability to collect correct</li> <li>Regardless of the sizes the maximum size of the</li> </ul>	sufficient paging file size. If the paging file is a virtual memory shortage that may result in an debug information. of internal memory and write debug information, dump file is "size of internal memory + 300 MB". Dilications or other items, add the amount of space	

(3/4)

	Setup			Items to confirm		
	EB	08	System partition size	If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive. 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.		
	EB	OS	Hyper-V 2.0	Refer to the following web site for information related to Hyper-V 2.0.		
			support	http://support.express.nec.co.jp/os/w2008r2/hyper-v-v2.html		
	ЕВ	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 <a href="http://support.microsoft.com/kb/975496/en-us">http://support.microsoft.com/kb/975496/en-us</a> .         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: <ul> <li>Replacement of motherboard</li> <li>Initialization of trusted platform module (TPM)</li> <li>Change of BIOS setting</li> </ul>		
	ЕВ	08	Installing Service Pack	<ul> <li>If the OS installation media contains Service Pack 1, you need not apply the service pack again.</li> <li>You can install the Service Pack on the server. When the Service Pack is not attached to your system, prepare it by yourself.</li> </ul>		
_	ЕВ	OS	License authentication	<ul> <li>License authentication is required depending on the installation of Windows.</li> <li>For details, refer to 3.7 <i>License Authentication</i>.</li> <li>Activate within 30 days following installation.</li> <li>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.</li> </ul>		

# 3.2 Setup with EXPRESSBUILDER

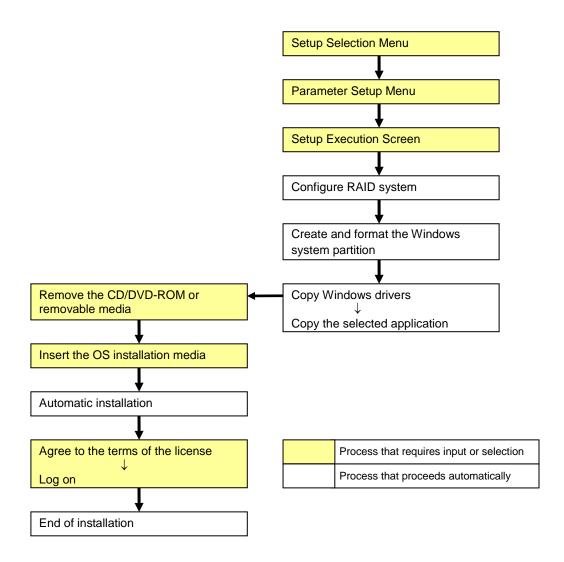
This section describes how to install Windows with EXPRESSBUILDER.

This feature automatically recognizes the RAID controller connected to the server and configures the RAID system. Therefore the hardware installation of the server needs to be finished by following " *User's Guide* ".

Important	<ul> <li>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: <ul> <li>RAID settings wizard</li> <li>Partition Settings in the Windows Setup wizard</li> </ul> </li> <li>Backing up user data, as needed, is recommended.</li> <li>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.</li> </ul>
Note	<ul> <li>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.</li> <li>When using an onboard RAID controller (LSI Embedded MegaRAID): Do not support the creation of RAID10 by using the onboard RAID controller. Refer to <i>Chapter 2 (4. RAID System Configuration)</i> in "<i>Maintenance Guide</i>" when creating RAID10.</li> </ul>
Tips	<ul> <li>Setup with EXPRESSBUILDER allows you to use a pre-specified parameter file or save the parameters specified in setup as a parameter file on removable media or Internal Flash Memory (if purchased optionally).</li> <li>For details on creating a parameter file, refer to 8 Windows OS Parameter File.</li> </ul>

### 3.2.1 Setup flow





### 3.2.2 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 (optional)
- > 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. .

press5800/GT-110e, GT-110e-S, R110e-1E Installation Guide (Windows)

### 3.2.3 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 (3.1 Before Starting Setup) prior to installing Windows.
If modifying or adding network adapters or other drivers, refer to Chapter 1 (3.5)

1. Turn peripheral device (such as a display) power on, and then turn the server power on.

Setting Up Device Drivers).

- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select **Os installation** \*\*\* **default** \*\*\*. <u>You will automatically advance to step 4, with no need for further input.</u>

Boot selection Os installation *** default *** Tool Menu (Normal Mode) Tool Menu (Redirection Mode)	
Automatic select	

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

elect a	language to use	for the	EXPRESSBUILDE
С	日本語	c	English
C	Français	С	Italiano
C	Deutsch	C	Español

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 than this EULA. By installing, copying, downloading, accessing or otherwise using the SOFTWARE, you agree to be bound by the terms of this EULA.	
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 ("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 EULA. By installing, copying, downloading, accessing or otherwise using the SOFTWARE, you agree to be bound by the terms of this EULA, Manufacturer and Microsoft Licensing, GP ('MS') are unwilling to	
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 caquired which includes careful 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.	
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 cacquired 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 SULA. 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	
entity) and the manufacturer ("Manufacturer2) of the special purpose computing device or software ("SYSTEM") you caquired 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.	
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	
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	
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	
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	
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 terms, you cannot use EXPRESSBUILD	ER.

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

NEC	2	EXPRESSBUILDER Version 6. xx- xxx .xx ( xxx
	inction, select a radio button, and then click [Next]. icked, you can remove USB devices inserted into this computer	r safely.
	6 Set up this computer	
	C Invoke various utilities	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ <sub>Next</sub>	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.

$\rightarrow 0$	Go to Step 10.	
NE	C	EXPRESSBUILDER Version 6. xx - xxx ( xxx )
If [Configure	operating system, select an item in the listb RAID system only] is selected, EXPRESSBUI rrameter file] is selected, you can set up the	ILDER only configures RAID system without OS installation.
	Install Windows	Windows Server 2008 R2
	C Configure RAID system only	

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 (xxx)
	em in the listbox, and then click (Next). I. EXPRESSENILDER only configures FAID system without OS installation. can set up the computer according to the parameter file.
C Install Windows	Windows Server 2008 R2
C Configure RAID s	within only.
C Load a parameter	
Back	← → Next <sup>USB</sup> Remove

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

NEC		EXPRESS Version 6	BUILD
t parameters for the setup. Settings] is clicked, you can change the param Save] is clicked, you can save the parameter t * If "I" is displayed, you cannot proceed to the i	o a file.	set the parameters.	
		0	efault values
RAID settings			Default
RAIDI(Zuisk)	) : System Partition (40GB)	.   li	Settings
	) . system Partition (403b)		Skip
	+		
Vindows settings User information	Network settings	Windows Components	Default
OK User settings	Default settings	Default settings	Settings
	+		
Application settings Applications installation	1		Default
OK Default settings	-	j	Settings

10. Set parameters required for setup.

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

NEC			EXPRESS Version 6	BUILDE
[Save] is clicked, you c	etup. u can change the paramete an save the parameter to a u cannot proceed to the nex	file.	set the parameters.	
			<b>Ø</b> D	efault values
RAID settings Skip	Disk array1 RAID0(Idisk) Logical drive1 (148GB) :	System Partition (40GB)		Default Settings Skip
		-		
Windows settings	User information	Network settings Default settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings		ł	Default Settings
	Back	→ Next	Save	USB

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

EXPRESSBUILDER Version 6. xx- xxx .xx ( xxx )	
> set the parameters  Or provide the parameters Or pa A a a a a a a a a a a a a a a a a a a	ight angle

#### 10-1 RAID settings

Use this menu to configure the RAID system with the RAID controller detected automatically.

NoteWhen using an onboard RAID controller (LSI Embedded MegaRAID):This function does not support the creation of RAID10 by using the onboard RAID<br/>controller. Refer to Chapter 2 (4. RAID System Configuration) in "Maintenance<br/>Guide" when creating RAID10.

Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version 6	
[Save] is clicked, you ca	tup. u can change the parameter in save the parameter to a u cannot proceed to the next	file.	set the parameters.	
				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 Default settings	Windows Components Default settings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	Save	

#### 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				BUILDER
f [Save] is clicked, you ca	tup. J can change the paramete In save the parameter to a cannot proceed to the nex	file.	set the parameters.	
			0	Default values
RAID settings Skip	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40GB)	)	Default Settings Skip
Windows settings		-		
windows settings	User information Default settings	Default settings	Windows Components Default sittings	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back	→ Next	Save	USB Remove

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

If [Use OS standard installer] is selected, you need to input para standard installer.	meters step by step without this wizard by using t
Start Set Windows preferences Set Jardition preferences Set user preferences Set user preferences Set component preferences Check/Exit	Use 05 standard installer

(3) Specify the Windows basic settings.

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

c information	
Operating System	: Windows Server 2008 R2
O Use OS standar	d installer
🔲 Copy OEM	drivers into a removable media
Setup with EXPR	RESSBUILDER-
Edition	: Standard(Full Installation)
Language	: English

(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 of Windows installation. Windows can be installed into the first hard disk drive or logical drive. Th area where 2TB is exceeded cannot be used.)	e partition size can be set within 2TB.(The
f there are any partitions in the destination disk, below red-framed area	is deleted.
Current partitions(the red-framed area is deleted) :	
Data partition :Free area	24
(40.0GB) (108.1GB)	
Partitioning	
Use the existing partition	
Create a new partition	
C Specify the maximum amount	
	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				
• Yoi	You cannot reinstall to an existing partition that has been upgraded to						
Dyı	Dynamic Disk (refer to Chapter 1 (3.1 Before Starting Setup)). Do not select						

(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.

Set parameters about user information. Input Computer name within 15 characters. Administrator password requires more than 6		characters from three of the followir
ategories(numbers / uppercase / lowercase /	signs).	
Computer name	: 1-1766-0123456	(Required) 🔽 Auto
User name	: Administrator	
Administrator password	:	(Required)
Confirm Administrator password	:	(Required)
		4 / 8 Page

Note	Enter a computer name and administrator password that satisfies the following conditions:
	<ul> <li>Contains 6 or more characters</li> </ul>
	<ul> <li>Contains characters from at least three of the following categories: numbers, uppercase letters, lowercase letters, and symbols.</li> </ul>
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.

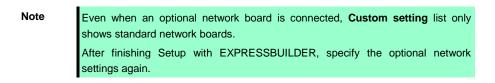
#### (6) Set up the network.

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

Set parameters about network protocol.	
f you input IP address, select [Custom settings], and then click [Advar	nced].
Network protocols	
<ul> <li>Standard setting</li> </ul>	
Custom settings	
Standard adapter – Internet Protocol (IPv4) 💌	Advanced
T	
	5 / 8 Page
Back Next	Cancel

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].

Join 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].

Advanced
7 / 8 Page
Cancel

(9) Confirm settings.

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

C I COL	
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 Pa

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 the Parameter Setup Menu.

NEC		EXPRESS Version 6	BUILDER
Set parameters for the setup. If [Settings] is clicked, you can change the parame If [Save] is clicked, you can save the parameter to **** If "!" is displayed, you cannot proceed to the no	a file.	et the parameters.	
RAID settings Disk array1 RAID1(2disk) Logical drive1 (148CB)	: System Partition (40GB)		Default Settings Skip
	+		
Windows settings User information User settings	Network settings Default settings	Windows Components Default settings	Default Settings
	+	G	
Application settings Applications installation Default settings			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].

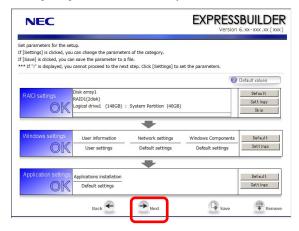
elect applications to install. or more information on each application, refer to [Description of Application] column.		
List of applications	Selected applications	
Apply drivers for mass storage controller	NEC ESMRO Avent Ndd >> Uniorean RAD Utility Microsoft Visual C++ 2005 SP1 Redistributable	
Description of Application-	Finish	

11. Save parameters on Parameter Setup Menu as needed.

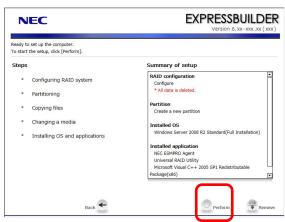
Click [Save], and save the parameter file according to displayed instructions.

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

12. Click [Next] on Parameter Setup Menu.



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.

?	
	[Message ID : H2001 ]

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

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



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

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

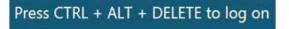
Windows Server 2008 R2 and selected applications will be installed automatically and restart several times.

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

[Start] (Full installation only).

Please read the license te	ms
MICROSOFT SOFTWAR	LICENSE TERMS
MICROSOFT WINDOWS	SERVER 2008 R2 STANDARD
where you live, one of it:	an agreement between Microsoft Corporation (or based on affiliates) and you. Please read them. They apply to the which includes the media on which you received it, if any. The licrosoft
updates,	
supplements,	
Internet-based servi	tes, and
sunnort services	
I accept the license tems	

18. When the following message appears, press <Ctrl> + <Alt> + <Del> 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 (3.5 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 (3.8 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.

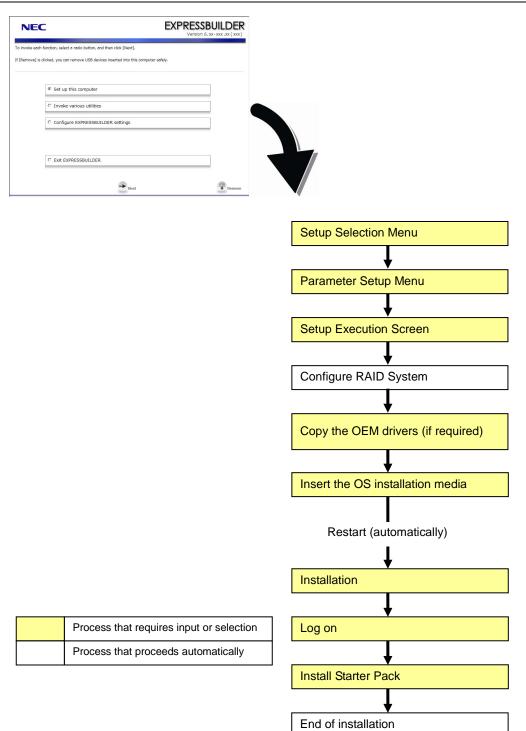
# 3.3 Setup with OS Standard Installer

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. Therefore the hardware installation of the server needs to be finished 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.
Note	When using an onboard RAID controller (LSI Embedded MegaRAID): Do not support the creation of RAID10 by using the onboard RAID controller. Refer to Chapter 2 (4. RAID System Configuration) in "Maintenance Guide" when creating RAID10.
Tips	<ul> <li>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 removable media or Internal Flash Memory (if purchased optionally).</li> <li>For details on creating a parameter file, refer to 8 Windows OS Parameter File.</li> </ul>

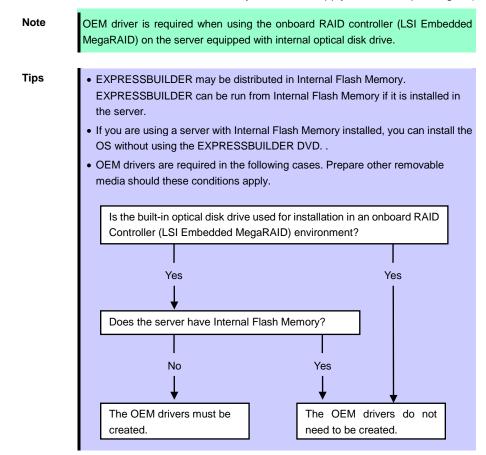
# *3.3.1* Setup flow



# 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 (optional)
- Prepare if needed:
  - Removable media for Windows OS parameter file
  - Removable media for creating OEM drivers (Windows Server 2008 R2)
  - Service Pack
    - (If the OS installation media contains Service Pack 1, you need not apply the service pack again.)



# *3.3.3* 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 (such as a display) 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].

AFRE	SSBUILDER CORF	19 <b>0</b> E	語を選択してください
elect	a language to use	for the	EXPRESSBUILDER
0	日本語	œ	English
o	Français	C	Italiano
C	Deutsch	C	Español

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

To use this software, agree this license.	
END-USER LICENSE AGREEMENT FOR MICROSOFT® WINDOWS® PREINSTALLATION EN IMPORTANT-READ CAREFULLY:	VIRONMENT
This End-User License Agreement ("EULA") is a legal agreement between you (either an i entity) and the manufacturer ("Manufacturer2) of the special purpose computing device or you acquired which includes certain Microsoft software product(s) installed on or for use w ("SOFTWARE").	software ("SYSTEM")
The SOFTWARE includes computer software, and may include associated media, printed n or electronic documentation.	naterials, and "online"
Any software provided along with the SOFTWARE that is associated with a separate end-u or separate terms of use is licensed to you under the terms of that license agreement or t than this FILM.	
By installing, copying, downloading, accessing or otherwise using the SOFTWARE, you agr terms of this EULA.	ee to be bound by the
If you do not agree to the terms of this EULA, Manufacturer and Microsoft Licensing, GP (" license the SOFTWARE to you.	'MS") are unwilling to

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)
	function, select a radio button, and then click [Next]. clicked, you can remove USB devices inserted into this computer se	afely.
	€ Set up 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.

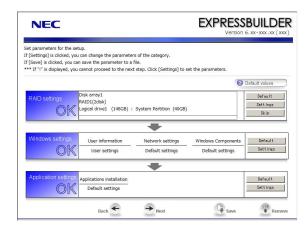
 If you do not use a parameter file, select an OS from the pull-down menu in [Install Windows], and click [Next]. On this dialog, select "Windows Server 2008 R2" from the pull-down menu.
 → Go to Step 10.

NEC	2	EXPRESSE Version 6.	
If [Configure RA		box, and then click [Next]. JILDER only configures RAID system without OS install e computer according to the parameter file.	ation.
	Install Windows	Windows Server 2008 R2	
	C Configure RAID system only		1
	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			ESSBUILDER ersion 6.xx-xxx .xx (xxx)
If [Configure RA		box, and then click [Next]. JILDER only configures RAID system withou a computer according to the parameter file.	t OS installation.
	C Install Windows	Windows Server 2008 R2	×
	- <u>C. Gurlig an 2010</u> gyddau arly		
	Coad a parameter file		
	Back ←	→ Next	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
f [Save] is clicked, you ca	tup. u can change the parameter an save the parameter to a u cannot proceed to the next	file.	set the parameters.	
			0	Default values
RAID settings Skip	Disk array1 RAID0(1disk) Logical drive1 (148GB) :	System Partition (40GB)	)	Default Settings Skip
	F	+		
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 🗲	→ Next	Save	Remove

Click [Default] if you want 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	iero.
	🕜 Default values
	Default Settinge

#### 10-1 RAID settings

Use this menu to configure the RAID system with the RAID controller detected automatically.

Note When using an onboard RAID controller (LSI Embedded MegaRAID): This function does not support the creation of RAID10 by using the onboard RAID controller. Refer to Chapter 2 (4. RAID System Configuration) in *"Maintenance Guide"* when creating RAID10.

Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESSI Version 6	BUILDER
If [Save] is clicked, you ca	tup. u can change the parameter in save the parameter to a u cannot proceed to the next	file.	set the parameters.	
RAID settings Skip	Disk array1 RAIDD(Idisk) 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

#### When creating new logical drives

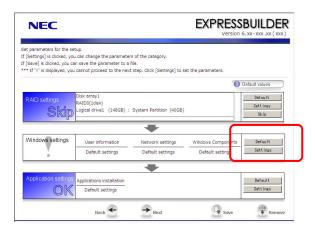
- (1) Click [Settings] in RAID settings.
- (2) Use the wizard to set up logical drives.

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.

	w to set the parameters necessary for Wind nstaller] is selected, you need to input parar		this wizard by using th
standard installer.			
	Start		
	Set Windows preferences	Use OS standard installer	
	Set partition preferences		
	Set user preferences		
	Set network preferences	_	
	Set component preferences	_	
	Check/Exit	_	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].

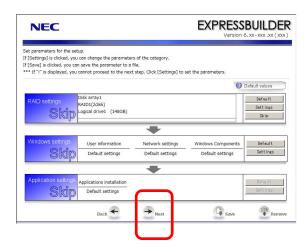
sic information		
Operating System	: Windows Server 2008 R2	
Ose OS standar	d installer	
E cop, cert.		
C Setup with EXPR	ESSBUILDER	
Edition	: Standard(Full Installation)	
Edition Language	: Standard(Full Installation)	

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

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

Wizard	
Parameter setting is completed. To finish this wizard, click [Finish].	
Installed OS	: Windows Server 2008 R2
(Use OS standard installer)	
Copy the OEM drivers	: Act
	8 / 8 Page
Back	6 / 6 Fage

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.
<ul> <li>Installing OS</li> </ul>	Installed OS Windows Server 2008 R2
	Copy OEM drivers Act
Back ←	Perform USB Remove

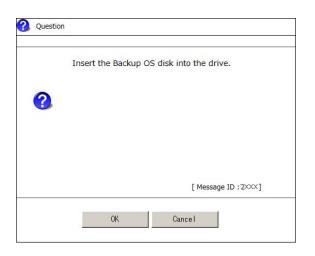
17. Continue setup according to displayed message.

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.

	OEM drivers(XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX) are copied.
	Insert removable media.
?	If [Yes] is selected, the copying starts.
	[ Message ID : F20xx ]

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



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
```

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.

The boot sequence proceeds and the message "Windows is loading files..." appears.

Note

Note

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

This step is unnecessary if no bootable operating system exists.

20. When the following window appears, click [Next] at default settings.



 When the following message appears, click [Install Now <sup>(2)</sup>]. Windows Server 2008 R2 installation starts.



- If the following message appears, go to step 22.
- If not go to step 24.

Load Driver A required CD/DVD drive device driver is missing. If you have a driver floppy disk, CD, DVD, or USB flash drive, please insert it now. Note: If the Windows installation media is in the CD/DVD drive, you can safely remove it for this step. [Browse] [OK] [Cancel]

The above message appears if you are using an onboard RAID controller (LSI Embedded MegaRAID) in an environment equipped with an internal DVD drive.
When this message appears, the message will say "CD, DVD, or USB flash drive", but use Internal Flash Memory or removable media with the OEM drivers copied onto it.

22. Select the destination, and then click [OK].

Tips

 If using OEM drivers (made at step 17)

 Removable media:\OEM\_Driver\ws2008r2\megasr1

 If using Internal Flash Memory

 Internal Flash Memory:\024\win\winnt\oemfd\ws2008r2\megasr1

 Tips

 The volume label of Internal Flash Memory is INTER-FLASH.

23. Select LSI Embedded MegaRAID, and then click [Next].

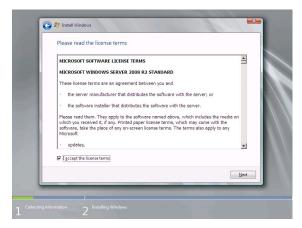
24. When the following window appears, select the Windows edition you have purchased and your preferred installation method.

Operating system	Architecture	Date modified
Windows Server 2008 R2 Standard (Full Installation)	364	7/14/2009
Windows Server 2008 R2 Standard (Server Core Installation)	x64	7/14/2009
Windows Server 2008 R2 Enterprise (Full Installation)	x64	7/14/2009
Windows Server 2008 R2 Enterprise (Server Core Installation)	×64	7/14/2009
Windows Server 2008 R2 Datacenter (Full Installation) Windows Server 2008 R2 Datacenter (Server Core Installation)	x64 x64	7/14/2009
Windows Server 2008 K2 Datacenter (Server Core Installation) Windows Web Server 2008 R2 (Full Installation)	x64	7/14/2009 7/14/2009
Windows Web Server 2008 R2 (Full Installation) Windows Web Server 2008 R2 (Server Core Installation)	x04 x64	7/14/2009

Tips

The Windows versions that appear on the screen differ depending on the OS installation media used.

25. 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].



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



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

Note If the driver was loaded in steps 22 to 23, or if not using a RAID Controller, go to step 31.

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 28.

Load Driver

То	install	the	driver	needed	to	acces	s your	hard	drive,	insert
the	e install	atio	nmedia	contain	ing	the d	river f	iles,	and the	nclick
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, the message "The Installation media can be a floppy disk, CD, DVD, or USB flash drive." appears on the screen, use the supplied EXPRESSBUILDER DVD or Internal Flash Memory.
- 28. 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.)

#### N8103-128 RAID Controller:

\024\win\winnt\oemfd\ws2008r2\stexstpt

#### N8103-149/150/151 RAID Controller:

 $024\win\winnt\cemfd\ws2008r2\megasas2$ 

If using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive:

\024\win\winnt\oemfd\ws2008r2\megasr1

Tips

The driver does not have to be loaded at this time if it was loaded in steps 22 and 23.

29. Select the necessary driver from the driver list shown, and then click [Next].

When using N8103-128 RAID RAID Controller [Promise SuperTrak SAS 6G RAID Controller]

When using the N8103-149/150/151 RAID Controller [LSI MegaRAID SAS 9267-8i]

If using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive [LSI Embedded MegaRAID] 30. If you used EXPRESSBUILDER DVD, remove it and then insert the OS installation media.

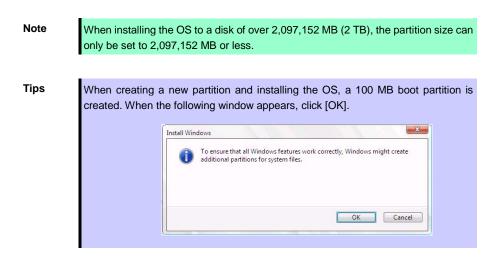


31. When the following window appears, select the disk in which the partition will be created, and then click **Drive options (advanced)**.

If a partition has already been created, go to step 34.

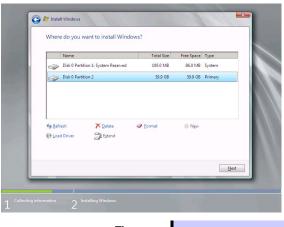


32. Click [New], enter the partition size into the size input box, and then click [Apply].



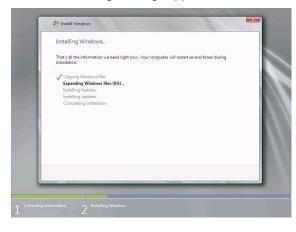
33. Select the partition created in step 32, and then click [Format].

34. In the window below, select the created partition, and then click [Next].



- Tips
- The number of partitions displayed differs depending on the hardware configuration.

When the following message appears, Windows installation starts automatically.



35. 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].



36. 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.
- 37. When the following message appears, click [OK].



38. Confirm the following according to the settings selected (displayed) in Step 24.

#### Full installations:

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

Pe	erform the following tasks to configure t	nis server			Vindows Serve Standard
9	Provide Computer Information	í.		2	Specifying computer information
	Activate Windows	Product ID:	Not activated		
	P Set time zone	Time Zone:	(UTC-08.00) Pacific Time (US & Canada)		
	Serigure networking	Local Area Connection:	Not connected		
	Provide computer name and domain	Full Computer Name: Workgroup:	WIN-Q1SKAJAVAF8 WORKGROUP		
0	Update This Server			2	Updating your Windows server
	Realize automatic updating and feedback	Updates: Feedback:	Not configured Windows Error Reporting off Not participating in Customer Experience I	Improv	ement Program
	and install updates	Checked for Updates: Installed Updates:	Never Never		
0	Customize This Server			[?]	Customizing your server
	Add roles	Roles:	None		
	Add features	Features:	None		
	Stable Remote Desktop	Remote Desktop:	Disabled		
	Configure Windows Frewal	Firewall	Public: On		

#### Server Core installations:

The command prompt will appear. Set the user information.

C:\Users\Admi	nistrator>	

- 39. Install Starter Pack by referring to Chapter 1 (3.4 Installing Starter Pack).
- 40. Install drivers and specify detailed settings by referring to Chapter 1 (3.5 Setting Up Device Drivers).
- 41. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 42. Apply Service Pack as needed according to Chapter 1 (3.8 Applying Service Pack).
- 43. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with OS standard installer is now complete.

# **3.4** 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.
	<ul> <li>The system configurations have changed (when internal option devices have been added or removed)</li> </ul>
	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.

# 3.4.1 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. Start the installer of Starter Pack 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	<u>×</u>
NEC	EXPRESSBUILDER
Menu items	
🕞 Read documen	its
Set up Window	
Set up softwar	Create a parameter file for Windows OS
S oer ap soltwar	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**

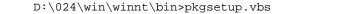
(1) From the command prompt, type the following command. (In the example below, the optical disk drive is D drive.)

```
Cd /d D:\024\win\winnt\bin
```

C:\Users\administrator>cd /d D:\024\win\winnt\bin

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

Pkgsetup.vbs



4. Wait for several minutes without attempting any further operation until the following window appears.

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

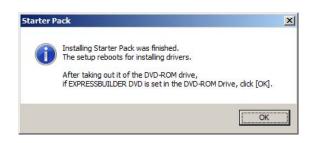
Read the message, and then click [OK].

Starter Pack installation starts. (About 5-10 minutes)

\* It changes with states of a system.



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.

# 3.4.2 When using Internal Flash Memory

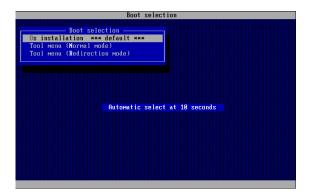
(Optional " Internal Flash Memory " is required)

- 1. After installing the operating system, restart the server.
- 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].

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:	4
This End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and the manufacturer ("Manufacture?) 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 provide the terms of this EULA.	
Yes No	-
Note Unless you agree these	e terms, you cannot use EXPRESSBUILDE

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

NE	C	EXPRESSBUILDER Version 6. xx - xxx .xx ( xxx )
	function, select the radio button, and then click [Next]. clicked, you can remove USB devices inserted into this cor	mputer safely.
	C Setup this computer	
(	€ Invoke various utilities	
	○ 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 Wi	ndows
C. Cours on motors PATD configuration	. 4.92
C Run a file directly	
Back 🔶 🔶	Next USB Remove

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

NEC	2	EXPRESSBUILDER Version 6.xx-xxx.xx(xxx)
	ack stored in Internal Flash I ing system, and then click [I	Memory to the installed Windows. Perform].
	Installed Windows	Windows Server 2008 R2 – Full Installation
	Back	Perform USB Remove

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

	EXPRESSBUILDER copies Starter Pack into the partition where Windows has been installed.
2	Current disk space : XXXXX MB
	Required disk space: xxMB

3	Questio	n
		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].

	the state of the s		
	into the partition where Windows has been installed.		
A.	If [Close] is selected, this computer reboots.		
	After logging in Windows, install Starter Pack		
	following the message.		
	[ Message ID : M1000 ]		

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.	
Click LOK J 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 C:\StartPKG\bin

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

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

Pkgsetup.vbs

C:\StartPKG\bin>pkgsetup.vbs

12. Wait for several minutes without attempting any further operation until the following window appears, and then click [OK].



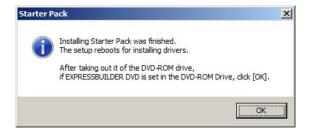
Installation of Starter Pack starts. (About 5-10 minutes) \* It changes with states of a system.

Note

If you chose Full installation, 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.



13. Click [OK] to restart the system.

Installation of Starter Pack is now complete.

# **3.5** 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 for an optional device, refer to the manual supplied with the optional device.

# 3.5.1 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.

```
Important 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

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

Optional LAN boards: N8104-128/132/133/138

Note: N8104-128 is supported by Express5800/R110e-1E only.

Important Using an optional LAN board, perform procedure "3.6.2 Setting up LAN drivers" for each optional LAN board.

#### (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\* [N8104-132/133/138] 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.

## 3.5.2 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.

#### (2) Using N8104-128

Using N8104-128 with the server, iSCSI Offload Engine must be disabled.

Follow the procedure below to set it.

- 1. Double-click the **Broadcom Control Suite** icon on the Control Panel window. **Broadcom Advanced Control Suite** starts.
- Set Filter to ALL VIEW, select Broadcom BCM57711 NetXtreme II 10 GigE # xx under Explorer View the Adapter xx (BCM57711 A0) - Port x.
- 3. Tab on **Configurations** at the right side screen and then expand **Resource Reservations**.
- 4. Click the [Configure] button on the **Click the button to configure**. The **Hardware and Resource Configuration Wizard** appears.
- 5. Remove a checkmark from [iSCSI] under **Protocols**, if checked. Select [Next], and then click the [Apply] button.
- 6. When the following message 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?

- 7. Complete steps 2 to 6 for each N8104-128 network adapter. Then, close the **Broadcom Advanced Control Suite**.
- 8. Restart the system. Setup is now completed.

#### (3) Using N8104-132/133/138

Using N8104-132/133/138 with the server, follow the procedure below to set it.

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

Tips EX

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory. Proceed to the next step.

- 2. Double-click to the following file.
  - When using EXPRESSBUILDER DVD:

Optical disk drive:\024\win\winnt\ws2008x64\lan\pgdyavd\_Disable.vbs

• If Starter Pack was installed from Internal Flash Memory:

System drive:\StartPKG\ws2008x64\lan\pgdyavd\_Disable.vbs

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

Configuration Completed [Option:PopUp RLV Disabled(Action:Done)] Reboot the system

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

Setup is now completed.

# *3.5.3* Setting up team/LiveLink

Important	When using Smart Load Balancing and Failover (without Standby			
	Member ), be sure to setup LiveLink at creation of team.			
	Member ), be sure to setup LiveLink at creation of team. When using Smart Load Balancing and Failover (with Standby Member ),			
	setup for LiveLink is not essential.			

- When deleting the team, refer to Chapter 1 (3.5.3 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 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.
- Using Server Core installations, Not supporting setting up team/LiveLink by the BACS.

#### (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

Important	Possible combinations of network adapters that compose the team are as follows.			
	When the number of adapters that composes the team is up to four:			
	<ul> <li>Between standard network adapters</li> </ul>			
	<ul> <li>Between LAN cards excluding N8104-128</li> </ul>			
	<ul> <li>A standard network adapter and LAN card N8104-128</li> </ul>			
	When the number of adapters that composes the team is up to two:			
	<ul> <li>Between N8104-128 adapters.</li> </ul>			
	Teaming with another N8104-128 on different board is not supported.			
Tips	To edit a team, right-click on the BACS team, and then select <b>Edit Team</b> . Then refer to step 3 and the subsequent steps to edit the team.			

- 1. Double-click the **Broadcom Control Suite** icon on the Control Panel window. **Broadcom Advanced Control Suite** starts.
- 2. Set a **Filter** in a **TEAM VIEW**, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.

<mark>Broadcom Advanced Control Suite 4</mark> Eile View Action Filter Context Tools Teams iSOSI Help   Filter: TEAM VIEW ▼   Information ▼   ☞ Vital Signs	s 🔽 Driver Information	<u>×</u>
Explorer View	Information   Configurations   Diagnost	ics Statistics
E- 888 Hosts	Property	Value
Losseigned Adapters     Losseigned     Losseigned Adapters     Losseigned Adapters     Losseigned	Vith Sinns     MAC Address     Permanent MAC Address     Prv4 Address     Officed Capabilities     Officed Capabilities     Officer Information     Oriver Version     Driver Information     Driver Name     Driver Status	S0E54986AD60           S0E54986AD60           169254156174           LSO,CO           1500           1500           1500           1502422           10/3/2011           b57xp62zys           Loaded
	Vital Signs The Vital Signs section of the Information ta network adapters that are installed in your s adapter and general network connectivity.	
	,	DAL-54

The Broadcom Teaming wizard appears.

3. Click [Next].

he Broadcom Teaming Wizard will guide you through the process of creating and modifying teams and/or VLANs. Expert Mode lote: Current work in the Teaming Wizard will be lost when Expert Mode is clicked. o always start in Expert Mode, check the "" Default to Expert Mode on next start" checkbox. Default to Expert Mode on next start Cancel < Back Next >	
lote: Current work in the Teaming Wizard will be lost when Expert Mode is clicked. To always start in Expert Mode, check the ""Default to Expert Mode on next start" checkbox. T Default to Expert Mode on next start	To continue,
o always start in Expert Mode, check the ""Default to Expert Mode on next start" checkbox. Default to Expert Mode on next start	
Default to Expert Mode on next start	
Cancel KBack Next >	
	Preview 🗾
Note Do not use Expert Mode.	

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

Broadcom Teaming Wizard	<u>? ×</u>
Creating/Modifying a Team: Team Name You must assign your team a unique name.	BROADCOM
Enter the name for the team: Team 1	
A team name has a maximum length of 39 characters. The name can use any the set $A^{*}$	symbolic character except
Cancel < Back Next >	Preview 🔳

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	<u>?</u> ]:
reating/Modifying a Team: Team Type elect the type of team you want to create.	BROADCOM
Team Type	
Smart Load Balancing(TM) and Failover (SLB)	
C 802.3ad Link Aggregation using Link Aggregation Control Protocol (LACP)	
C FEC/GEC Generic Trunking	
TCP Offload Engine (TOE) support is supported only on a SLB team type. If a te connections will be offloaded.	am type other than SLB is selected, no TCP
Cancel   < Back   Next >	Preview 📊

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

Available Adapters 1008] Broadcom NetXtreme Gigabit Ethernet #2	TOE	LSO Yes	CO Yes	RSS No	eamab Yes	NDIS 5.1	MTU 1500	
vooj zioacom neuritanie Olgani Ethemet wz	NO	163	1403	1.0	145	1.0.1	12500	1
Add	575							Remove
Add Team Members	TOE	LSO	<b>C</b> 0	RSS	samab	NDIS	MTU	Remove
<u></u>	TOE	LSO Yes	CO Yes	RSS No	samab Yes	NDIS 5.1	MTU 1500	Remove
Team Members			100.02	1000000	10000	A RECEIPTION OF		Remove
Team Members			100.02	1000000	10000	A RECEIPTION OF		Remove
Team Members			100.32	1000000	10000	A RECEIPTION OF		Remove
Team Members			100.32	1000000	10000	A RECEIPTION OF		Remove

- 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	<u>?)</u>
reating/Modifying a Team: Designating a Standby Member Jo 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.	
C Use the following member as a standby member:	
[0007] Broadcom NetXtreme Gigabit Ethernet	<u></u>
Enable Auto-Fallback Disable mode	
<u>Qancel</u> <u>Next</u> >	Preview 🔝

- 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].

Hi 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.	
Do not configure a standby member.     Use the following member as a standby member:	
(0008) Broadcom NetXtreme Gigabit Ethernet #2	
Enable Auto-Fallback Disable mode     (3)	
Qancel <u>Sack</u>	Preview
Note Enable Auto-Failback Disable r again.	mode is cleared while editing the team. Select

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

Broadcom Teaming Wizard	<u>?</u> ×
Creating/Modifying a Team: Configuring LiveLink Do you want to configure LiveLink?	BROADCOM.
Configure LiveLink?	
· Yes	
C No	
LiveLink detects loss of network connectivity beyond the switch and routes traffic that have a live link.	c only through team members
Cancel < Back Next	Preview 💼

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...].

Probe Interval (seconds)	2		
Probe Maximum Retries	5	•	
Probe VLAN ID (Optional: 0-4094)	0		
Target		IP Address	
Probe Target 1 Probe Target 2 Probe Target 3			Y
	Edit Target IP	Address	
	Lot 10 get 1		

#### 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 a link is down is detected, 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 Confi	gurations
IP Setting	
Team Name	Team 1
Target 1:	
Target 2:	
Target 3:	ī
Target 4:	1
Please enter ei	ither an IPv4 or IPv6 address for the probe targets IP address fie

Important • *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].

Probe Interval (seconds)	2	•	
Probe Maximum Retries	5		
Probe VLAN ID (Optional: 0-4094)	0		
Target		IP Address	
Probe Target 1 Probe Target 2			
Probe Target 3			<u> </u>
	Edit	Target IP Address	
	L		

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

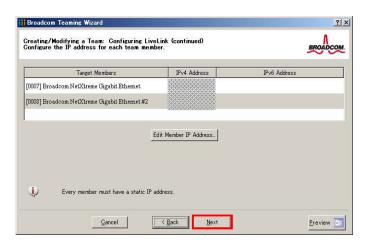
Broadcom Teaming Wizard			?
Creating/Modifying a Team: Configuring Live Configure the IP address for each team memb	Link (continued) per.		BROADCOM
Target Members	IPv4 Address	IPv6 Address	
[0007] Broadcom NetXtreme Gigabit Ethernet			
[0008] Broadcom NetXtreme Gigabit Ethernet #2			
E	dit Member IP Address		

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

Setting	
Name:	
	[0009] Broadcom BCM57810 NetXtreme II 10 GigE (NDIS VBD Client) #161
IPv4 Address:	T
IPv6 Address:	-

- Important 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.

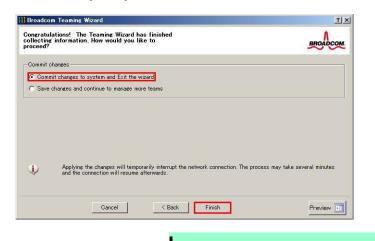
14. Click [Next].



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

0
BROADCOM
Preview 📊

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.

<u>File View Action Filter Context Tools Teams iSCSI Help</u>	
Explorer View	8
Hosts  Ho	2

- 17. Restart the system.
- After the system starts, start Broadcom Control Suite by clicking the Broadcom Control Suite icon in Control Panel, 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)

Property      Prover Section Meeters      Prover Section Meeters      Prover Section Meeters      Prover Section Meeters      Prover Section      Prover Version      Oriver Version	Value Team 1 Smart Load Balancing(TM) and Failover LSO, CO
Torans     Toran	Smart Load Balancing(TM) and Failover
Team Amme     Team Torem     Team     Team To	Smart Load Balancing(TM) and Failover
Team 1     Team 1	
BASP Virtual Adapters     Icam Uffload CupBolities     Team 1 (0020] BASP Virtual Adapter)     Primary Adapters     Team 1 (0020] Broadcom NetXtreme Gigabit Ethernet     Torver Name     Driver Data     Priceb Max Flaries     Probe Max Flaries     Probe Vian ID	150.00
Team 1 (0020) BASP Virtual Adapter)      Primer Mamme      Primer Varian      Primer	
Primary Adapters     Primary Adapters     Primary Adapters     Primary Adapters     Primary Adapters     Price Harmonia     Price Harmonia     Price Harmonia     Price Harmonia     Price Visa ID     Price Visa ID	1500
Driver Version     Driver Version     Driver Version     Driver Version     Driver Version     Driver Version     Driver Date     Drobe Interval     Trobe Max Retries     Probe Max Retries     Probe Visn ID	Baspxp32.sys
Event Date     Dover Date     Dover Date     Dover Date     Dover Date     Dover Date     Dover NetWrene Gigabit Ethernet #2     Probe Max Retries     Probe Visn ID	6.3.31
[0008] Broadcom NetXtreme Gigabit Ethernet #2     Probe Max Retries     Probe Vian ID	6/15/2011
- Probe Vian ID	2000
	5
Team Probe Target 1	0
	1000000000000000
Team Properties Displays information about the tea	2

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

xplorer View	Information Statistics	
Inota      Inota	Property           Team Name           Team Manne           Team Mone           Team Mone           Team Mone           Team Mode           Team Mode           Team Mode           Team Mode           Driver Version           Driver Version           Probe Max Retries           Probe Max Retries           Probe Visn ID           Team Properties           Displays information about the team.	Value           Team 1           SLE (Autor-Filtback Disable)           Primary           150, CO           1500, CO           Basprog22:ys           6.331           6/15/2011           2000           5           0

Team setup is now complete.

(4) Procedure for deleting team

 Important
 You must delete teams from Broadcom Control Suite.

 You cannot delete the team from the team adapter displayed in the Device Manager.

- 1. Double-click the **Broadcom Control Suite** icon on the Control Panel window. **Broadcom Advanced Control Suite** starts.
- 2. Set a **Filter** in a **TEAM VIEW**, right-click the adapter to be used for the team, and then select **Delete Team** from the short-cut menu.

Broadcom Advanced Control Suite 4 File View Action Filter Context Tools Teams (SOSI Help		LOX
Filter: TEAM VIEW		
Explorer View 8	Information Statistics	
😑 aaa Hosts	Property	Value
Teans Te	Team Properties     Team Properties     Team Type     Team Type     Team MTU     Driver Version     Driver Version     Driver Version     Probe Interval     Probe Interval     Probe Interval     Probe Target 1      Team Properties	Team 1           Snart Load Balancing (TM) and Failover           LS0, CO           1500           Basop 02 259           6331           6/15/2011           2000           5           0
BROADCOM	Displays information about the team.	

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.

## Note

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:\024\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.

### 3.5.4 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:\024\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.

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

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

### 3.5.6 When using a RAID Controller (N8103-160)

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

### 3.5.7 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.

# 3.6 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.

## **3.7** 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.

🔨 🛛 🖉 • Control Panel •	System and Security * System		👻 🌇 Search C
Control Panel Home	View basic information abo	ut your computer	
Device Manager	Windows edition		
Remote settings	Windows Server 2008 R2 St	tandard	-
Advanced system settings	Copyright © 2009 Microsoft	Corporation. All rights reserved.	
	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 available for this Display	
	Computer name, domain, and w	orkgroup settings	
	Computer name:	WIN-RO6HQKR5EQ4	Change setting
	Full computer name:	WIN-RO6HQKR5EQ4	
	Computer description:		
	Workgroup:	WORKGROUP	
	Windows activation		
	Windows is activated		ask for .
See also	Product ID: xxxxxx-xxx-xxx	00000-00000	genuine Microsoft
			sontware
Action Center			Learn more onlin

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

When the following window appears, click Change product key.

Control Paris .	System and Security * System		<ul> <li>Search Cont</li> </ul>	for Panel
5 - 25 7 P - 1	TICH DUSIC INFORMATION ADDI	ac your compacer		
Control Panel Home	Windows edition			
Device Manager	Windows Server 2008 R2 St	andard		$\bigcirc$
Remote settings	Copyright @ 2009 Microsoft	Corporation. All rights rese	rved.	
Advanced system settings				
	System			122412-24
	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	available for this Displa	у
	Computer name, domain, and w	orkgroup settings		
	<b>a</b> 1	WIN-ROSHOKRSEO4		Change setting:
	Computer name:	WINHCOOHQUICEQ4		
	Full computer name:	WIN-RO6HQKR5EQ4		
	Full computer name:			
See also	Full computer name: Computer description:	WIN-RO6HQKR5EQ4		
See also Action Center	Full computer name: Computer description: Workgroup:	WIN-RO6HQKRSEQ4	now	

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.

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

Administrator: C:\Windows\system32\cmd.ex	e
C:\Users\Administrator>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	×
Name: Windows Server(R), ServerStandardCore edition Description: Windows Operating System - Windows Serve channel Partial Product Key: xxxxx License Status: Licensed	r(R), OEM_SLP
	OK

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

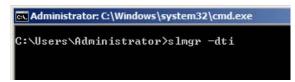
At the command prompt, enter the following, and then press <Enter> key. Set the product key found on the COA label in *PID*.

slmgr -ipk PID



3. Obtain an installation ID for Windows activation.

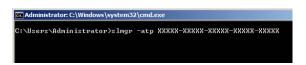
At the command prompt, enter the following, and then press <Enter> key.  ${\tt slmgr}$  -dti



- 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.

## **3.8** 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

## **3.9** Installation When Multiple Logical Drives Exist

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

#### (1) Installation process

- Setup with EXPRESSBUILDER

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.

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	<ul> <li>For details, refer to the following Microsoft website:</li> </ul>
	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 (3.3 Setup with OS Standard Installer)*, and proceed to setup Windows with OS standard installer and the instructions.

Tips

I

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.

# 4.1 Before Starting Setup

Chapter 1 Installing Windows

4.

Read through the cautions explained here before starting setup.

**Setting Up Windows Server 2008** 

- BTO : Setting up of Pre-installed model
- **EB** : Confirm during Setup with EXPRESSBUILDER
- **OS** : Confirm during Setup with OS standard installer

				(1/4)
:	Setup	D C		Items to confirm
_	EB	08	Windows family	<ul> <li>The following editions of the Windows Server 2008 family may be installed.</li> <li>Windows Server 2008 Standard 64-bit (x64) Edition</li> <li>Windows Server 2008 Enterprise 64-bit (x64) Edition</li> <li>Windows Server 2008 Standard 32-bit (x86) Edition</li> <li>Windows Server 2008 Enterprise 32-bit (x86) Edition</li> <li>Inquiries about installing other editions may be made at your sales representative. For information about Service Packs, refer to <i>1.3 Service Pack Support</i>.</li> </ul>
			Hardware	The following hardware configurations require special procedures.
-	EB	08	configuration	<ul> <li>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.     </li> </ul>
_	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 Exist)</i> .
_	ЕВ	05		<ul> <li>Setup when mass memory is installed         If mass memory is installed in your system, the large size of paging file is required at installation. Thus, the partition size for storing debug information (dump file) may not be secured.         If you fail to secure the dump file size, use OS standard installer for setup, and allocate the required file space to 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. Specify another disk as destination to store the debug information (required dump file size) by referring to Chapter 1 (7. Setup for Solving Problems).         If the hard disk drive does not have enough 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 hard disk drive for the dump file.         Note         If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.         Note         If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.         Note         If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.         Note         If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.         Note         If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.   </li> </ul>

Setup	)	Items to confirm					
Svoto		System partition					
EB	OS	size <windows< td=""><td colspan="2">Size required to install the OS + paging file size + dump file size + application size <b>Full installations</b></td></windows<>	Size required to install the OS + paging file size + dump file size + application size <b>Full installations</b>				
		Server 2008 64-bit Edition>	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 Server Core installations	= 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 + 300 MB			
			Application size	= as required by the application			
			For example, if the installed memo the partition size is calculated as fo	ry size is 1 GB (1,024 MB) and Full installation is selecte Ilows:			
			11,600 MB + (1,024 MB $\times$ 1.5) application size	+ 1,024 MB + 300 MB + application size = 14,460 MB			
			<ul> <li>information (dump fill large enough to stor size. If the paging fill that may result in an</li> <li>Regardless of the size maximum size of the</li> <li>When installing other</li> </ul>	file sizes are recommended for collecting debug e). The initial size of the boot volume paging file must be e dump files. Make sure you set a sufficient paging file e is insufficient, there will be a virtual memory shortage inability to collect correct debug information. zes of internal memory and write debug information, the e dump file is "size of internal memory + 300 MB". er applications or other items, add the amount of space cation to the partition.			
			If the partition size for installing Wi partition size or add another hard d	ndows is smaller than the recommended size, expand th lisk drive.			

					(3/4)		
	Setup	)	Items to confirm				
_	EB	08	System partition size <windows Server 2008 32-bit Edition&gt;</windows 		alculated by using the following formula. paging file size + dump file size + application size = 6,300 MB (Windows Server 2008) = 9,300 MB (Windows Server 2008 with Service Pack 2)		
				Paging file size (recommended) Dump file size Application size Server Core installations	<ul> <li>= 9,400 MB</li> <li>(Windows Server 2008 + Service Pack 2)</li> <li>= installed memory size × 1.5</li> <li>= installed memory size + 300 MB</li> <li>= as required by the application</li> </ul>		
				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) Dump file size Application size	<ul> <li>= installed memory size × 1.5</li> <li>= installed memory size + 300 MB</li> <li>= as required by the application</li> </ul>		
				the partition size is calculated as for	ory size is 1 GB (1,024 MB) and Full installation is selected, ollows: + 1,024 MB + 300 MB + application size = 9,160 MB +		
				<ul> <li>information (dump fill large enough to stor size. If the paging fill that may result in an</li> <li>A paging file size of in some system cond If the message pro appears, specify 405</li> <li>If the mounted men</li> </ul>	mpting you to specify a value smaller than 4096 MB 95 MB. hory size is 2 GB or greater, the maximum size of the		
					B + 300 MB". er applications or other items, add the amount of space cation to the partition.		
				If the partition size for installing W partition size or add another hard o	indows is smaller than the recommended size, expand the disk drive.		

				(4/4)	
3	Setup	)		Items to confirm	
-	EB	OS	Upgrade to Windows Server 2008	Inplace 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.TipsInplace upgrade refers to overwriting an existing OS (in this case, Windows 2003) with another OS (Windows Server 2008).	
-	EB	OS	Using BitLocker	<ul> <li>If using BitLocker, note the following.</li> <li>Before installing an OS, be sure to create the following two partitions in the hard disk drive: <ul> <li>System partition (to store the loader)</li> <li>Boot partition (to store the OS)</li> </ul> </li> <li>Note For details, refer to the following document provided in Microsoft TechNet:</li> </ul>	
				<ul> <li>Be sure to keep the recovery password secure. Do not keep it near a server running BitLocker.</li> <li>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.</li> <li>The recovery password might be required at startup of the OS after the following: <ul> <li>Replacement of motherboard</li> <li>Initialization of trusted platform module (TPM)</li> <li>Change of BIOS setting</li> </ul> </li> </ul>	
				• To reinstall the operating system into a partition that is encrypted with BitLocker, delete the BitLocker-encrypted partition prior to reinstallation.	
-	EB	08	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	<ul> <li>License authentication is required depending on the installation of Windows.</li> <li>For details, refer to <i>Chapter 1 (4.8 License Authentication)</i>.</li> <li>NOTE <ul> <li>Activate within 60 days following installation.</li> <li>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.</li> </ul> </li> </ul>	

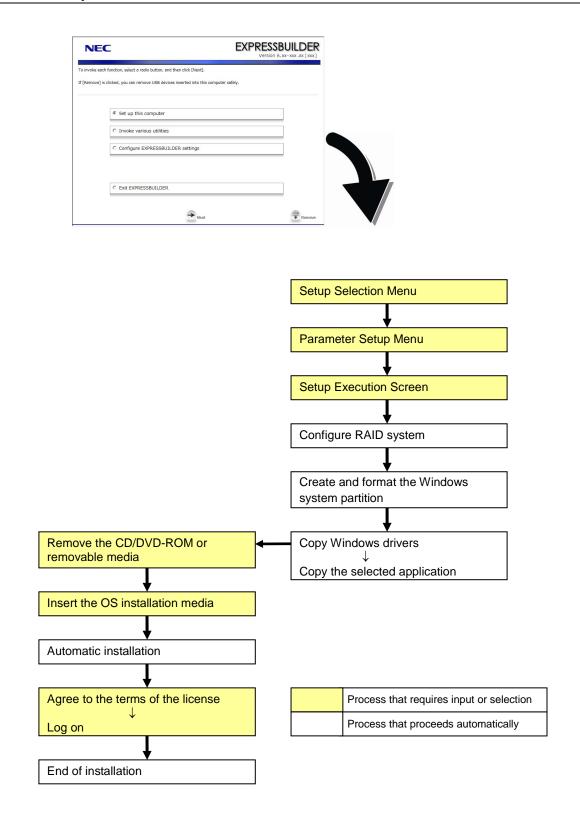
# **4.2** Setup with EXPRESSBUILDER

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. Therefore the hardware installation of the server needs to be finished by following "*User's Guide*".

Important	<ul> <li>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:         <ul> <li>RAID settings wizard</li> <li>Partition Settings in the Windows Setup wizard</li> </ul> </li> <li>Backing up user data, as needed, is recommended.</li> <li>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.</li> </ul>
Note	<ul> <li>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.</li> <li>When using an onboard RAID controller (LSI Embedded MegaRAID): Do not support the creation of RAID10 by using the onboard RAID controller. Refer to Chapter 2 (4. RAID System Configuration) in "Maintenance Guide" when creating RAID10.</li> </ul>
Tips	<ul> <li>Setup with EXPRESSBUILDER allows you to use a prespecified parameter file or save the parameters specified in setup as a parameter file on removable media or Internal Flash Memory (if purchased optionally).</li> <li>For details on creating a parameter file, refer to <i>Chapter 1 (8 Windows OS Parameter File)</i>.</li> </ul>

### 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 DVD-ROM*)
- > First Steps Guide
- Either of the following EXPRESSBUILDER
  - EXPRESSBUILDER DVD
  - Internal Flash Memory (optional)
- > 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.

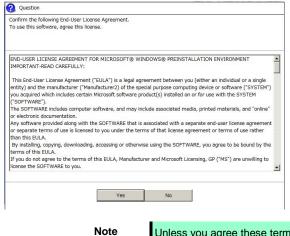
- 1. Turn peripheral device (such as a display) power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select **Os installation** \*\*\* **default** \*\*\*. You will automatically advance to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

Boot selection
Boot selection
Os 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].

EXPRE	ESSBUILDERで使用	する言	語を選択してください
Select	a language to use	for the	EXPRESSBUILDEF
0	日本語	œ	English
0	Français	0	Italiano
0	Deutsch	0	Español

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



Unless you agree these terms, you cannot use EXPRESSBUILDER.

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

NEC	2	EXPRESSBUILDER Version 6. xx- xxx . xx ( xxx )		
	o invoke each function, select the radio button, and then click [Next]. f [Remove] is clicked, you can remove USB devices inserted into this computer safely.			
	C Invoke various utilities			
	C Configure EXPRESSBUILDER settings			
	C Exit EXPRESSBUILDER			
	→ <sub>Next</sub>	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 x86" from the pull-down menu.

	E		ESSBUILD
m only] is selected, EXPRESSBL	JILDER only configures RAID sys		OS installation.
stall Windows	Windows Server 20	108 ×86	×
nfigure RAID system only			
ad a parameter file			
	m only] is selected, EXPRESSBU	vitem, select an item in the listbox, and then click [Next]. m only] is selected, EXPRESSBUILDER only configures RAID syn ] is selected, you can set up the computer according to the par stall Windows	Ve rstern, select an item in the listbox, and then click [Next]. m only] is selected, EXPRESSBUILDER only configures RAID system without ] is selected, you can set up the computer according to the parameter file. stall Windows Windows Server 2008 x88

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

NE	C	EXPRESSBUILDER Version 6. xx - xxx . xx ( xxx )			
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.					
	C Install Windows	Windows Server 2008 x86	×		
	C Configure RAID system only				
	Back ←	→ Next	USB FRemove		

Confirm settings on Parameter Setup Menu as needed, then click [Next].

 $\rightarrow$  Go to Step 13.

NEC			BUILDER 6. xx - xxx ( xxx )
Set parameters for the setup. If [Settings] is clicked, you can change the parameter If [Save] is clicked, you can save the parameter to *** If "!" is displayed, you cannot proceed to the ne	a file.	set the parameters.	
RAID settings OK Logical drive1 (148CB)	: System Partition (40GB		Default values Default Settings Skip
	-		
Windows settings User information User settings	Network settings	Windows Components Default settings	Default Settings
	+		
Application settings			Default Settings
Back	→ <sub>Next</sub>	Save	Remove

10. Set parameters required for setup.

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

NEC			EXPRESS Version 6	
f [Save] is clicked, you ca	tup. u can change the paramete in save the parameter to a u cannot proceed to the nex	file.	set the parameters.	
			🕜 D	efault values
RAID settings Skip	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)		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		ļ	Default Settings
	Back 🗲	→ Next	Save	Remov

Click [Default] if you want to restore the default values.

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

EXPRESSBUILDER Version 6.xx-xxx (xxx)	
) set the parameters	
	Ø Default values
	Derault Sattinge

### 10-1 RAID settings

Use this menu to configure the RAID system with the RAID controller detected automatically.

Note

When using an onboard RAID controller (LSI Embedded MegaRAID): This function does not support the creation of RAID10 by using the onboard RAID controller. Refer to Chapter 2 (4. RAID System Configuration) in "*Maintenance Guide*"when creating RAID10.

Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER
If [Save] is clicked, you ca	etup. u can change the parameter an save the parameter to a u cannot proceed to the next	file.	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	→ <sub>Next</sub>	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.

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	BUILDER
f [Save] is clicked, you ca	tup. I can change the parameter In save the parameter to a l cannot proceed to the next	file.	set the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)		Default Default Settings Skip
Windows settings	User information	Network settings	Windows Components	Default
¥ 0	Default settings	Default settings	Default settings	Settings
Application settings	Applications installation Default settings	Ŧ	1	Default Settings
	Back	→ <sub>Next</sub>	Save	Remove

(1) Click [Settings] in Windows settings.

(2)	Click	[Next]	in the Windows	settings	wizard
	Wizard				

standard installer.		
Start Set Windows preferences Set partition preferences Set partition preferences Set network preferences Set network preferences Set component preferences Check/Exit	Use 05 standard installer	1 / 8 Page

(3) Specify the Windows basic settings. . Cł

pecify the Window	s basic setting	js.			
hange settings for	"Edition" and	"Time Zone"	as needed,	and click [	Next].

sic inform	nation	
Oper	ating System	: Windows Server 2008 x86
сu	se OS standard	installer
1	Copy the OE	M drivers into the removable media
_ © S€	etup with EXPR	ESSBUILDER
E	dition	: Standard(Full Installation)
L	anguage	: English
Т	ime 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].

et parameters about the partition of V	Windows installation.
	hard disk drive or logical drive. The partition size can be set within 2TB.(The
rea where 2TB is exceeded cannot be	
there are any partitions in the destina	ation disk, below red-framed area is deleted.
Current partitions(the red-framed area	is deleted) :
:Eree area	
(148.1GB)	
Partitioning	
-	
Use the existing partition	1
<ul> <li>Create a new partition—</li> </ul>	
C Specify the maximum ar	mount
Enter a value	: 40 (GB) *1TB=1024GB
	(12GB - 148GB)
	()
	3 / 8 Page

### 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].

tegories(numbers / uppercase / lowercase /	signs).	
Computer name	: 1-1766-0123456	(Required) 🔽 Auto
User name	: Administrator	
Administrator password	:	(Required)
Confirm Administrator password	:	(Required)

- Note
   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].

et parameters about network protocol. you input IP address, select [Custom settings], and then click [Advance	ed].
and the sub-state of the	
letwork protocols	
<ul> <li>Standard setting</li> </ul>	
C Custom settings	
Standard adapter – Internet Protocol (IPv4)	Advanced
L	
	5 / 8 Page
	Cancel
Back Next	

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].

Join 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].

Wizard	
et parameters about Windows components.	
elect 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
Back Next	Cancel

### (9) Confirm settings.

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

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

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 6	
Set the 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	o a file.	set the parameters.	
		0	Default values
RAID settings	i) : System Partition (40GB)		Default Settings Skip
	+		
Windows settings User information User settings	Network settings	Components settings Default settings	Default Settings
	+		
Application settings Applications installation Default settings	n		Default Settings
Back	→ Next	Save	Remove

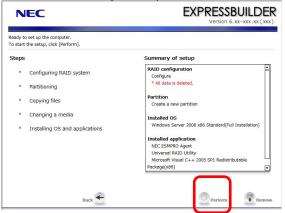
- (1) Click [Settings] in Application settings.
- (2) Confirm settings on the dialog shown below, change them as needed, and click [Finish].

select applications to install. For more information on each application, re	fer to [Description of Application] column.
List of applications	Selected applications
Apply drivers for mass storage controller	Add >> Add >> Microsoft Visual C++ 2005 SP1 Redistributable Microsoft Visual C++ 2005 SP1 Redistributable
	Finish

- Save parameters on Parameter Setup Menu as needed.
   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 6	BUILDER
Set parameters for the setup. If [Settings] is clicked, you can change the pa If [Save] is clicked, you can save the parame *** If "I" is displayed, you cannot proceed to	er to a file.	set the parameters.	
		🔞 D	efault values
RAID settings Skip Logical drive1 (14	IGB) : System Partition (40GB)		Default Settings Skip
	+		
Windows settings OK User informati	n Network settings Default settings	Windows Components Default settings	Default Settings
	+		
Application settings OK Applications install Default setting		ļ	Default Settings
Back 🗲	→ Next	G 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.

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

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

15. <u>Remove the removable media and DVD(EXPRESSB</u>UILDER) from the server.

	Remove the CD/DVD and other removable media.
8	
	[ Message ID : H1002 ]

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



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 Windo	ws Up Windows	
Please	read the license terms	
MICR	OSOFT SOFTWARE LICENSE TERMS	<u>-</u>
MICR	OSOFT WINDOWS SERVER 2008, STANDARD	
where softwa	license terms are an agreement between Microsoft Corporation (or based on you live, one of its affiliates) and you. Please read them. They apply to the are named above, which includes the media on which you received it, if any. The also apply to any Microsoft	
ő	updates,	
Ö	supplements,	
Ö	Internet-based services, and	
п	support services	•
	ept the license terms	
	И	ext

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> + <Del> 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	Canree 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**.



- 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.

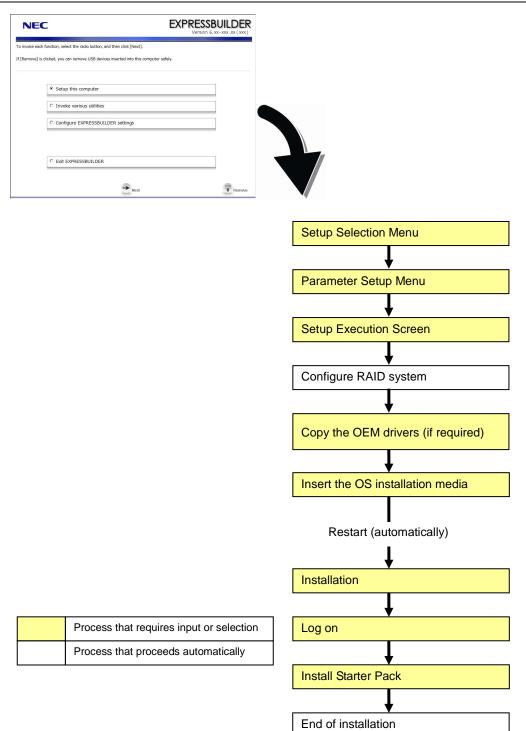
# **4.3** Setup with OS Standard Installer

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. Therefore the hardware installation of the server needs to be finished 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.
Note	When using an onboard RAID controller (LSI Embedded MegaRAID): Do not support the creation of RAID10 by using the onboard RAID controller. Refer to Chapter 2 (4. RAID System Configuration) in "Maintenance Guide" when creating RAID10.
Tips	<ul> <li>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 removable media or Internal Flash Memory (if purchased optionally).</li> <li>For details on creating a parameter file, refer to <i>8 Windows OS Parameter File</i>.</li> </ul>

### 4.3.1 Setup flow

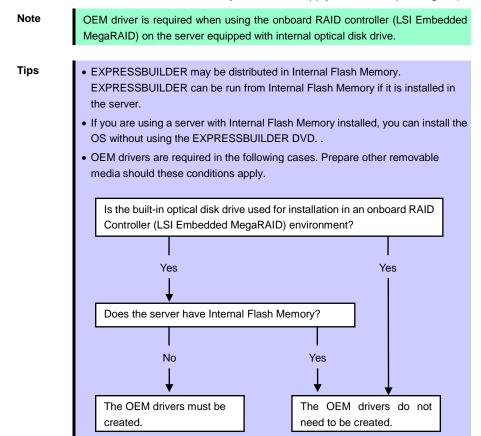


### 4.3.2 Requirements for Setup

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 (optional)
- Prepare if needed:
  - · Removable media for Windows OS parameter file
  - Removable media for creating OEM drivers (Windows Server 2008 x64)
  - Removable media for creating OEM drivers (Windows Server 2008)
  - Service Pack

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



### 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 (such as a display) 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 Menu (Normal Mo Tool Menu (Redirecti	default *** de)
	Automatic select at 10 seconds

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

Select	a language to use	for the	EXPRESSBUILDER.
0	日本語	œ	English
0	Français	0	Italiano
0	Deutsch	О	Español

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

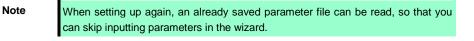
Confirm the following End-User License Agreement.
o use this software, agree this license.
END-USER LICENSE AGREEMENT FOR MICROSOFT® WINDOWS® PREINSTALLATION ENVIRONMENT
IMPOSER LICENSE AGREEMENT FOR MICROSOFT & WINDOWS & PREINSTALLATION ENVIRONMENT
This End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single antity) 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.
In electronic occurrenceduon. May 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 icense the SOFTWARE to you.
Yes No

Unless you agree these terms, you cannot use EXPRESSBUILDER.

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

NEC	2	EXPRESSBUILDER Version 6.xx-xxx .xx ( xxx )
	function, select the radio button, and then click [Next]. slicked, you can remove USB devices inserted into this compute	r safely.
	Setup this computer	
	C Invoke various utilities	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ <sub>Next</sub>	USB Remove

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.



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	EXPRESSBUILDER Version 6. xx-xxx ( xxx )
To install the Operating System, select the Item in the list If [Configure RAID system only] is selected, EXPRESSBUI If [Load a parameter file] is selected, you can setup accor	LDER only configures RAID system without the 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	EXPRESSBUILDER Version 6.xx-xxx.xx (xxx)
To install the Operating System, select the item in the listbox, and then If [Configure RAID system only] is selected, EXPRESSBUILDER only con If [Load a parameter file] is selected, you can setup according to the pa	igures RAID system without the OS installation.
C Install Windows	ndows Server 2008 x85
C Configure RAID System only	
Congue roub spacin only     Coad a parameter file	
Back + Next	USB Remove

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

NEC		EXPRESS Version 6	BUILDE
Set parameters for the setup. If [Settings] is clicked, you can change the parameter If [Save] is clicked, you can save the parameter to a *** If "!" is displayed, you cannot proceed to the ne:	file.	set the parameters.	
RAID settings Disk array1 RAID1(2disk) Logical drive1 (148GB)	: System Partition (40GB)		efault values Default Settings Skip
Windows settings	Network settings	Windows Components	Default
OK User settings	Default settings	Default settings	Settings
Application settings		ļ	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	BUILDER 5. xx - xxx ( xxx )
If [Save] is clicked, you ca	tup. u can change the parameter an save the parameter to a u cannot proceed to the next	file.	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	→ <sub>Next</sub>	Save	Remove

Click [Default] if you want to restore the default values.

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

	RESSBUILDER Version 6. xx - xxx ( xxx )
) set the parameters	5.
	🕜 Default values
	Pefeult

### 10-1 RAID settings

Use this menu to configure the RAID system with the RAID controller detected automatically.

Note When using an onboard RAID controller (LSI Embedded MegaRAID): This function does not support the creation of RAID10 by using the onboard RAID controller. Refer to Chapter 2 (4. RAID System Configuration) in *"Maintenance Guide"* when creating RAID10.

Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER 5. xx - xxx . xx ( xxx )
f [Save] is clicked, you ca	tup. u can change the parameter in save the parameter to a l u cannot proceed to the next	file.	set the parameters.	
			0	Default values
RAID settings Skip	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)	)	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 🗲	→ Next	C 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.

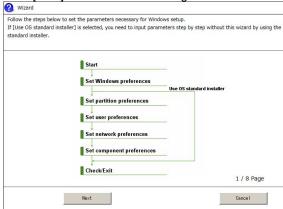
### When skipping the creation of new logical drives

Click [Skip] in RAID settings.

11. Click [Settings] in Windows settings.

NEC			EXPRESS Version	BUILDER
f [Save] is clicked, you ca	tup. u can change the parameter in save the parameter to a u cannot proceed to the nex	file.	set the parameters.	
			0	Default values
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (148GB) :	System Partition (40GB)	)	Default Settings Skip
		+		
Windows settings	User information Default settings	Network settings Default settings	Windows Componints Default setting	Default Settings
		+		
Application settings	Applications installation Default settings			Default Settings
	Back 🗲	→ Next	Save	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].

information	
Operating System	: Windows Server 2008 x86
• Use OS standard	installer
Copy OLH C	ivers into a removable media
C Setup with EXPR	SSBUILDER
<ul> <li>C Setup with EXPR Edition</li> </ul>	ESSBUILDER : Standard(Full Installation)

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

### removable media.

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

Wizard	
Parameter setting is completed.	
To finish this wizard, click [Finish].	
Installed OS	: Windows Server 2008 x86
	: WINDOWS Server 2008 X86
(Use OS standard installer)	
Copy the OEM drivers	: Act
	8 / 8 Page
Back	Finish

15. Click [Next] on Parameter Setup Menu.

NEC		EXPRESSI Version 6	BUILDE
et parameters for the setup. [Settings] is dicked, you can change the paramet [Save] is clicked, you can save the parameter to a •• If "!" is displayed, you cannot proceed to the ne	file.	set the parameters.	
		1 C	lefault values
RAID settings			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	$\frown$	1	Default Settings
Back 🗲	→ Next	Same	Remov

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

NE	EC	EXPRESSBUILDER Version 6.xx-xxx.xx (xxx)
	et up the computer. e setup, click [Perform].	
Steps		Summary of setup
• (	Configuring RAID system	RAID configuration Configure
• (	Changing a media	* All data is deleted.
• 1	Installing OS	Installed OS Windows Server 2008 x86
		Copy OEM drivers
	Back	Perform

17. Continue setup according to displayed message.

If the Copy the OEM drivers to the removable media checkbox is selected in step 13, the following window appears.

Follow the c	onscreen ins	tructions ar	nd continue	the	operation.
--------------	--------------	--------------	-------------	-----	------------

	OEM drivers(XXXXXXXXXXXXXXXXXXXXXXXXXXX) are copied.
-	Insert removable media.
?	If [Yes] is selected, the copying starts.
	[ Massace ID - F20-11
	[ Message ID : F20xx ]

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

?	insert the buck	up OS disk into the drive.
9		
		[ Message ID : 2×××]

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

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 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.

This step is unnecessary if no bootable operating system exists.

Flash Memory.

20. When the following window appears, click [Next] at default settings.



When the following message appears, click [Install Now Server 2008 installation starts.



- If the following message appears, go to step 22.
- If not go to step 24.

Load Driver
A required CD/DVD drive device driver is missing. If you have a driver floppy disk, CD, DVD, or USB flash drive, please insert it now.
Note: If the Windows installation media is in the CD/DVD drive, you can safely remove it for this step.
[Browse] [OK] [Cancel]

Tips

- The above message appears if you are using an onboard RAID Controller (LSI Embedded MegaRAID) in an environment equipped with an internal DVD drive.
  When this message appears, the message will say "CD, DVD, or USB flash drive", but you must use Internal Flash Memory or removable media with the OEM drivers copied onto it.
- 22. Select the destination, and then click [OK].

If using OEM drivers (made at step 17)

- Windows Server 2008 x64 *Removable media*:\OEM\_Driver\ws2008x64\megasr1
- Windows Server 2008 x86 *Removable media*:\OEM\_Driver\ws2008\megasr1

#### If using Internal Flash Memory

Tips

- Windows Server 2008 x64 Internal Flash Memory:\024\win\winnt\oemfd\ws2008x64\megasr1
- Windows Server 2008 x86 Internal Flash Memory:\024\win\winnt\oemfd\ws2008\megasr1

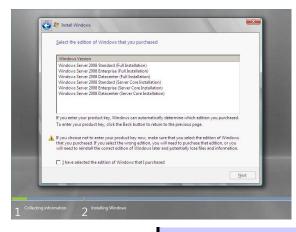
The volume label of Internal Flash Memory is INTER-FLASH.

- 23. Select LSI Embedded MegaRAID, and then click [Next].
- 24. 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.

Type your product key fo	for activation	
Windows package. Although yo to enter it may result in the loss	on your computer or on the installati ou are not required to enter your proc s of data, information, and programs. ndows. We strongly advise that you e	luct key now to install, failure You may be required to
The product key sticker looks lik	ke this:	
**************************************		
Product key (dashes will be add	ded automatically):	
	E2221	
Automatically activate Wind	dows when I'm online	
What is activation?		
Read our privacy statement		<u>N</u>
ormation 🥎 Installing Wir	indows	

Tips

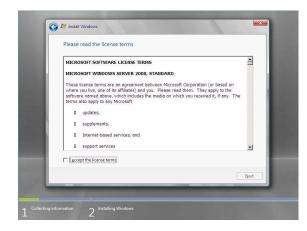
- The above message appears if you are using an onboard RAID controller (LSI Embedded MegaRAID) in an environment equipped with an internal DVD drive.
  When this message appears, the message will say "CD, DVD, or USB flash drive", but use Internal Flash Memory or removable media with the OEM drivers copied onto it.
- 25. 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.



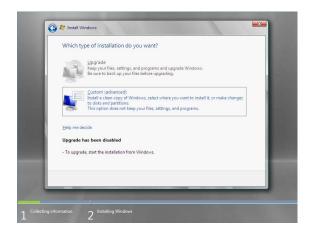
Tips

The Windows versions that appear on the screen differ depending on the OS installation media used.

26. 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].



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



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

Note

If the driver was loaded in steps 22 to 23, or if not using a RAID Controller, go to step 32.

### 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 29.

```
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, the message "The Installation media can be a floppy disk, CD,
  - DVD, or USB flash drive." appears on the screen, 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.)

### When using the N8103-128 RAID Controller :

- Windows Server 2008 x64 \024\win\winnt\oemfd\ws2008x64\stexstpt
- Windows Server 2008 x86 \024\win\winnt\oemfd\ws2008\stexstpt

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

- Windows Server 2008 x64 \024\win\winnt\oemfd\ws2008x64\megasas2
- Windows Server 2008 x86 \024\win\winnt\oemfd\ws2008\megasas2

#### When using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive :

- Windows Server 2008 x64
   \024\win\winnt\oemfd\ws2008x64\megasr1
- Windows Server 2008 x86 \024\win\winnt\oemfd\ws2008\megasr1

Tips

The driver does not have to be loaded at this time if it was loaded in steps 22 and 23.

30. Select the necessary driver from the driver list shown, and then click [Next].

When using the N8103-128 RAID Controller

### [Promise SuperTrak SAS 6G RAID Controller]

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

#### [LSI MegaRAID SAS 9267-8i]

When using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive

### [LSI Embedded MegaRAID]

- 31. If you used EXPRESSBUILDER DVD, remove it and then insert the OS installation media.
- 32. 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 35.
- 33. 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.

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

Name		Total Size	Free Space	Гуре
Disk o ona	located Space	74.5 GB	74.5 GB	
€ <u>R</u> efresh € Load Driver	X Delete Delete	Eormat	<mark>∦</mark> Ne <u>w</u>	
				Next

When the following message appears, Windows installation starts automatically.

Installing Windows	
That's all information we need right now. Your computer	
will restart several times during installation.	
✓ Copying files	
Expanding files	
Installing features	
Installing updates	
Completing installation	
· · · ·	

Tips

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

Install Windows - Insert Disc				
Please insert Windows installation disc 1.				
	OK	— r	Cancel	
	UK		Cancer	

36. The content displayed differs depending on what you selected in step 25. 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	rform the following tasks to ini	tially configure this serve	er	Kindows 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	
2	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	
B	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> + <Del> keys.



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

	Other User	
۲	Cancel Windows Server 2008 Standard	

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



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



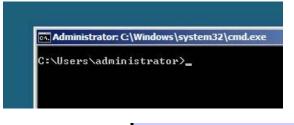
(5) Change your password, and then click [].



- 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".

- 37. Install Starter Pack by referring to Chapter 1 (4.4 Installing Starter Pack).
- 38. Install drivers and specify detailed settings by referring to Chapter 1 (4.5 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 (4.9 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.

# 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.
	<ul> <li>The system configurations have changed (when internal option devices</li> </ul>
	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.
	<ul> <li>If the system was restored using a restore process</li> </ul>
	<ul> <li>If a system has been restored using the backup tool</li> </ul>
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. Start the installer of Starter Pack according to the installation type.

### **Full installations**

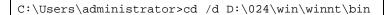
When Autorun Menu appears, click **Setup Windows** to open the short-cut menu and then select **Install Starter Pack**.

EC	EXPRESSBUILD
lenu items	
Read docume	nts
Set up Window	WS
	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

### **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:\024\win\winnt\bin



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

pkgsetup.vbs



4. Wait for several minutes without attempting any further operation until the following window appears.

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

Read the message, and then click [OK].

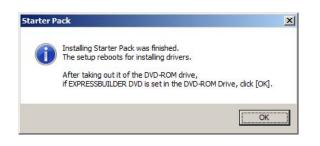
Note

Starter Pack installation starts. (About 5-10 minutes)

\* It changes with states of a system.

Starter Pack		
Installing Sta	rter Pack.	
Please wait f	or a while	
	ng the OS information.	
>> Updati Perform	ing drivers. ning 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.

# 4.4.2 When using Internal Flash Memory

(Optional "Internal Flash Memory " is required)

- 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.

Note

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

 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	
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 indudes 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 of sparate 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	terms, you cannot use EXPRESSBUILDER

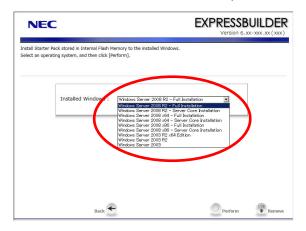
6. Select Invoke various utilities from Top Menu of EXPRESSBUILDER, and then click [Next].

NE	C	EXPRESSBUILDER Version 6. xx - xxx . xx ( xxx )
	function, select the radio button, and then click [Next].	
If [Remove] is	clicked, you can remove USB devices inserted into this compute	r safely.
	C Setup this computer	
ſ		
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ <sub>Next</sub>	USB FRemove

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

Version 6.xx-xxx.xx(xxx)
USE 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].

	EXPRESSBUILDER copies Starter Pack into the partition where Windows has been installed.
?	Current disk space : XXXXX MB
	Required disk space: xxMB

Note



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

	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 ]

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.
ОК

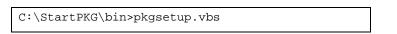
# **Server Core installations**

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

```
Drive (usually C drive).
cd /d C:\StartPKG\bin
```

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

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



12. Wait for several minutes without attempting any further operation until the following window appears, and then click [OK].



Installation of Starter Pack starts. (About 5-10 minutes) \* It changes with states of a system.

Note

If you chose Full installation, the following progress message appears while Starter Pack is being installed. Wait a moment until the update is complete.

nstalling 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.



13. Click [OK] to restart the system.

Installation of Starter Pack is now complete.

# **4.5** Setting Up Device Drivers

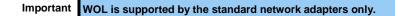
Install and set up device drivers provided for the standard configuration.

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.



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

This server supports the following optional LAN boards.

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

Optional LAN boards: N8104-128/132/133/138

Note: N8104-128 is supported by Express5800/R110e-1E only.

Important Using an optional LAN board, perform procedure "4.5.2 Setting up LAN drivers" for each optional LAN board.

# (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\* [N8104-132/133/138] 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.

### (2) Using N8104-128

Using N8104-128 with the server, iSCSI Offload Engine and EnablePMTUBHDetect must be disabled.

Follow the procedure below to set it.

- Double-click the Broadcom Control Suite icon on the Control Panel window. Broadcom Advanced Control Suite starts.
- Set Filter to ALL VIEW, select Broadcom BCM57711 NetXtreme II 10 GigE # xx under Explorer View the Adapter xx (BCM57711 A0) - Port x.
- 3. Tab on **Configurations** at the right side screen and then expand **Resource Reservations**.
- 4. Click the [Configure] button on the **Click the button to configure**. The **Hardware and Resource Configuration Wizard** appears.
- Remove a checkmark from [iSCSI] under Protocols, if checked. Select [Next], and then click the [Apply] button.
- 6. When the following message 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?

- 7. Complete steps 2 to 6 for each N8104-128 network adapter. Then, close the **Broadcom Advanced Control Suite**.
- 8. Insert EXPRESSBUILDER DVD into the optical disk drive. If Autorun Menu appears, close the menu.

Tips

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory. Proceed to the next step.

- 9. Double-click **BhdDisabled.vbs** in the following folder.
  - When using EXPRESSBUILDER DVD: <Windows Server 2008 64-bit Edition > Optical disk drive:\024\win\winnt\ws2008x64\lan
     <Windows Server 2008 32-bit Edition >
    - Optical disk drive:\024\win\winnt\ws2008\lan
  - If Starter Pack was installed from Internal Flash Memory:
     <Windows Server 2008 64-bit Edition > System drive:\StartPKG\ws2008x64\lan
     <Windows Server 2008 32-bit Edition > System drive:\StartPKG\ws2008\lan
- 10. When the following message appears, click [OK].
  Black Hole Router Detect Disable Completed, Reboot the system
- 11. Eject EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Setup is now complete.

# (3) Using N8104-132/133/138

Using N8104-132/133/138 with the server, follow the procedure below to set it.

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

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory. Proceed to the next step.

- 2. Double-click to the following file.
  - When using EXPRESSBUILDER DVD:
     <Windows Server 2008 64-bit Edition > Optical disk drive:\024\win\winnt\ws2008x64\lan\pgdyavd\_Disable.vbs
     <Windows Server 2008 32-bit Edition > Optical disk drive:\024\win\winnt\ws2008\lan\pgdyavd\_Disable.vbs
  - If Starter Pack was installed from Internal Flash Memory:
     <Windows Server 2008 64-bit Edition >
     System drive:\StartPKG\ws2008x64\lan\pgdyavd\_Disable.vbs
     <Windows Server 2008 32-bit Edition >
     System drive:\StartPKG\ws2008\lan\pgdyavd\_Disable.vbs
- 3. When the following message appears, click [OK].

Configuration Completed
[Option:PopUp RLV Disabled(Action:Done)]
Reboot the system

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

Setup is now completed.

# 4.5.3 Setting up team/LiveLink

- Important
  When using Smart Load Balancing and Failover (without Standby Member ), be sure to setup LiveLink at creation of team.
  When using Smart Load Balancing and Failover (with Standby Member ), setup for LiveLink is not essential.
  - 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.
  - Using Server Core installations, Not supporting setting up team/LiveLink by the BACS.

### (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

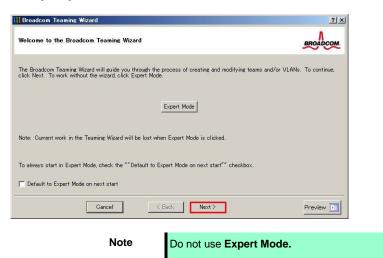
Important	Possible combinations of network adapters that compose the team are as follows.
	When the number of adapters that composes the team is up to four:
	<ul> <li>Between standard network adapters</li> </ul>
	<ul> <li>Between LAN cards excluding N8104-128</li> </ul>
	<ul> <li>A standard network adapter and LAN card N8104-128</li> </ul>
	When the number of adapters that composes the team is up to two:
	<ul> <li>Between N8104-128 adapters.</li> </ul>
	Teaming with another N8104-128 on different board is not supported.
Tips	To edit a team, right-click on the BACS team, and then select <b>Edit Team</b> . Then refer to step 3 and the subsequent steps to edit the team.

- 1. Double-click the **Broadcom Control Suite** icon on the Control Panel window. **Broadcom Advanced Control Suite** starts.
- 2. Set a **Filter** in a **TEAM VIEW**, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.

xplorer View	Information Configurations	Diagnostics Statistics
🖻 and Hosts	Property F Vital Signs	Value
Teams     Teams     Totassigned Adapters     Totassigned Adapters	rret Permanent MAC Address Permanent MAC Address Pr4 #2 Pr4 #2 Priver Information Driver Version Driver Version Driver Name Driver Status Vital Signs The Vital Signs section of the In	169254.156.174 LSO.CO 1500 10/3/2011 b57xp32.sys Loaded

The Broadcom Teaming wizard appears.

3. Click [Next].



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

iii Broadcom Team	ing Wizard	<u>? ×</u>
Creating/Modifyi You must assign	ng a Team: Team Name your team a unique name.	BROADCOM
Enter the nam	e for the team:	
Team 1		
I) A	team name has a maximum length of 39 characters. The ${\rm V}/{\rm M}^{\prime\prime\prime}$	name can use any symbolic character except
	Cancel < Back Nex	t> Preview

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

roadcom Teaming Wizard	?
eating/Modifying a Team: Team Type ect the type of team you want to create.	BROADCOM
Team Type	
Smart Load Balancing(TM) and Failover (SLB)	
C 8023ad Link Aggregation using Link Aggregation Control Protocol (LACP)	
C FEC/GEC Generic Trunking	
CP Offload Engine (TOE) support is supported only on a SLB team type. If a team type onnections will be offloaded.	other than SLB is selected, no TCP
CP Offload Engine (TOE) support is supported only on a SLB team type. If a team type or snnections will be offloaded.	other than SLB is selected, no TCP
CP Offload Engine (TOE) support is supported only on a SLB team type. If a team type or annections will be offloaded.	ther than SLB is selected, no TCP

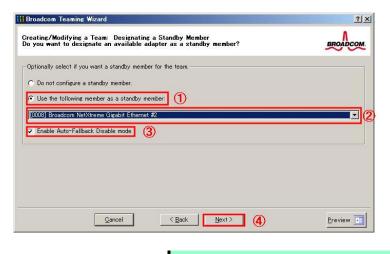
6. Select the adapters that compose the team, click [Add] to add them to the **Team Members** area, and then click [Next].

Available Adapters	TOE	LSO	CO	RSS	samab		MTU	
008] Broadcom NetXtreme Gigabit Ethernet #2	No	Yes	Yes	No	Yes	5.1	1500	
Add	576							Remove
Add Team Members	TOE	LSO	CO	RSS	3amab	NDIS	MTU	Remove
<u>A</u>	TOE No	LSO Yes	CO Yes	RSS No	samab Yes	NDIS 5.1	MTU 1500	Remove

- 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].

ii 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.	
Do not configure a standby member.	
C Use the following member as a standby member:	
[D007] Broadcom NetXtreme Gigabit Ethernet	<u> </u>
Fable Auto-Fallback Disable mode	
Cancel < Back Next >	Preview 페

- 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].



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].

ii Broadco	om Teaming Wizard	?!:
Creating Do you v	/Modifying a Team: Configuring LiveLink want to configure LiveLink?	BROADCOM
Configur	re LiveLink?	
Yes		
C No		
į)	LiveLink detects loss of network connectivity beyond the switch and that have a live link.	routes traffic only through team members
	Cancel < Back Next	Preview 🗾

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...].

Configure LiveĹink(TM) attri			BROADCOM
Probe Interval (seconds)	2		
Probe Maximum Retries	5		
Probe VLAN ID (Optional: 0-4094)	0		
Target		IP Address	<b></b>
Probe Target 1			
Probe Target 2 Probe Target 3			-
At least one LiveLink	Edit Target IP Ad	tress	

• 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).
<ul> <li>Switching a path upon detection of a communication path error by LiveLink takes (Probe maximum retries + 1) x Probe interval (seconds) at maximum.</li> <li>If a link is down is detected, failover occurs immediately after the link goes down. It takes the time specified for Probe interval (seconds) to recover from the</li> </ul>
link going down.

10. In the Target xx text box, enter the IP address of the alive monitoring server, and then click [OK].

🚻 LiveLink Confi	gurations	<u>&gt;</u>
IP Setting		
Team Name	Team 1	
Target 1:		1
Target 2:		-
Target 3:		
Target 4:		1
Please enter e	ther an IPv4 or IPv6 address for the probe target	s IP address field.
OK		Cancel

Tips

- Important
   *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.

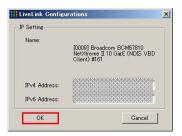
11. Click [Next].

Probe Interval (seconds)	2	<b>_</b>	
Probe Maximum Retries	5	<b>_</b>	
Probe VLAN ID (Optional: 0-4094)	0		
Target	J	IP Address	
Probe Target 1 Probe Target 2			-
Probe Target 3			<u>•</u>
	Edit T	arget IP Address	

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

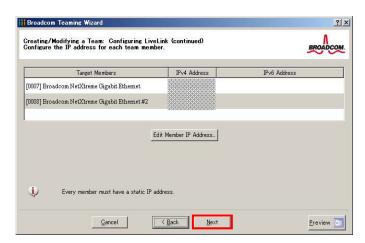
reating/Modifying a Team: Configuring LiveLi onfigure the IP address for each team member			BROADCO
Target Members	IPv4 Address	IPv6 Address	
0007] Broadcom NetXtreme Gigabit Ethernet			
0008] Broadcom NetXtreme Gigabit Ethernet #2			
Edi	t Member IP Address		

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



Important	• 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	
🕝 Skip Manage VLAN	
Cancel < Back Next	Preview 🔟

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

Congratulations! The Teaming Wizard has finished sollecting information. How would you like to proceed?	BROADCOL
-Commit changes	
Commit changes to system and Exit the wizard	
C Save changes and continue to manage more teams	
Applying the changes will temporarily interrupt the network connection. The and the connection will resume afterwards.	ne process may take several minutes
Applying the changes will temporarily interrupt the network connection. The second	ne process may take several minutes
Applying the changes will temporarily interrupt the network connection. The and the connection will resume afterwards.	ne process may take several minutes

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.

Eile View Action Filter Context To	ols _leams i⊴ust Help	
xplorer View		8
<ul> <li>□- primary Adapters</li> <li>□- 100071 Broade</li> <li>□- 100072 Standby Adapters</li> </ul>	0] BASP Virtual Adapter) com NetXtreme Gigabit Ethernet	2

- 17. Restart the system.
- After the system starts, start Broadcom Control Suite by clicking the Broadcom Control Suite icon in Control Panel, 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)

xplorer View d	Information Statistics	
😑 aaa Hosts	Property	Value
ò 🔒 🕂 10000000000	- Team Properties	
E Teams	- Team Name	Team 1
- 111 Team 1	- Team Type	Smart Load Balancing (TM) and Failover
	- Team Offload Capabilities	LSO, CO
🖨 🃂 BASP Virtual Adapters	- Team MTU	1500
- In Team 1 ([0020] BASP Virtual Adapter)	- Driver Name	Baspxp32.sys
🖻 🃂 Primary Adapters	- Driver Version	6.3.31
	- Driver Date	6/15/2011
🏭 [0007] Broadcom NetXtreme Gigabit Ethernet	- Probe Interval	2000
10008] Broadcom NetXtreme Gigabit Ethernet #2	- Probe Max Retries	5
115	- Probe Vlan ID	0
	- Team Probe Target 1	
	Team Properties Displays information about the team.	

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

plorer View É	Information Statistics	
e and Hosts	Property	Value
ó- 🔒, 30300000000	- Team Properties	
E Teams	- Team Name	Team 1
- 111 Team 1	- Team Type	SLB (Auto-Fallback Disable)
🖨 📂 BASP Virtual Adapters	- Team Mode	Primary
	- Team Offload Capabilities	LSO, CO
- 19 Team 1 ([0020] BASP Virtual Adapter)	- Team MTU	1500
😑 🃂 Primary Adapters	- Driver Name	Baspxp32.sys
	- Driver Version	6.3.31
10007] Broadcom NetXtreme Gigabit Ethernet	- Driver Date	6/15/2011
🖻 🃂 Standby Adapters	Probe Interval	2000
5 [0008] Broadcom NetXtreme Gigabit Ethernet #2	Probe Max Retries	5
20 C	Probe Vlan ID	0
	Gam Probe Target 1	
	Team Properties Displays information about the team.	

Team setup is now complete.

### (4) Procedure for deleting team

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

- 1. Double-click Broadcom Control Suite in the Control Panel window. Broadcom Advanced Control Suite starts.
- 2. Set a **Filter** in a **TEAM VIEW**, right-click the adapter to be used for the team, and then select **Delete Team** from the short-cut menu.

Filter: TEAM VIEW Theam Properties	Information Statistics	
- and Hosts	Property	Value
	- Team Properties	Value
E Teams	Team Name	Team 1
	Team Type	Smart Load Balancing(TM) and Failover
E III Tear Edit Team	Team Offload Capabilities	LSO, CO
🖻 🌮 🖡 Delete Team ers	Team MTU	1500
Ealback BASP Virtual Adapter)	Driver Name	Baspxp32.sys
	Driver Version	6331
	Driver Date	6/15/2011
[0007] Broadcom NetXtreme Gigabit Ethernet	Probe Interval	2000
[0008] Broadcom NetXtreme Gigabit Ethernet #2	Probe Max Retries	5
	- Probe Vlan ID	0
	- Team Probe Target 1	
	Team Properties Displays information about the team.	

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 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 x64 >
     Optical disk drive:\024\win\winnt\ws2008x64\lan
     <Windows Server 2008 x86 >
     Optical disk drive:\024\win\winnt\ws2008\lan
  - If Starter Pack was installed from Internal Flash Memory:

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

LegacyVlanStats	×
Registry Addition Completed, Reboot	the system
	ОК

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:\024\win\winnt\ws2008x64\video
- Windows Server 2008 32-bit Edition
   Optical disk drive:\024\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 SAS controller (N8103-104A/142)

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

# 4.5.6 When using a RAID Controller (N8103-160)

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

# 4.5.7 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.

7 Run	_		
	Type the name of a prog resource, and Windows		
Open:	slui		•
	🕐 This task will be cre	ated with administ	rative privileges.

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.

Windows Activation	
Activation was successful	
Activation helps verify that your copy of Windows is genuine. With a genuine copy of Windows Server®, you are eligible to receive all available updates and product support from Microsoft. Learn more online about the benefits of genuine Windows	ask for genuine 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	
The Windows Server® Standard product key you typed is inva	alid for activation
Buy a new product key online	
Type a different product key	
✤ Contact Microsoft to help resolve this problem	

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.

Windows Activation	
🕥 🎋 Windows Activation	
Activate Windows now	
You must activate Windows within 60 days to continue using all Windows feature	es.
Activate Windows online now	
Ask me jater	
Show me other ways to activate	
What is activation?	
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.

Name: Windows Server(R), Server	Standard edition
	stem - Windows Server(R), OEM_SLP
hannel	
Partial Product Key: 7CYMX icense Status: Licensed	
Icense Status: Licensed	

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

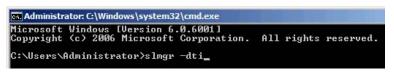
At the command prompt, enter the following, and then press <Enter> key. Set the product key found on the COA label in *PID*.

slmgr -ipk PID

<mark>e∴ 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-XXXXX\_

3. Obtain an installation ID for Windows activation.

At the command prompt, enter the following, and then press <Enter> key.  ${\tt slmgr}$  -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

Administrator: C:\Windows\system32\cmd.exe		
	Windows [Version 6.0.6001] (c) 2006 Microsoft Corporation.	All rights reserved.
C:\Users\f	ldministrator≻slmgr –atp xxxxx-xx	xxx-xxxxx-xxxxx-xxxxx_

Windows activation is now complete.

# **4.9** Applying Service Pack

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

# **4.10** Installation When Multiple Logical Drives Exist

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

### (1) Installation process

- Setup with EXPRESSBUILDER

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.

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.
  - 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.

(1/3)

# **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.

BTO

EB

**0**S

: Setting up of Pre-installed model

: Confirm during Setup with EXPRESSBUILDER

: Confirm during Setup with OS standard installer

	Setup			Items to confirm	
	Setup	)			
-	_	OS	Windows family	<ul> <li>The following editions of the Windows Server 2003 family may be installed.</li> <li>Windows Server 2003 R2 Standard x64 Edition</li> <li>Windows Server 2003 R2 Enterprise x64 Edition (supported by R110e-1 only)</li> <li>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:</li> </ul>	
				Note Setup with EXPRESSBUILDER cannot be used.	
_	_	05	License authentication	If Windows Server 2003 R2 x64 Edition is installed from Backup CD-ROM, the license is already activated. If Windows Server 2003 R2 x64 Edition is installed from an OS CD instead of Backup CD-ROM, 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 Chapter 1 (5.6 License Authentication).         Important       • Activate within 30 days following installation. The system is locked if 30 days have passed without activation.	
			Hardware	The following hardware configurations require special procedures.	
_	-	Configuration		• When using the OEM drivers, be sure to change the boot order of the Flash FDD on the BIOS settings as follows: Select <b>Boot</b> , <b>Floppy Drive BBS priorities</b> , <b>Boot Option #1</b> , and then specify the Flash FDD used.	
				Note Change as instructed in <i>Chapter 1 (5.2.3 Setup procedure)</i> .	

				(2/3)
	Setup			Items to confirm
_	_	05	Hardware configuration	<ul> <li>Notes on using N8103-149/150/151 on Windows2003:         <ol> <li>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.</li></ol></li></ul>
_		OS		<ul> <li>* 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.</li> <li>• Connecting MO devices Installing Windows while an MO device is connected can result in installation failure.</li> </ul>
_	-	OS		<ul> <li>Remove the MO device, and then start installation from the beginning.</li> <li>DAT, LTO, and similar media Do not set media that is unnecessary to installation during setup.</li> </ul>
_	_	05		<ul> <li>Setup when mass memory is installed If mass memory is installed in your system, the large size of paging file is required at installation. Thus, the partition size for storing debug information (dump file) may not be secured. If you fail to secure the dump file size, use OS standard installer for setup, and allocate the required file space to multiple disks by performing the following steps. <ol> <li>Set the system partition size to a size sufficient to install the OS and paging file.</li> <li>Specify another disk as destination to store the debug information (required dump file size) by referring to <i>Chapter 1 (7. Setup for Solving Problems)</i>. If the hard disk drive does not have enough 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 hard disk drive for the dump file. </li> </ol></li></ul> Note If the partition size for installing Windows is smaller than the recommended
	_	OS		<ul> <li>Size, expand the partition size or add another hard disk drive.</li> <li>Connecting to multiple hard disk drives (Logical Drives) For details on installing operating systems to a system in which multiple Logical Drives</li> </ul>
_	_	OS		<ul> <li>exist, refer to Chapter 1 (5.7 Installation When Multiple Logical Drives Exist).</li> <li>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:         <ul> <li>Image: Image: I</li></ul></li></ul>
_	_	OS	Service Pack	<ul> <li>Select Leave the current file system intact (no change) for the OS partition format.</li> <li>Before applying a Service Pack, make sure that Windows Server 2003 R2 x64 Edition DISC 2</li> </ul>
				has been installed. Use Starter Pack when you apply a Service Pack from the Service Pack 2 CD-ROM.
				If you used OS installation media including Service Pack 2 for installation, you do not have to install Service Pack 2 again.

			(3/3)	
Setup		Items to confirm		
	OS	System partition size	<ul> <li>The system partition size can be calculated by using the following formula.</li> <li>Size required to install the OS + paging file size + dump file size + application size</li> <li>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)</li> <li>Paging file size (recommended) = installed memory size × 1.5</li> <li>Dump file size = as required by the application</li> <li>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:</li> <li>4,100 MB + (1,024 MB × 1.5) + 1,024 MB + 1 MB + application size = 6,661 MB + application size</li> <li>Note</li> <li>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.</li> <li>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".</li> <li>When installing other applications or other items, add the amount of space needed by the application to the partition.</li> </ul>	
			If the partition size for installing the system is smaller than the size recommended size, expand the partition size or add another disk.	
	OS	Setup with OS standard installer	Dialog boxes 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.	
	OS	When using RAID Controller (N8103- 149/150/151/ 160)	<ul> <li>Upon completion of installation of OS and application of Service Pack 2, update the driver for RAID Controller before installing Universal RAID Utility. Take the steps below:</li> <li>Insert the EXPRESSBUILDER DVD into optical disk drive.</li> <li>Open the following file using text editor such as notepad. &lt;\Gamma FEXPRESSBUILDER_JDVD&gt;: \024\win\winnt\w2k3amd\dac_driver_update\Readme.txt</li> <li>Update the driver according to instructions in Readme.txt file.</li> <li>When update completes, install the Universal RAID Utility</li> </ul>	

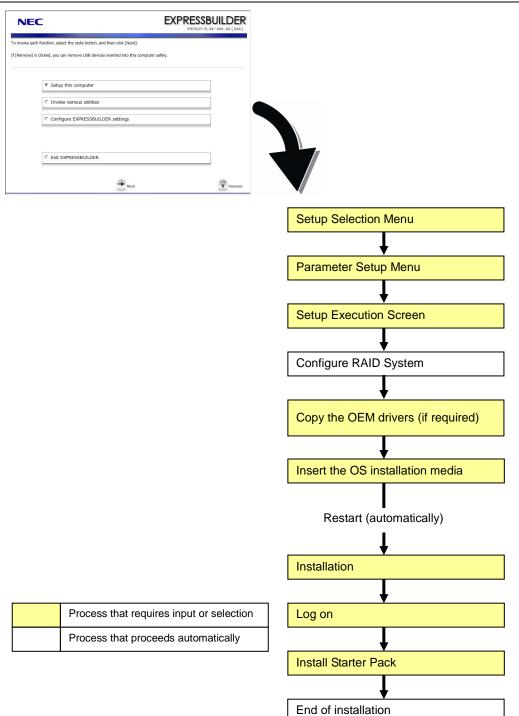
# 5.2 Setup with OS Standard Installer

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. Therefore the hardware installation of the server needs to be finished 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.
Note	When using an onboard RAID controller (LSI Embedded MegaRAID): Do not support the creation of RAID10 by using the onboard RAID controller. Refer to Chapter 2 (4. RAID System Configuration) in " <i>Maintenance Guide</i> " when creating RAID10.
Tips	<ul> <li>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 removable media or Internal Flash Memory (if purchased optionally).</li> <li>For details on creating a parameter file, refer to <i>Chapter 1 (8 Windows OS Parameter File)</i>.</li> </ul>

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

Note	OEM drivers are necessary if a RAID controller or optional board is connected.
	Use a Flash FDD as the removable media to create OEM drivers.
Time	
Tips	<ul> <li>EXPRESSBUILDER may be distributed in Internal Flash Memory.</li> </ul>
	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.

### 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.

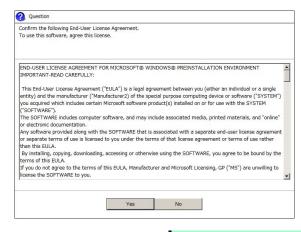
- 1. Turn peripheral device (such as a display) power on, and then turn the server power on.
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. When the following message appears, select Os installation \*\*\* default \*\*\*.

Tool menu	— Boot selection lation *** default *** (Normal mode) (Redirection mode)	]
		ect at 10 seconds

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

XPRE	SSBUILDERで使用	する言	語を選択してくださ
elect	a language to use	for the	EXPRESSBUILDE
0	日本語	œ	English
0	Français	0	Italiano
o	Deutsch	0	Español

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



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 the radio button, and then click [Next].	
If [Remove] is	clicked, you can remove USB devices inserted into this compu	uter safely.
	C Invoke various utilities	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ Next	USB

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.

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	EXPRESSBUILDER Version 6. xx-xxx.xxx (xxx)
If [Configure I	operating system, select an item in the listbox, RAID system only] is selected, EXPRESSBUILD ameter file] is selected, you can set up the co	DER only configures RAID system without OS installation.
	C Install Windows	Windows Server 2003 R2 x64 Edition 💌
	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	2	EXPRESSBUILDE Version 6. XX-XXX.XX ( XX
f [Configure RA		stbox, and then click [Next]. BULDER only configures RAID system without OS installation. he computer according to the parameter file.
	C Install Windows	Windows Server 2003 R2 x64 Edition 🗾
	C Configure RAID system on	Ŷ
(	Coad a parameter file	
	Back 🗲	→ Next USE Remo

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

NEC		EXPRESS Version 6	BUILDE
et parameters for the setup. [Settings] is clicked, you can change the paramete [Save] is clicked, you can save the parameter to a ** If "I" is displayed, you cannot proceed to the ne:	a file.	et the parameters.	
		<b>Ø</b> D	efault values
RAID settings Skip Logical drive1 (148GB)			Default Settings Skip
	+		
Windows settings User information Skip Default settings	Network settings	Windows Components Default settings	Default Settings
	+		
Application settings Applications installation Default settings		ł	Default Settings
Back 🗲	→ Next	Save	USB Rem
	-		-

10. Set parameters required for setup.

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

NEC			EXPRESS Version 6	
Set parameters for the setup. If [Settings] is clicked, you can c If [Save] is clicked, you can save *** If "!" is displayed, you canno	the parameter to a l	file.	set the parameters.	
RAID settings RAID:	nray1 L(2disk)		0	Default values Default Sett ings
	al drive1 (148GB)	-		Skip
	Ser information	Network settings	Windows Components Default settings	Default Settings
	cations installation	+		Default
- Skip "	efault settings Back	→ Next	Save	USB Remove

Click [Default] if you want to restore the default values.

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

	Version 6. xx- xxx (xxx)
) set the parameters	
	Ø Default values
	Verault Sattings

### 10-1 RAID settings

Use this menu to configure the RAID system with the RAID controller detected automatically.

Note When using an onboard RAID controller (LSI Embedded MegaRAID): This function does not support the creation of RAID10 by using the onboard RAID controller.Refer to *Chapter 2 (4. RAID System Configuration)* in "*Maintenance Guide*" when creating RAID10.

Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			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 parameter to *** If "!" is displayed, you cannot proceed to the ne	a file.	set the parameters.	
RAID settings			Default values Default Settings Skip
Windows settings User information Default settings	Network settings Default settings	Windows Components Default settings	Default Settings
Application settings Skip Default settings	+		Default Settings
Back	→ Next	Save	Remove

### When creating new logical drives

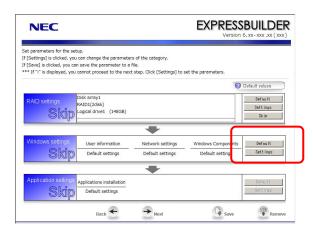
- (1) Click [Settings] in RAID settings.
- (2) Use the wizard to set up logical drives.

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.

11. Click [Settings] in Windows settings.



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

et the parameters necessary for Wind -] is selected, you need to input param		is wizard by using
Start Set Windows preferences Set partition preferences Set user preferences Set user preferences Set component preferences Set component preferences Check/Exit	Use OS standard installer	1 / 8 Page

Specify the Windows basic settings

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

sic information	
Operating System	: Windows Server 2003 R2 x64 Edition
• Use OS standard	
Setup with EXPR	ESSBUILDER
Edition	: 💌
Language	:
Time zone	
Time zone	:

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].

Installed OS	: Windows Server 2003 R2 x64 Edition
(Use OS standard installer)	
Copy the OEM drivers	: Act

15. Click [Next] on Parameter Setup Menu.

NEC		EXPRESSI Version 6	BUILDE
Set parameters for the setup. If [Settings] is clicked, you can change the paramet If [Save] is clicked, you can save the parameter to a *** If "I" is displayed, you cannot proceed to the ne	a file.	set the parameters.	
		0	lefault values
RAID settings			Default Settings Skip
	+		
Windows settings User information Default settings	Network settings	Windows Components Default settings	Default Settings
	+		
Application settings Applications installation Default settings	$\frown$		Default Settings
Back	→ Next	Save	Remo

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 x64 Edition Copy OEM drivers Act	
Back 🗲	Perform Remove	_
Note	insert a Flash FDD into	<b>the OEM drivers into the removable media</b> check o the server and then click [Perform]. edia 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.

	OEM drivers(XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX) are copied.
	All data on Flash FDD is deleted.
?	If [Yes] is selected, the copying starts.
	[ Message ID : F20xx ]

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 Cancel
	10

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 an optional mass storage controller is used, press <F6> key while either of the following messages is displayed. If not, go to step 25 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, check the boot order of the Flash FDD on BIOS settings.

21. The following message appears.

up could not determine the type of one or more mass storage devices talled in your system, or you have aboved to manually specify an adapter. rently, Setup will load support for the following mass storage devices(s):
To specify additional SCSI adapters, CD-BOM drives, or special disk controllers for use with Mindows, including those for which you have a device support disk from a mass storage device manufacturer, press S.
If you do not have any device support disks from a mass storage device menufecturer, or do not want to specify additional mass storage devices for use with Mindows, press ENTER.

If a RAID controller is used on the server, 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.

When using N8103-128 RAID Controller: Promise SuperTrak EX Family Controller - 64bits platform When using N8103-149/150/151 RAID Controller: LSI MegaRAID SAS RAID Controller Driver When using Onboard RAID Controller (LSI Embedded MegaRAID): LSI Embedded MegaRAID (Windows 2003 64-bit)

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

- 23. If N8103-104A is connected, press <S> key and go to step 24. If not, press <Enter> key and go to step 25.
- 24. 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 25.

25. When the following message appears, press <Enter> key to start Windows setup.



If the partition created is shown as "G:", delete the partition "G:"

Important Pay attention to a partition you are going to delete.

If it is shown as "C:", you do not need to delete the partition and go to step 26.

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.

- 26. 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, the message indicating that the driver has not passed logo testing might appear, but this does not affect the setup. Click [OK] to continue setup.

27. The server automatically restarts after installing Windows Server 2003 R2 x64 Edition.

28. The Windows Setup dialog box appears after log on.



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.

- 29. Insert the Windows Server 2003 R2 x64 Edition DISC 2 into the optical disk drive. Check the settings, and then click [OK].
- 30. 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.
- 31. Install Starter Pack by referring to Chapter 1 (5.3 Installing Starter Pack ).
- 32. Install drivers and specify detailed settings by referring to Chapter 1 (5.4 Setting Up Device Drivers).
- 33. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 34. 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	<ul> <li>Also install Starter Pack and Windows x64 hotfix: KB921411 in the following cases:</li> </ul>
	<ul> <li>The system configurations have changed (when internal option devices have been added or removed)</li> <li>If a dialog box prompting you to restart appears after changing system configurations, click [No] and then update the system.</li> </ul>
	<ul> <li>If the system was restored using a restore process</li> </ul>
	<ul> <li>If a system has been restored using the backup tool</li> <li>Be sure to install Service Pack 2 (CD-ROM) from Starter Pack.</li> </ul>
	<ul> <li>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.</li> </ul>
Note	Before applying a Service Pack, make sure that <b>Windows Server 2003 R2</b> 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*:\024\win\winnt\w2k3amd\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 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 Next> Cancel	

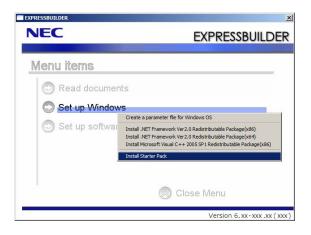
After this, continue installation according to the onscreen messages.

6. When the following message appears, click [Finish] and remove EXPRESSBUILDER DVD before restarting.

Software Update Installatio	n Wizard
$\odot$	Completing the Hotfix for Windows x64 (KB921411) Installation Wizard
B	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.
	Kack 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.

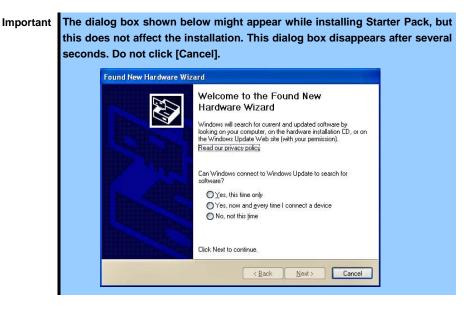
9. When the following menu appears, click **Set up Windows** to open the short-cut menu, and then select **Install Starter Pack**.

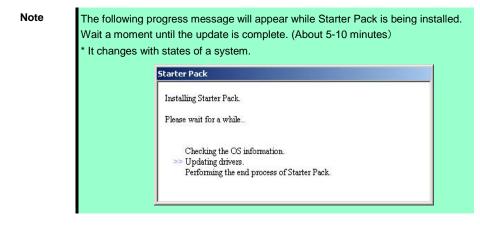


10. Wait for several minutes without attempting any further operation until the following window appears



Starter Pack installation starts when [OK] is clicked.





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

Starter P	Pack 🔀
?	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>

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 without Service Pack 2, click [Yes].<br/>(Service Pack 2 is mandatory)If Starter Pack is being reinstalled in an environment where Service Pack 2<br/>has already been installed, you do not need to reinstall Service Pack 2.

12. When the following message appears, click [Yes].

Installin	g Service Pack	X
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	
	Yes No	

13. When the following dialog box appears, specify the Service Pack to apply and then click [Open].

Look in:	See Local Disk	(L:)	•	+ 🗈 💣 📰	
	Documents	and Settings			
My Recent	Dintel				
Documents	WINDOWS	2			
Desktop	Common with the second				
🍅 ly Documents					
<b>1</b>					
My Computer					
My Network	File name:			-	<u>Oper</u>
Places	Files of type:	Execute file(*.exe)		-	Cano

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 i	Pack		×
2	The setup does n Do you want to re		vice Pack.
	Yes	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.

Note Be sure to remove bootable media from the optical disk drive.

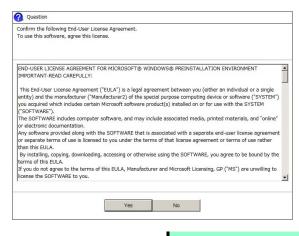
3. When the following message appears, select Os installation \*\*\* default \*\*\*.



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

XPRES	SSBUILDERで使用	<b>する言</b>	語を選択してください
elect a	language to use	for the	EXPRESSBUILDER
0	日本語	œ	English
0	Français	0	Italiano
0	Deutsch	C	Español

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



Note

Unless you agree these terms, you cannot use EXPRESSBUILDER.

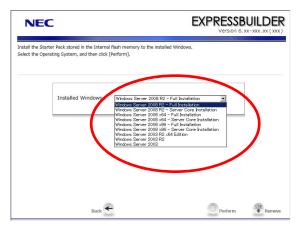
6. Select Invoke various utilities from Top Menu of EXPRESSBUILDER, and then click [Next].

NE	C	EXPRESSBUILDER Version 6. xx- xxx . xx ( xxx )
	ch function, select the radio button, and then click [Next]. Is clicked, you can remove USB devices inserted into this comput	er safely.
	○ Setup this computer	
	Invoke various utilities	
C	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ <sub>Next</sub>	USB Remove

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

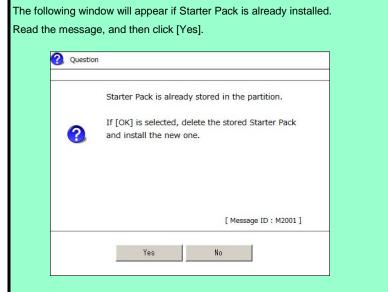
NEC		EXPRESSBUILDER Version 6. xx- xxx ( xxx )
	h be individually invoked from this menu. Ind then click [Next].	
	Install Starter pack to installed Windows     Save or restore KND comparation gata	
[	C Run a file directly	
	Back - Next	USB Remove

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



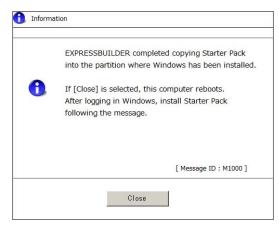
9. Read the message and then click [Yes].

	EXPRESSBUILDER copies Starter Pack into the partition where Windows has been installed.
?	Current disk space : XXXXX MB
	Required disk space: xxMB



Note

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. Go to Step 16, and click [Cancel] on the screen to install Starter Pack. Then perform from Step 1 of (2) When using Internal Flash Memory.				

If you installed the Windows Server 2003 x64 Edition 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	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 Your might need to restat your computer after you complete this update. To continue, click Next.	
	Keack Cancel	

After this, continue installation according to the onscreen messages.

14. When the following message appears, click [Finish] to restart the server.



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



16. Wait for several minutes without attempting any further operation until the following window appears.



Installation of Starter Pack starts when [OK] is clicked.

Important The dialog box shown below might appear while installing Starter Pack, but this does not affect the installation. This dialog box disappears after several seconds. Do not click [Cancel].

Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Bread our privacy policy
Can Windows connect to Windows Update to search for software? Yes, this time only Yes, now and every time I connect a device No, not this time
Click Next to continue.

Note

The following progress message appears while Starter Pack is being installed. Wait a moment until the update is complete. (About 5-10 minutes) \* It changes with states of a system.

nstalling 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.

tarter 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>Y</u> es <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.

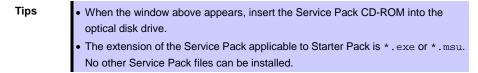
ImportantIf you are using OS installation media without Service Pack 2, click [Yes].<br/>(Service Pack 2 is mandatory)If Starter Pack is being reinstalled in an environment where Service Pack 2<br/>has already been installed, you do not need to reinstall Service Pack 2.

17. When the following message appears, click [Yes].

Installing	g 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
	Yes <u>N</u> o

18. When the following dialog box appears, specify the Service Pack to install and then click [Open].

Look jn:	🍛 Local Disk (C:)		• <del>•</del> •	of 📰 •	
My Recent Documents Desktop y Documents	Documents and Setting     Tritel     Program Files     WMDOWS     Wimpub	35			
dy Computer My Network Places	File name:	ute file(*.exe)		J J	<u>O</u> per



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 does not install Service Pack. Do you want to reboot?		
	Yes	No		

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 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

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

Optional LAN boards: N8104-132/133/138

Important Using an optional LAN board, perform procedure "5.4.2 Setting up LAN drivers" for each optional LAN board.

If [! Ethernet Controller] is displayed in Device Manager after LAN boards has been installed, you need to install the driver in the following procedure.

1. Set EXPRESSBUILDER DVD in optical disk drive.

Tips

When the Autorun menu appears, close the window.

If you apply Starter Pack from the 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: \024\win\winnt\w2k3amd\lan\bcom\drvinst\15000401\x64\win2003\x64
  - When applying Starter Pack from internal flash memory:
     System drive: \StartPKG\w2k3amd\lan\bcom\drvinst\15000401\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 has been installed. In such a case, the LAN driver is installed automatically. Make sure that the network adapter name for LAN 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:

[N8104-132/133/138] 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.

The link speed setting is now complete.

## (2) Using N8104-132/133/138

Using N8104-132/133/138 with the server, follow the procedure below to set it.

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

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory. Proceed to the next step.

- 2. Double-click to the following file.
  - When using EXPRESSBUILDER DVD:

Optical disk drive:\024\win\winnt\w2k3amd\lan\pgdyavd\_Disable.vbs

• If Starter Pack was installed from Internal Flash Memory:

System drive:\StartPKG\w2k3amd\lan\pgdyavd\_Disable.vbs

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

Configuration Completed [Option:PopUp RLV Disabled(Action:Done)] Reboot the system

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

Setup is now complete.

## 5.4.3 Setting up team/LiveLink

Important	When using Smart Load Balancing and Failover (without Standby
	Member ), be sure to setup LiveLink at creation of team. When using Smart Load Balancing and Failover (with Standby Member ),
	When using Smart Load Balancing and Failover (with Standby Member ),
	setup for LiveLink is not essential.
	• When deleting the team, refer to Chapter 1 (5.4.3 Setting up team/LiveLink)

- 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.
- Using Server Core installations, Not supporting setting up team/LiveLink by the BACS.

## (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.

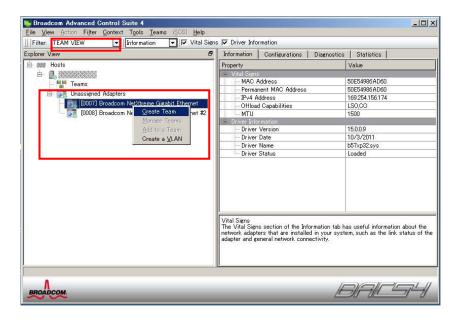
Note

You must set up LiveLink when you create a team.

(3) Setting up team/LiveLink

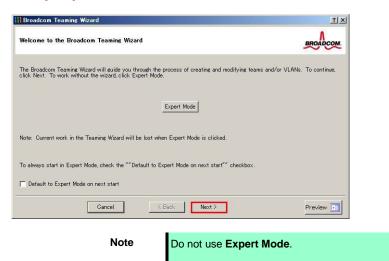
Important	<ul> <li>Possible combinations of network adapters that compose the team are as follows.</li> </ul>
	When the number of adapters that composes the team is up to four: — Between standard network adapters.
	<ul> <li>Between LAN boards.</li> <li>A standard network adapter and LAN boards</li> </ul>
Tips	To edit a team, right-click on the BACS team, and then select <b>Edit Team</b> . Then refer to step 3 and the subsequent steps to edit the team.

- Double-click the Broadcom Control Suite icon on the Control Panel window. Broadcom Advanced Control Suite starts.
- 2. Set a **Filter** in a **TEAM VIEW**, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.



The Broadcom Teaming wizard appears.

3. Click [Next].



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

Broadcom Teaming Wizard	<u> </u>
Creating/Modifying a Team: Team Name You must assign your team a unique name.	BROADCOM
Enter the name for the team:	
A team name has a maximum length of 39 characters. The name can use any &&₩/.*?℃ "*	symbolic character except
Cancel < Back Next>	Preview 🔟

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	<u>?</u>  ×
Creating/Modifying a Team: Team Type Select the type of team you want to create.	BROADCOM
Team Type	
Smart Load Balancing(TM) and Failover (SLB)	
C 802.3ad Link Aggregation using Link Aggregation Control Protocol (LACP)	
C FEC/GEC Generic Trunking	
TCP Offload Engine (TOE) support is supported only on a SLB team type. If a	eam type other than SLB is selected, no TCP
connections will be offloaded.	
Cancel   < Back   Next >	Preview 1
Cancel Next /	Preview

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

Available Adapters	TOE	LSO	CO	RSS	samab	NDIS	MTU	
008] Broadcom NetXtreme Gigabit Ethernet #2	No	Yes	Yes	No	Yes	5.1	1500	
Add								Remove
Add Team Members	TOE	LSO	CO	RSS	samab	NDIS	MTU	Remove
A	TOE	LSO Yes	CO Yes	RSS No	3amab Yes	NDIS 5.1	MTU 1500	Remove

- 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	<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.	
© Do not configure a standby member.	
C Use the following member as a standby member:	
[0007] Broadcom NetXtreme Gigabit Ethernet	<u>*</u>
Enable Auto-Fallback Disable mode	
Cancel < Back Next >	Preview 📊
	Fleview

- 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>
reating/Modifying a Team: Designating a Standby Member o you want to designate an available adapter as a standby member?	BROADCOM
Optionally select if you want a standby member for the team.	
C Do not configure a standby member.	
Use the following member as a standby member: 1	
[0008] Broadcom NetXtreme Gigabit Ethernet #2	2
Enable Auto-Fallback Disable mode     3	
Cancel < Back Next > (4)	Preview 可

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].

вколосом
nrough team members
Preview 📊

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...].

robe Interval (seconds)	2	
robe Maximum Retries	5	
		<u> </u>
obe VLAN ID (Optional: 0-4094)		
Target Probe Target 1		IP Address
Probe Target 2		
Probe Target 3		
	Edit Target IP Address	

# 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 a link is down is detected, 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].

iiiLiveLink Confi	gurations	×
IP Setting		
Team Name	Team 1	
Target 1:	ſ	
Target 2:	F	
Target 3:	I	
Target 4:	Γ	
Please enter e	ther an IPv4 or IPv6 address for the probe t	targets IP address field.
OK		Cancel

Tips

- Important *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].

robe Interval (seconds)	2	<b>_</b>	
robe Maximum Retries	5	<b>_</b>	
robe VLAN ID (Optional: 0-4094)	0		
Target	ļ	IP Address	-
Probe Target 1 Probe Target 2			
Probe Target 3			2
	Edit Targ	et IP Address	
	Edit Targ	et IP Address	

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

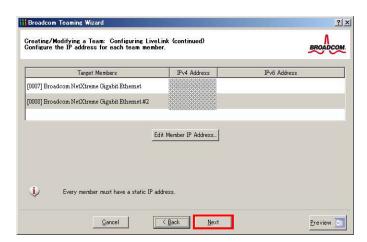
Link (continued) ber.	BROAL	col
IPv4 Address	IPv6 Address	
		IPv4 Address IPv6 Address

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



Important	• 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.

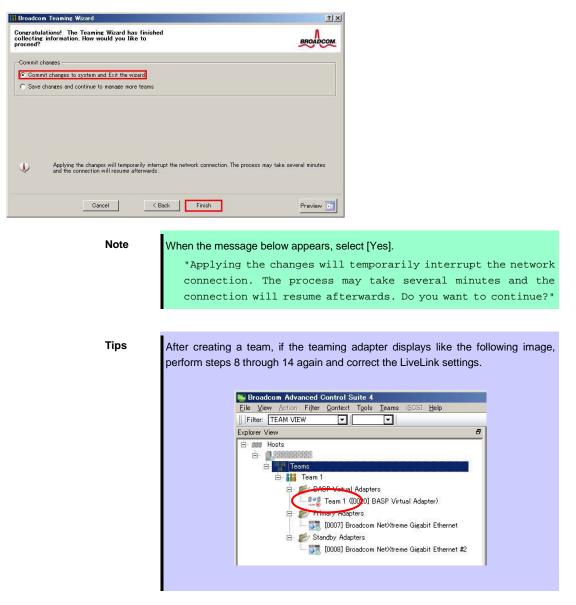
14. Click [Next].



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

iii 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 C Skip Manage VLAN	
Cancel < Back Next	Preview

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 Suite** 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)

Seadcom Advanced Control Suite 4		- U ×
Eile View Action Filter Context Tools Teams (SOSI Help		
Filter: TEAM VIEW  Information  Team Properties		
Explorer View 8	Information Statistics	
😑 🚥 Hosts	Property	Value
÷ 1	- Team Properties	
E Teams	- Team Name	Team 1
i Itam 1	- Team Type	Smart Load Balancing(TM) and Failover
	- Team Offload Capabilities	LSO, CO
🖻 🥟 BASP Virtual Adapters	- Team MTU	1500
- Per Team 1 ([0020] BASP Virtual Adapter)	- Driver Name	Baspxp32.sys
🖹 🃂 Primary Adapters	Driver Version	6.3.31
	- Driver Date	6/15/2011
- 🏭 [0007] Broadcom NetXtreme Gigabit Ethernet	- Probe Interval	2000
🔤 🏭 [0008] Broadcom NetXtreme Gigabit Ethernet #2	- Probe Max Retries	5
T105	- Probe Vlan ID	0
	- Team Probe Target 1	
	Team Properties Displays information about the team.	
вголосам		IBYANC'SY I

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

xplorer View É	P Information Statistics	
😑 000 Hosts	Property	Value
÷ 🔒	- Team Properties	
Teams	- Team Name	Team 1
- • • • • • • • • • • • • • • • • • • •	- Team Type	SLB (Auto-Fallback Disable)
	Team Mode	Primary
🖻 🥟 BASP Virtual Adapters	- Team Offload Capabilities	LSO, CO
Level Team 1 ([0020] BASP Virtual Adapter)	- Team MTU	1500
🖃 🃂 Primary Adapters	- Driver Name	Baspxp32.sys
	- Driver Version	6.3.31
- 🏭 [0007] Broadcom NetXtreme Gigabit Ethernet	- Driver Date	6/15/2011
😑 🃂 Standby Adapters	- Probe Interval	2000
[0008] Broadcom NetXtreme Gigabit Ethernet #2	- Probe Max Retries	5
Ecopy producer intervatine digative and the	- Probe Vlan ID	0
	Carget 1	
	Team Properties Displays information about the team.	

Team setup is now complete.

(4) Procedure for deleting team

ImportantYou must delete teams from Broadcom Control Suite.You cannot delete the team from the team adapter displayed in the Device<br/>Manager.

- 1. Double-click **Broadcom Control Suite** in the Control Panel window. **Broadcom Advanced Control Suite** starts.
- 2. Set a **Filter** in a **TEAM VIEW**, right-click the adapter to be used for the team, and then select Delete Team from the short-cut menu.

	Information Statistics	
BBB Hosts	Property	Value
Teans     T	Team Properties     Team Name     Team Type     Team Official Capabilities     Team MTU     Oriver Name     Oriver Version     Oriver Version     Probe Interval     Probe Max Retries     Probe Max Retries     Probe Target 1      Team Properties Displays information about the team.	Team 1           Smart Load Balancing(TM) and Failover           LSD, CO           1500           Basp:p32.sys           6331           6/15/2011           2000           5           0

Note

## When the message below appears, select [Yes].

The selected team will be deleted from system, do you want to
roceed?
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.
  - 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:\024\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 SAS controller (N8103-104A/142)

The driver for SAS controller is installed when you apply "Starter Pack".

# 5.4.5 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.

# 5.4.6 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*:\024\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.

Installation is now complete.

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.

Changing drive letter assignments is now complete.

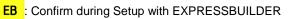
# 6. Setting Up Windows Server 2003

Set up Windows Server 2003 and the system.

# 6.1 Before Starting Setup

Read through the cautions explained here before starting setup.

BTO : Setting up of Pre-installed model



**0S** : Confirm during Setup with OS standard installer

	Cotur			(1/3)
	Setup	-		Items to confirm
_	-	OS	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 *1
				Windows Server 2003 Standard Edition *2
				*1 Supported by R110e-1E only *2 Supported by GT110e and GT110e-S
				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.
				-
_	_	OS	License authentication	If Windows Server 2003 is installed from Backup CD-ROM, the license is already activated. If Windows Server 2003 is installed from an OS CD instead of Backup CD-ROM, a product key
			aumentication	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 (6.8 License Authentication).
				Important Activate within 30 days following installation. The system is locked if 30
				days have passed without activation.
			Hardware configuration	The following hardware configurations require special procedures.
		OS	configuration	When using OEM drivers, be sure to change the boot order of the Flash FDD on the BIOS
_	-	03		settings as follows:
				Select <b>Boot</b> , <b>Floppy Drive BBS priorities</b> , <b>Boot Option #1</b> , and then specify the Flash FDD used.
				T DD used.
				Note Change as instructed in Chapter 1 (6.3.3 Setup procedure).
-	-	OS		<ul> <li>Notes on using N8103-149/150/151 on Windows2003:</li> </ul>
				1) 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
				2) When no battery is used:
				<ul> <li>Set the cache mode of RAID Controller to the default setting (AutoSwitch or WriteThrough) until Service Pack 2 is applied.</li> </ul>
				<ul> <li>To operate the RAID Controller in WriteBack mode, change setting to WriteBack after Service Pack 2 is applied.</li> </ul>
				* 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.

(1/3)

			-	(2/3)
	Setup			Items to confirm
_	_	OS	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.
-	-	OS		<ul> <li>DAT, LTO, and similar media</li> <li>Do not set media that is unnecessary to installation during setup.</li> </ul>
-	-	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</i> (6.9 <i>Reinstallation When Multiple Logical Drives Exist</i> ).
_	-	OS		• 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:) 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.
_	-	OS		<ul> <li>Setup when mass memory is installed If mass memory is installed in your system, the large size of paging file is required at installation. Thus, the partition size for storing debug information (dump file) may not be secured. If you fail to secure the dump file size, use OS standard installer for setup, and allocate the required file space to multiple disks by performing the following steps. <ol> <li>Set the system partition size to a size sufficient to install the OS and paging file.</li> <li>Specify another disk as destination to store the debug information (required dump file size) by referring to <i>Chapter 1 (7. Setup for Solving Problems)</i>. </li> </ol></li></ul> If the hard disk drive does not have enough 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 hard disk drive for the dump file.
				<b>Note</b> If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.
_	_	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.
-	-	OS		Use Starter Pack when you apply a Service Pack from the Service Pack 2 CD-ROM.
_	-	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)
	Setup			Items to confirm
-	_	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)         = 5300MB         (Windows Server 2003 with Service Pack 2)         = 5300MB         (Windows Server 2003 with Service Pack 1)         + ServicePack 2 CD-ROM)         Paging file size (recommended)         = installed memory size × 1.5         Dump file 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
				<ul> <li>Inter above paging me sizes are recommended for conecting debdg 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.</li> <li>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.</li> <li>If the mounted memory size is 2 GB or greater, the maximum size of the dump file is "2048 MB + 12 MB".</li> <li>When installing other applications or other items, add the amount of space needed by the application to the partition.</li> </ul>
_	_	08	Setup with OS standard installer	Dialog boxes 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.
-		OS	When using RAID Controller (N8103-149/15 0/151/160)	<ul> <li>Upon completion of installation of OS and application of Service Pack 2, update the driver for RAID Controller before installing Universal RAID Utility. Take the steps below:</li> <li>1. Insert the EXPRESSBUILDER DVD into optical disk drive.</li> <li>2. Open the following file using text editor such as notepad.</li> <li><expressbuilder dvd=""> : \024\win\winnt\dotnet\dac_driver_update\Readme.txt</expressbuilder></li> <li>3. Update the driver according to instructions in Readme.txt file.</li> <li>When update completes, install the Universal RAID Utility.</li> </ul>
_	_	08	Upgrade to Windows Server 2003 R2	Inplace upgrade from Windows Server 2003 to Windows Server 2003 R2 is not recommended because it overwrites the files and registries and might cause an unexpected effect on the system and applications.If you want to use Windows Server 2003 R2, back up the necessary data before installing Windows Server 2003 R2.TipsInplace upgrade refers to overwriting an existing OS (in this case, Windows 2003) with another OS (Windows Server 2003 R2).

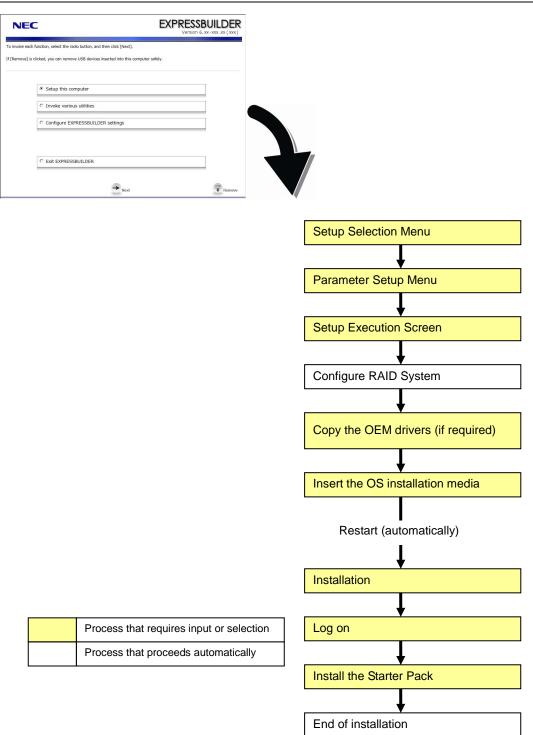
# 6.2 Setup with OS Standard Installer

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. Therefore the hardware installation of the server needs to be finished 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.
Note	When using an onboard RAID controller (LSI Embedded MegaRAID): Do not support the creation of RAID10 by using the onboard RAID controller. Refer to Chapter 2 (4. RAID System Configuration) in " <i>Maintenance Guide</i> " when creating RAID10.
Tips	<ul> <li>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 removable media or Internal Flash Memory (if purchased optionally).</li> <li>For details on creating a parameter file, refer to <i>Chapter 1 (8 Windows OS Parameter File)</i>.</li> </ul>

# 6.2.1 Setup flow



# 6.2.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

> Operating system installation media (prepare one of the following)

#### <Windows Server 2003 R2>

- 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 R2>

Be sure to prepare the Windows Server 2003 CD-ROM that contains Service Pack 1.

- Microsoft Windows Server 2003, Standard Edition (CD-ROM) (hereafter referred to as Windows Server 2003 CD-ROM)
- Windows Server 2003 Service Pack (CD-ROM)
- First Steps Guide
- Either of the following EXPRESSBUILDER
  - EXPRESSBUILDER DVD
  - Internal Flash Memory (optional)
- Prepare if needed:
  - · Removable media for creating Windows OS parameter file
  - Flash FDD for creating OEM drivers (Windows Server 2003)

Note	OEM drivers are necessary if a RAID Controller or optional board is connected. Use a Flash FDD as the removable media to create OEM drivers.
Tips	<ul> <li>EXPRESSBUILDER may be distributed in Internal Flash Memory. EXPRESSBUILDER can be run from Internal Flash Memory if it is installed in the server.</li> <li>If you are using a server with Internal Flash Memory installed, you can install the OS without using EXPRESSBUILDER DVD.</li> </ul>

# 6.2.3 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 (such as a display) 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 \*\*\*.



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

XPRESSB	UILDERで使用	する言	語を選択してくださ
elect a lar	nguage to use	for the	EXPRESSBUILDE
° E	本語	œ	English
οF	rançais	0	Italiano
ΟD	eutsch	0	Español

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 E IMPORTANT-READ CAREFULLY:	VIRONMENT	
This End-User License Agreement ("EULA") is a legal agreement between you (either an entity) and the manufacturer ("Manufacturer2) of the special purpose computing device or you acquired which includes certain Microsoft software product(s) installed on or for use ("SOFTWARE").	r software ("SYSTEM")	
The SOFTWARE includes computer software, and may include associated media, printed or electronic documentation.	materials, and "online"	
Any software provided along with the SOFTWARE that is associated with a separate end- or separate terms of use is licensed to you under the terms of that license agreement or than this FULA.		
By installing, copying, downloading, accessing or otherwise using the SOFTWARE, you ag terms of this EULA.	ree to be bound by the	
If you do not agree to the terms of this EULA, Manufacturer and Microsoft Licensing, GP license the SOFTWARE to you.	"MS") are unwilling to	

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)
	function, select a radio button, and then click [Next]. clicked, you can remove USB devices inserted into this compo	uter safely.
	• Set up this computer	
	C Invoke various utilities	
	C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ <sub>Next</sub>	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, 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 . xx ( xxx )
If [Configure R	perating system, select an item in the listbox, AID system only] is selected, EXPRESSBUILD imeter file] is selected, you can set up the co	ER only configures RAID system without OS installation.
		Windows Server 2003 R2
	C Configure RAID system only	
	C Load a parameter file	
	Back	Next USB

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	2	EXPI	Version 6.xx-xxx.xx (xxx)
If [Configure R		tbox, and then click [Next]. UILDER only configures RAID system with e computer according to the parameter f	
	C Install Windows	Windows Server 2003 R2	×
	C Configure RAID system only		
l	Configure RAID system only     Load a parameter me		
	Back	→ Next	USB Remove

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

NEC			EXPRESS Version 6	BUILDE
et parameters for the setu [Settings] is clicked, you [Save] is clicked, you can ** If "!" is displayed, you c	can change the paramete save the parameter to a		set the parameters.	
			🕜 D	efault values
RAID settings	Disk array1 CAID1(2disk) .ogical drive1 (148GB)			Default Settings Skip
		+		
Windows settings	User information	Network settings	Windows Components	Default
Skip	Default settings	Default settings	Default settings	Sett ings
		+		
Application settings Skip	Applications installation Default settings	$\frown$	ł	Default Settings
	Back ←	→ Next	Save	USB Rem

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

NEC		EXPRESS Version	BUILDER 5. xx - xxx . xx ( xxx )
Set parameters for the setup. If [Settings] is clicked, you can change the param If [Save] is clicked, you can save the parameter *** If "!" is displayed, you cannot proceed to the	to a file.	set the parameters.	
		0	Default values
RAID settings Skip Logical drive1 (148G	B) : System Partition (12GB	)	Default Settings Skip
	+		
Windows settings User information User settings	Network settings	Windows Components Default settings	Default Settings
	+		
Application settings Applications installation Default settings	2n		Default Settings
Back	→ Next	💽 Save	Remove

Click [Default] if you want to restore the default values.

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

EXF	Version 6. XX - XXX ( XXX )	
set the parame	eters.	
	🕜 Default values	
	Default	

## 10-1 RAID settings

Use this menu to configure the RAID system with the RAID controller detected automatically.

Note	When using an onboard RAID controller (LSI Embedded MegaRAID):
	This function does not support the creation of RAID10 by using the onboard RAID
	controller. Refer to Chapter 2 (4. RAID System Configuration) in "Maintenance
	Guide" when creating RAID10.

Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version	BUILDER 5. xx - xxx . xx ( xxx )
Set parameters for the setup If [Settings] is clicked, you co If [Save] is clicked, you can *** If "!" is displayed, you ca	an change the parameter save the parameter to a f	file.	et the parameters.	
			0	Default values
RAID settings R	isk array1 AID1(2disk) ogical drive1 (148GB) :	System Partition (12GB)		Default Settings Skip
		+		
Windows settings	User information User settings	Network settings Default settings	Windows Components Default settings	Default Settings
		+		
Application settings	pplications 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 wizrad is terminated, return to Parameter Setup Menu.

11. Click [Settings] in Windows settings.

NEC			BUILDER 6.xx-xxx.xx(xxx)
Set parameters for the setup. If [Settings] is clicked, you can change the parametir If [Save] is clicked, you can save the parameter to a *** If "I" is displayed, you cannot proceed to the ner	file.	et the parameters.	
RAID settings Skip Logical drive1 (14868)	: System Partition (12GB)		Default values           Default           Settings           Skip
	-		
Windows settings User information User settings	Network settings	Windows Components Default settings	Default Settings
	+		
Application settings			Default Settings
Back	→ <sub>Next</sub>	💽 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].

Basic information	R] is selected, both Windows and applications can be in	
	: Windows Server 2003 R2	
Use OS standa Copy OEM	d installer drivers into a removable media	
Setup with EXP	RESSBUILDER-	
Edition	: 👻	
Language	:	
Time zone	:	

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

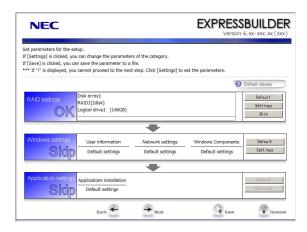
Tips

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 the parameter setup menu.

meter setting is completed. nish this wizard, click [Finish].	
Installed OS	: Windows Server 2003 R2
(Use OS standard installer)	
Copy OEM drivers	: Act
L	9 / 9 Pa
Back	Finish

15. Click [Next] on Parameter Setup Menu.



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 setup the computer. To start the setup, click [Perform].	
Steps	Summary of setup RAID configuration
<ul> <li>Configuring the RAID system</li> <li>Copying the OEM drivers</li> </ul>	Configure * All data is deleted.
<ul> <li>Changing a media</li> </ul>	Installed OS Windows Server 2003 R2
<ul> <li>Installing the Operating System</li> </ul>	Copy the OEM drivers
	ACC
Back 🗲	Perform
Note	• If you select the Copy
	insert a Flash FDD into
	Do not remove the med

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.

	OEM drivers(XXXXXXXXXXXXXXXXXXXXXXX) are copied. All data on Flash FDD is deleted.
?	If [Yes] is selected, the copying starts.
	[Message ID : F20xx]

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

	Insert the Backup OS disk into the drive.
?	
	[ Message ID : H2×××

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 an optional mass storage controller is used, press <F6> key while either of the following messages is displayed. If not, go to step25 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, check the boot order of the Flash FDD on BIOS settings.

#### 21. The following message appears.



If a RAID controller is used on the server, 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.

When using N8103-128 RAID Controller: **Promise SuperTrak EX SAS 6G RAID Controller-32bits platform** When using N8103-149/150/151 RAID Controller:

LSI MegaRAID SAS RAID Controller Driver

When using Onboard RAID Controller (LSI Embedded MegaRAID): LSI Embedded MegaRAID (Windows 2003)

- 23. When N8103-104A is connected: press <S> key and go to step 24. If not, press <Enter> key and go to step 25.
- 24. 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 25.
- 25. 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:"

Important Pay attention to a partition you are going to delete.

If it is shown as "C:", you do not need to delete the partition and go to step 26. 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	<ul> <li>A partition in which you install Windows must be created in drive "C:".</li> </ul>
	• 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.

26. 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, the message indicating that the driver has not passed logo testing might appear, but this does not affect the setup. Click [OK] to continue setup.

- 27. The server automatically restarts after installing Windows Server 2003.
  - When Windows Server 2003 was installed: Go to step 31.
  - When Windows Server 2003 R2 was installed: Go to step 28.
- 28. The Windows Setup dialog box appears after log on.

Window	s Setup	×
Ø	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	
	Cancel	

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.

- 29. Insert the Windows Server 2003 R2 DISC 2 into the optical disk drive. Check the settings, and then click [OK].
- 30. When the installation procedure completes, remove the Windows Server 2003 R2 Edition DISC 2 from the optical disk drive and then restart the server.
- 31. Install Starter Pack by referring to Chapter 1 (6.4 Installing Starter Pack ).
- 32. Install drivers and specify detailed settings by referring to Chapter 1 (6.5 Setting Up Device Drivers).
- 33. For optional devices whose driver has not been installed, install the device drivers according to the instructions supplied in the driver manual.
- 34. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with OS standard installer is now complete.

# 6.3 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:
	<ul> <li>The system configurations have changed (when internal option devices have been added or removed)</li> </ul>
	If a dialog box prompting you to restart appears after changing system configurations, click [No] and then update the system.
	<ul> <li>If the system was restored using a restore process</li> </ul>
	<ul> <li>If a system has been restored using the backup tool</li> </ul>
	Be sure to install Service Pack 2 (CD-ROM) from Starter Pack.
	<ul> <li>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.</li> </ul>
Note	For Windows Server 2003 R2, make sure that <b>Windows Server 2003 R2</b> 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/GT-110e, GT-110e-S, R110e-1E Installation Guide (Windows)

# 6.3.1 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*:\024\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 Mext> Cancel	

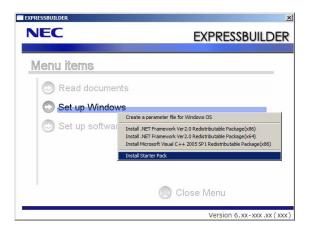
After this, continue installation according to the onscreen messages.

6. When the following message appears, click [Finish] and remove EXPRESSBUILDER DVD before restarting.

Software Update Installation	Wizard
	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.
	Do not restart now
	< <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 Set up Windows to open the short-cut menu and then select **Install Starter Pack.** 



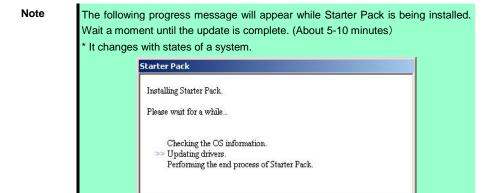
10. Wait for several minutes without attempting any further operation until the following window appears.



Starter Pack installation starts when [OK] is clicked.



Important The dialog box shown below might appear while installing Starter Pack, but this does not affect the installation. This dialog box disappears after several



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

Starter F	Pack
?	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>

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 without Service Pack 2, click [Yes]. (Service Pack 2 is mandatory) 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].

Installin	g Service Pack	×
2	Installing Service Pack.	
~	If you want to continue installing, click [Ye select Service Pack (browse the file like an If you want to stop installing, click [No].	
	e.g. XXXXXXXXXXXXXXXXXXXXXXXXXXX	
	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.

stall Service Pack. t?
Įo
)

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.

Note 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].

XPRESS	BUILDERで使用	। <b>ग</b> ७ ह	語を選択してください
elect a l	anguage to use	for the	EXPRESSBUILDEF
0	日本語	œ	English
0	Français	0	Italiano
0	Deutsch	0	Español

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® W	/INDOWS® PREINSTALLATION ENVIRONMENT
IMPORTANT-READ CAREFULLY:	
	greement between you (either an individual or a single pecial purpose computing device or software ("SYSTEM") product(s) installed on or for use with the SYSTEM
The SOFTWARE includes computer software, and may i	include associated media, printed materials, and "online"
or electronic documentation. Any software provided along with the SOFTWARE that i	is associated with a separate end-user license agreement
or separate terms of use is licensed to you under the te	
than this EULA. By installing, conving, downloading, accessing or other	wise using the SOFTWARE, you agree to be bound by the
terms of this EULA.	wae dailing the Son Trivance, you agree to be bound by the
If you do not agree to the terms of this EULA, Manufact license the SOFTWARE to you.	turer and Microsoft Licensing, GP ("MS") are unwilling to
itelise the SOFTWARE to you.	
Yes	No
	-
Note	Unless you agree these

nless you agree these terms, you cannot use EXPRESSBUILDER.

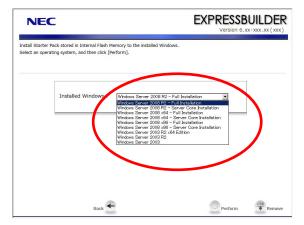
6. Select Invoke various utilities from Top Menu of EXPRESSBUILDER, and then click [Next].

NEC	:	EXPRESSBUILDER Version 6. xx - xxx ( xxx )
	unction, select the radio button, and then click [Next]. icked, you can remove USB devices inserted into this computer s	safely.
	C Setup this computer	
l	Invoke various utilities     C Configure EXPRESSBUILDER settings	
	C Exit EXPRESSBUILDER	
	→ <sub>Next</sub>	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 Win     Save or resure Rate comparation	
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].

	EXPRESSBUILDER copies Starter Pack into the partition where Windows has been installed.
?	Current disk space : XXXXX MB
	Required disk space: xxMB

# The following window will appear if Starter Pack is already installed. Read the message, and then click [Yes]. Question Starter Pack is already stored in the partition.

If [OK] is selected, delete the stored Starter Pack

No

[ Message ID : M2001 ]

and install the new one.

Yes

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

?

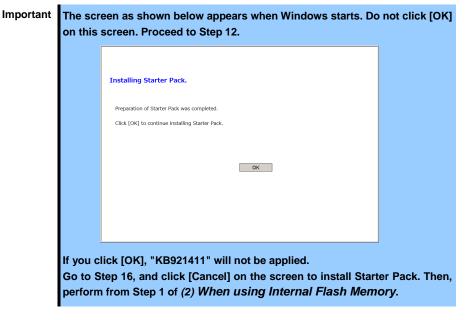
	EXPRESSBUILDER completed copying Starter Pack
	into the partition where Windows has been installed.
A	If [Close] is selected, this computer reboots.
	After logging in Windows, install Starter Pack
	following the message.
	[ Message ID : M1000 ]

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).



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 Installat	ion Wizard	×
Ð	Use this wizard to install the following software update: Hotfix for Windows Server 2003 (KB921411)	
N	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>≪</u> ∄ack <u>N</u> ext> Can	:el

After this, continue installation according to the onscreen messages.

14. When the following message appears, click [Finish] to restart the server.



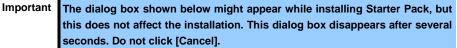
15. After Windows starts, the following window appears. Click [OK].

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

16. Wait for several minutes without attempting any further operation until the following window appears.



Installation of Starter Pack starts when [OK] is clicked.





Note

The following progress message appears while Starter Pack is being installed. Wait a moment until the update is complete. (About 5-10 minutes) \* It changes with states of a system.

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 F	Pack	×
2	Installing Starter Pack was finished. The setup will install Service Pack co	
	If you want to continue installing, cl If you want to stop installing, click [	
	Yes No	

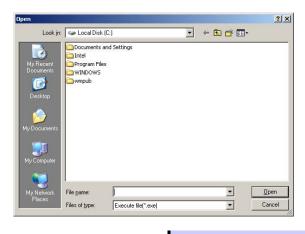
To apply the Service Pack, click [Yes] and go to step 17.

To not apply the Service Pack, click [No] and go to step 19.

Important If you are using OS installation media without Service Pack 2, click [Yes]. (Service Pack 2 is mandatory) 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].



18. When the following dialog box appears, specify the Service Pack to install and then click [Open].



Tips

When the window above appears, insert the Service Pack CD-ROM into the optical disk drive. 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.

19. When the following message prompts you to restart the system, click [Yes].

Starter F	Pack		×
2	The setup does i Do you want to i		rice Pack.
	Yes	No	

Installation of Starter Pack is now complete.

### 6.3.2 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.
- 6. Refer to Chapter 1 (6.4.1 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.

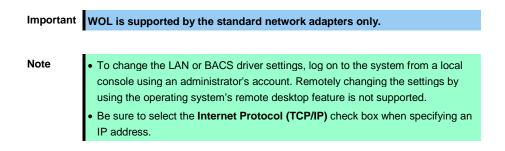
# 6.4 Setting Up Device Drivers

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.

### 6.4.1 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

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

Optional LAN boards: N8104-132/133/138

Important Using an optional LAN board, perform procedure "6.5.2 Setting up LAN drivers" for each optional LAN board.

If [! Ethernet Controller] is displayed in Device Manager after LAN boards 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 the 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].
- 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:\024\win\winnt\dotnet\lan\bcom\drvinst\15000401\ia32\win2003\ia32
  - When applying Starter Pack from internal flash memory:

System drive: \StartPKG\dotnet\lan\bcom\drvinst\15000401\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 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:

[N8104-132/133/138] Broadcom NetXtreme Gigabit Ethernet #xx\*

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

### 6.4.2 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.

The link speed setting is now complete.

### (2) Using N8104-132/133/138

Using N8104-132/133/138 with the server, follow the procedure below to set it.

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

Tips

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory. Proceed to the next step.

- 2. Double-click to the following file.
  - When using EXPRESSBUILDER DVD:

Optical disk drive:\024\win\winnt\dotnet\lan\pgdyavd\_Disable.vbs

• If Starter Pack was installed from Internal Flash Memory:

System drive:\StartPKG\dotnet\lan\pgdyavd\_Disable.vbs

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

Configuration Completed [Option:PopUp RLV Disabled(Action:Done)] Reboot the system

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

Setup is now complete.

### 6.4.3 Setting up team/LiveLink

Important	<ul> <li>When using Smart Load Balancing and Failover (without Standby Member ), be sure to setup LiveLink at creation of team.</li> <li>When using Smart Load Balancing and Failover (with Standby Member ),</li> </ul>
	Member ), be sure to setup LiveLink at creation of team.
	When using Smart Load Balancing and Failover (with Standby Member ),
	setup for LiveLink is not essential.

- When deleting the team, refer to Chapter 1 (6.5.3 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.
- Using Server Core installations, Not supporting setting up team/LiveLink by the BACS.

### (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

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.

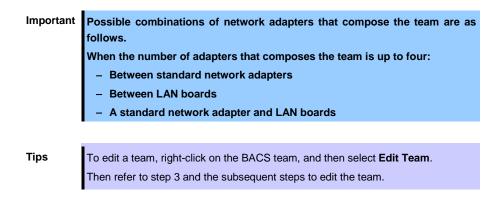
If a response to the transmission of a link packet within the specified range is not detected, it is identified as a communication route failure and adapter communication is stopped.

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.

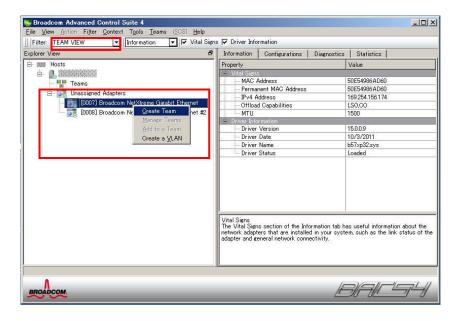
Note

You must set up LiveLink when you create a team.

(3) Setting up team/LiveLink

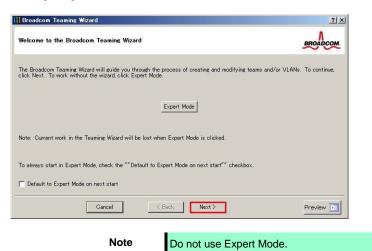


- Double-click the Broadcom Control Suite icon on the Control Panel window. Broadcom Advanced Control Suite starts.
- 2. Set a **Filter** in a **TEAM VIEW**, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.



The Broadcom Teaming wizard appears.

3. Click [Next].



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

Broadcom Teaming Wizard				<u>? ×</u>
Creating/Modifying a Tean You must assign your tean	: Team Name a unique nam	ne.		BROADCOM
Enter the name for the te	əm:			
Team 1 A team name 88¥/*?OT"	has a maximum	length of 39 charac	ters. The name can use an	y symbolic character except
	Cancel	< Back	Next >	Preview 📑

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	?
Sreating/Modifying a Team: Team Type Belect the type of team you want to create.	BROADCOM
Team Type	
Smart Load Balancing(TM) and Failover (SLB)	
C 8023ad Link Aggregation using Link Aggregation Control Protocol (LACP)	
TCP Offload Engine (TOE) support is supported only on a SLB team type. If a transmission will be offloaded.	eam type other than SLB is selected, no TCP
Cancel < Back Next >	Preview

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

Available Adapters	TOE	LSO	CO	RSS	samab		MTU	
008] Broadcom NetXtreme Gigabit Ethernet #2	No	Yes	Yes	No	Yes	5.1	1500	
Add	576							Bemove
Add Team Members	TOE	LSO	CO	RSS	3amab	NDIS	MTU	Remove
<u>A</u>	TOE No	LSO Yes	CO Yes	RSS No	samab Yes	NDIS 5.1	MTU 1500	Remove

- 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	<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.	
Do not configure a standby member.	
C Use the following member as a standby member:	
[0007] Broadcom NetXtreme Gigabit Ethernet	<u>v</u>
Enable Auto-Fallback Disable mode	
Cancel < Back Next >	Preview
Terrer Terrer	

- 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 reating/Modifying a Team: Designating a Standby Member 10 you want to designate an available adapter as a standby member?	₹ ×
Optionally select if you want a standby member for the team.	
C Do not configure a standby member.	
Use the following member as a standby member:	
[0008] Broadcom NetXtreme Gigabit Ethernet #2	<u> </u>
Enable Auto-Fallback Disable mode     (3)	
Qancel < Back Next >	Preview
	FLEAIEM

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].

ii Broadco	om Teaming Wizard	?!:
Creating Do you v	/Modifying a Team: Configuring LiveLink want to configure LiveLink?	BROADCOM
Configur	re LiveLink?	
Yes		
C No		
į)	LiveLink detects loss of network connectivity beyond the switch and that have a live link.	routes traffic only through team members
	Cancel < Back Next	Preview 🗾

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...].

Probe Interval (seconds)	2	-	
Probe Maximum Retries	5	-	
Probe VLAN ID (Optional: 0-4094)	0		
Target		IP Address	×
Probe Target 1			
Probe Target 2 Probe Target 3			-
	Edit Target IP Address	1	
	Lux Talget In Huuress		
•			
<ol> <li>At least one LiveLink pro</li> </ol>	be target must be specified.		

### 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 a link is down is detected, 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].

IP Setting	
Team Name	Team 1
Target 1:	F
Target 2:	F
Target 3:	Г
Target 4:	ſ
Please enter ei	ither an IPv4 or IPv6 address for the probe targets IP address field.

- Important *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].

Probe Interval (seconds)	2	•	
Probe Maximum Retries	5	<b>_</b>	
Probe VLAN ID (Optional: 0-4094)	0		
Target		IP Address	<b>*</b>
Probe Target 1 Probe Target 2			
Probe Target 3			<u> </u>
	Edit Target IP Address	1	

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

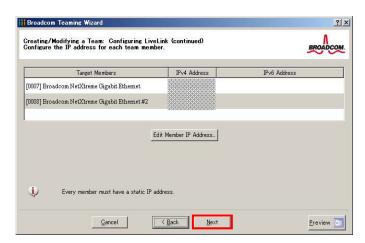
eLink (continued) ber.	BROADCO
IPv4 Address	IPv6 Address

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



Important	• 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 <i>Target xx</i> , 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].

iii 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 C Skip Manage VLAN	
Cancel < Back Next	Preview

i

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

Commit charges         Commit charges to system and Exit the ward         Sive charges and contrue to manage more team         Applying the charges will temporarily interrupt the network connection. The process may take several minutes         and the connection will resume afterwards.         Cancel       Exit         Preview         Note         When the message below appears, select [Yes].         "Applying the changes will temporarily interrupt the network connection. The process may take several minutes and connection. The process may take several minutes and connection will resume afterwards. Do you want to continue	Broadcom Teaming Wizard		<u>? ×</u>		
Interview of the delayers will empose it interview of the interview of	Congratulations! The Teaming Wizard has f collecting information. How would you like t proceed?	inished O	BROADCOM.		
with and the correction will resume afterwards.         Note         When the message below appears, select [Yes].         "Applying the changes will temporarily interrupt the netw connection. The process may take several minutes and connection will resume afterwards. Do you want to continu         Tips         After creating a team, if the teaming adapter displays like the following im perform steps 8 through 14 again and correct the LiveLink settings.         Image: Team 1	Commit changes to system and Exit the wizar				
Note       When the message below appears, select [Yes].         "Applying the changes will temporarily interrupt the netw connection. The process may take several minutes and connection will resume afterwards. Do you want to continu         Tips       After creating a team, if the teaming adapter displays like the following imperform steps 8 through 14 again and correct the LiveLink settings.         Broadcom Advanced Control Suite 4       Ele View         File View       Imperform Filter Context Tople Teams (COST Help)         File View       Imperform Steps 8         File View       Imperform Filter Context Tople Teams (COST Help)         File View       Imperform Steps 8         File View       Imperform Filter Context Tople Teams (COST Help)         File View       Imperform Filter Context Tople Teams (COST Help)         File View       Imperform Filter Context Tople Teams (COST Help)         File View       Imperform Filter Context Tople Teams (COST Help)         File View       Imperform Filter Context Tople Teams (COST Help)         File View       Imperform Steps 8         File View <thimperform 8<="" steps="" th=""></thimperform>	Applying the changes will temporaril and the connection will resume after	v interrupt the network connection. The process may te wards.	ake several minutes		
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. <b>Tips</b> After creating a team, if the teaming adapter displays like the following image perform steps 8 through 14 again and correct the LiveLink settings. <b>Broadcom Advanced Control Suite 4 Broadcom NetWarene Gigabit Ethernet Broadcom NetWarene Gigabit Ethernet Broadcom NetWarene Gigabit Ethernet Broadcom NetWarene Gigabit Ethernet</b>	Cancel	< Back Finish	Preview 🔟		
perform steps 8 through 14 again and correct the LiveLink settings.	Note	"Applying the cl connection. The	hanges will ten e process may	mporarily interrupt take several minut	tes and
	Tips	perform steps 8 through	Advanced Control Suit Action Filter Context To AM VIEW Teams Team 1 Frimary Adapters Control Filter Context 100 Frimary Adapters Standby Adapters	e Ct the LiveLink settings.	

17. Restart the system.

- After the system starts, start Broadcom Control Suite by clicking the Broadcom Control Suite icon in Control Panel, 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)

Broadcom Advanced Control Suite 4 Eile View Action Filter Context Tools Teams (205) Help Ulation TEAM VIEW		
I Filer (TEAM VIEW ♥ Information ♥ I♥ Team Properties Explorer View ♥ ■ and Hosts ■ Teams ■ Teams ■ BASP Virtual Adapters ■ Teams (00000) BASP Virtual Adapter). ■ Primary Adapters	Information Statistics   Property Team Properties Team Name Team Official Capabilities Team MTU Driver Name Driver Version Driver Version Driver Date	Value           Team 1           Smart Load Balancing (TM) and Failover (150, CO)           1500           Basepo22cys           6331           6/15/2011
00001] Broadcom NetXtreme Gigabit Ethernet #2	Probe Jeneral     Probe Max Retries     Probe Vien ID     Team Probe Target 1	0 00 2011 0 000 5 0 0
вкофсом	Team Properties Displays information about the team.	

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

xplorer View	Information Statistics	W-
Indots     Indots	Property           Team Name           Team Name           Team Mode           Team Mode           Team Mode           Team Mode           Team Mode           Driver Version           Driver Version           Driver Version           Probe Interval           Probe Max Retries           Probe Van ID           Team Probe Target 1	Value           Team 1           SLE (Antor-Filback Disable)           Primary           LSO, CO           1500           Baspop22sys           6.331           6/15/2011           2000           5           0

Team setup is now complete.

(4) Procedure for deleting team

ImportantYou must delete teams from Broadcom Control Suite.You cannot delete the team from the team adapter displayed in the Device<br/>Manager.

- 1. Double-click **Broadcom Control Suite** in the Control Panel window. **Broadcom Advanced Control Suite** starts.
- 2. Set a **Filter** in a **TEAM VIEW**, right-click the adapter to be used for the team, and then select Delete Team from the short-cut menu.

plorer View	Information Statistics	
- 000 Hosts	Property	Value
Tooms	Team Properties     Team Properties     Displays information about the team.     Team Processes     Team MTU     Driver Version     Driver Version     Driver Version     Driver Version     Probe Interval     Probe Vian ID     Team Properties     Displays information about the team.	Team 1           Smart Load Balancing(TM) and Failover           LS0, CO           1800           Baspop22sys           6331           6/15/2011           2000           5           0

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.

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:\024\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	X
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.

### 6.4.4 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:\024\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.

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

The driver for SAS controller is installed when you apply "Starter Pack".

### 6.4.6 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.

# 6.5 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.<br/>Refer to the following knowledge base to confirm whether your product<br/>supports the PAE option:KB291988<br/>A description of the 4 GB RAM Tuning feature and the Physical Address<br/>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"
/fastdetect
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.

# 6.6 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*.

# 6.7 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.

# 6.8 Reinstallation When Multiple Logical Drives Exist

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

### (1) Reinstallation process

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. Follow the steps to start Setup with OS standard installer.
- 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.

Cautions concerning memory dumpsMemory dumps must be collected by
a staff member from the maintenance service company. Customers only need to specify the settings for the memory dump.
<ul> <li>If any trouble occurs after specifying the settings below and you attempt to</li> </ul>
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].

The message to restart the system appears 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].

The message to restart the system appears 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.
- 5. 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].

The message to restart the system appears 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:

- 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/en-us

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.
- 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.
- 2. 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.

Important	Do not remove EXPRESSBUILDER DVD from the drive while creating a
	parameter file.
Tips	A parameter file can be created when using the following operating systems:
	<ul> <li>Windows Server 2008 R2 (Full installation)</li> </ul>
	<ul> <li>Windows Server 2008 (Full installation)</li> </ul>
	<ul> <li>Windows Server 2003 x64 Edition, Windows Server 2003</li> </ul>
	– Windows 7
	<ul> <li>Windows Vista</li> </ul>
	<ul> <li>Windows XP x64 Edition, Windows XP</li> </ul>

- 1. Start the OS.
- 2. Insert the supplied EXPRESSBUILDER DVD into the optical disk drive. Autorun Menu automatically appears.
- 3. Clilck GT110e/GT110e-S/R110e-1E on model selection dialog.

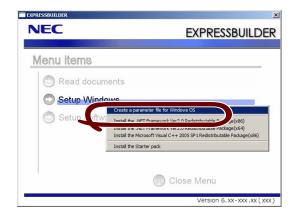
NEC	EXPRESSBUILD
Menu items	(Select a model that you want to setup)
GT110d /GT110d-S /R110d-1E	
	🔘 Close Menu
Tips	The dialog shown a

The dialog shown above may not appear depending on your system environment.

4. Right-click on the window or click Set up Windows to open the short-cut menu.

NEC	EXPRESSBUILDE
Menu items	
🔘 Read documents	
Setup Windows	
Setup software	
5	🔘 Close Menu
	Version 6.xx-xxx .xx ( xxx

5. Select Create a parameter file for Windows OS.



## The following window appears.



6. Specify the parameters according to the following procedure.

	oox, and then click [Next]. IILDER only configures RAID system without OS installation. computer according to the parameter file.
€ Install Windows	Windows Server 2008 R2
C Configure RAID system only	

Tips

- To modify an existing parameter file, click Load a Parameter file on the setup selection menu.
- To cancel parameter file creation in the middle, click [🏝] on the upper right of the dialog box.

## 7. Set parameters required for setup.

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

reate a parameter me for	Windows OS			
NEC			EXPRESSI Version 6	BUILDE
Set parameters for the se	etup.			
	u can change the parameter			
	an save the parameter to a f cannot proceed to the next			
** If it is displayed, you	cannot proceed to the next	step. Click [Settings] to s	set the parameters.	
			0	lefault values
RAID settings Skip	Disk array1 RAID1(2disk) Logical drive1 (2047GB) :	System Partition (40GB	3)	Default Settings Skip
		+		
Windows settings	User information	Network settings	Windows Components	Default
v.	Default settings	Default settings	Default settings	Settings
		+		
Application settings	Applications installation			Default
$\square$	Default settings		1	Settings
OK				

Click [Default] if you want to restore the default values.

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



## 7-1 RAID settings

Use this menu to configure RAID System with the RAID Controller detected automatically.

Note

When using an onboard RAID Controller (LSI Embedded MegaRAID): This function does not support the creation of RAID10 by using the onboard RAID Controller. Refer to Chapter 2 (4. RAID System Configuration) in "Maintenance Guide" when creating RAID10.

Specify the RAID settings using the RAID settings wizard on Parameter Setup Menu.

NEC			EXPRESS Version 6	BUILDE
[Save] is clicked, you can	can change the parameter save the parameter to a		set the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (2047GB)	: System Partition (40GE	3	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		0	

Important

nt The 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 the parameter setup menu. Proceed to Windows setup.

## 7-2 Windows settings

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

Create a parameter file for	Windows OS			1
NEC			EXPRESS Version	BUILDER
f [Save] is clicked, you ca	tup. u can change the parameter en save the parameter to a u cannot proceed to the nex	file.	set the parameters.	
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (2047GB)	: System Partition (40GE	Ē	Default values           Default           Settings           Skip
Windows settings	User information Default settings	Network settings Default settings	Windows Comporents Default setting	Default Settings
Application settings	Applications installation Default settings	+		Default Settings
	Back		Save	

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

f [Use OS standard tandard installer.	installer] is selected, you need to input parar	neters step by step without this wizard by using t
	Start	Use OS standard installer
	Set partition preferences Set user preferences	_
	Set network preferences	-
	Check/Exit	1 / 8 Page

(3) Specify the Windows basic settings.

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

ic information	
Operating System	: Windows Server 2008 R2
O Use OS standard	l installer
🔲 Copy the Of	M drivers into the removable media
┌ . Setup with EXPR	ESSBUILDER
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 of V	Vindows system.	
	lisk drive or logical drive. The partition size	can be set within 2TB.(The area
where 2TB is exceeded cannot be used	)	
Partitioning		
C Use the existing partition		
Create a new partition -		
C Specify the maximum ar	nount	
• Enter a value	: 40 (GB) *1TB=	=1024GB
	(15GB - 2047GB)	
	()	
		2 / 0 0===
		3 / 8 Page
Back		Gancel
DALK NEXT		Ganden

 Important
 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.

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.

	An error has occurred. Follow the instructions to retry.
<u>^</u>	Symptom : [Use the existing partition] setting is selected in the loaded parameter file That setting is not available for the configuration of this computer.
	Do you want to continue ? [ Message ID : D200

(5) Enter user information.

The user information window appears. Enter the user information, and then click [Next].

Set parameters about user information. nput Computer name within 15 characters. Administrator password requires more than 6 rategories(numbers / uppercase / lowercase /		haracters from three of the following
User information		
Computer name	: 7-383-635013540	(Required) 🔽 Auto
User name	: Administrator	
Administrator password	:	(Required)
Confirm Administrator password	:	(Required)
		4 / 8 Page

Note	Enter a computer name and administrator password that satisfies the following conditions:
	<ul> <li>Contains 6 or more characters</li> </ul>
	<ul> <li>Contains characters from at least three of the following categories: numbers, uppercase letters, lowercase letters, and symbols.</li> </ul>
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].

et parameters about network protocol.	
you input IP address, select [Custom settings], and then click [Adv	/anced].
Network protocols	
<ul> <li>Standard setting</li> </ul>	
Custom settings	
Standard adapter – Internet Protocol (IPv4)	Advanced
	5 / 8 Page

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].

Join a workgroup		
Workgroup name	: WORKGROUP	
Join a domain		
Domain name	:	
Account name	:	
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].

et parameters about Windows components.	
elect Windows features and Server roles to be enabled.	
Server roles	
Web server(IIS)	
DHCP server	
DNS server	
File services	
Print and Document services	
Vindows 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].

: Windows Server 2008 R2
: Standard(Full Installation)
: English
: (UTC-08:00) Pacific Time (US & Canada
: Create a new partition(40GB)

Return to the parameter setup menu.

Proceed to application setup.

## 7-3 Application settings

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

NEC			EXPRESS	
			Version	6. xx - xxx .xx ( xx
t parameters for the setup.		1.0		
Settings] is clicked, you can chi				
[Save] is clicked, you can save t * If "!" is displayed, you cannot			et the parameters.	
1 2 24	5	5 10 10 10 10 10 10 10 10 10 10 10 10 10		
			0	Default values
RAID settings			-	Default
RAIDI		: System Partition (40GB)		Settings
Skip				Skip
		+		
Windows settings	er information	Network settings	Windows Components	Default
OK .	ser settings	Default settings	Default settings	Settings
		+	<u> </u>	1
Application settings Applica	tions installation			Default
OK De	ault settings			Settings
			-	

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

ielect 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	Add >> Add >> (Viviersa RaD Utility Microsoft Visual C++ 2005 SP1 Redistributable (<> Delete
	Finish

8. 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 1	Nindows OS			
NEC			EXPRESS Version 6	
Set parameters for the set If [Settings] is clicked, you If [Save] is clicked, you can *** If "!" is displayed, you	can change the parameter save the parameter to a		the parameters.	
			0	lefault values
RAID settings	Disk array1 RAID1(2disk) Logical drive1 (2047GB)	: System Partition (40GB)		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		Save	>

When the following message appears, click [Yes] to complete parameter file creation.

	Do you quit creating a parameter file for Windows OS ?
?	
	[ Message ID : D2003 ]

Parameter file creation is now complete.

# R110e-1E

# NEC Express5800 Series Express5800/GT-110e, GT-110e-S, R110e-1E

# Installing the Bundled Software

This chapter provides brief explanation of bundled software and how to install them.

- Bundled software for the server Describes the bundled software to be installed in the server system.
- 2. Bundled software to be 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 online 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" on the NEC EXPRESSBUILDER DVD.

# **1.3** BMC Configuration

BMC Configuration enables you to specify configuration information to this server's BMC.

For details about how to install BMC Configuration, refer to "*BMC Configuration User's Guide*" on the NEC EXPRESSBUILDER DVD.

## **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 ESMPRO Manager, you can download update packages automatically and install them without interrupting the system.

For details about how to install NEC ExpressUpdate Agent, refer to "NEC ExpressUpdate Agent Installation Guide" on the NEC EXPRESSBUILDER DVD.

Important 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:

- Onboard RAID Controller (LSI Embedded MegaRAID)
- N8103-128 RAID Controller (128 MB, RAID 0/1)
- N8103-149 RAID Controller (512MB, RAID 0/1)
- N8103-150 RAID Controller (512MB, 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" on the supplied EXPRESSBUILDER DVD.

If the operating environment (such as the operating system) for Universal RAID Utility described in the user's guide differs from the one described in the user's guide of this product, follow the operating environment in the user's guide of this product.

## 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 Setup 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 Setup Windows and then Install the .NET Framework Ver2.0 Redistributable Package (x86) (Install the .NET Framework Ver2.0 Redistributable Package (x64) in the case of x64) from the autorun menu.

To install the Microsoft Visual C++ 2005 SP1 library runtime component, select **Setup Windows** and then **Install the Microsoft Visual C++ 2005 SP1 Redistributable 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, the Microsoft Visual C++ 2005 SP1 library runtime component is required.
Windows Server 2008 R2 includes the Microsoft Visual C++ 2005 SP1 library.
Therefore, the 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

Tips

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 the operating environment 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 for 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 can remotely control and monitor the hardware and RAID System of the server. To use these features, install the designated bundle software such as NEC ESMPRO Agent on the server.

For the operating environment, precautions for use, and detailed settings for NEC ESMPRO Manager, refer to "NEC ESMPRO Manager Installation Guide" or online help.