

Installation Guide (Windows)

NEC Express Server Express5800 Series

Express5800/R120f-2E, T120f EXP330A, EXP331A, EXP332A

Chapter 1 Installing Windows

Chapter 2 Installing Bundled Software

10.110.01-102.01 December 2014 © NEC Corporation 2014

Documents for This Product

Documents for this product are provided as booklets (CC) and electronic manuals (E) in the EXPRESSBUILDER DVD (②).

Safety Precautions and Regulatory Notices	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. See this guide first and read the outline of this product.

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 suitable location for this server
	Chapter 3: Setup	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 precautions for installation
	Chapter 2: Installing Bundled Software	Installation of NEC ESMPRO, Universal RAID Utility, and other bundled software
PDF	Maintenance Guide	
	Chapter 1: Maintenance	Server maintenance and troubleshooting
	Chapter 2: Useful Features	Useful features and the detail of system BIOS settings, RAID Configuration Utility, and EXPRESSBUILDER
	Chapter 3: Appendix	Error messages and Windows Event Logs
<u>۴</u>	Other documents The detail of NEC ESMPRO, Uni	versal RAID Utility, and other features.

Contents

Doc	uments	for This Product	2
Con	tents		3
Nota	Notati Optica Hard o Remo	Jsed in This Document ons used in the text al disk drive disk drive vable media viations of Operating Systems (Windows)	6 6 6
Trad	lemark	S	8
Lice	nse No	tification	9
	Latest	nd Additions to This Document	2
Gna	pter 1		3
1.	1.1 1.2 1.3 1.4 1.5	Starting Setup	4 5 6 7
	1.6 1.7	InfiniBand Adapters Supported by EXPRESSBUILDER	
2.	Settin	g Up the Operating System1	9
3.		g Up Windows Server 2012 R22	
	3.1	Precautions for Setting Up	
	3.2	Setup with EXPRESSBUILDER 2 3.2.1 Setup flow 2 3.2.2 Requirements for Setup 2 3.2.3 Setup procedure 2	27 28
	3.3	Setup with Windows Standard Installer	3 4 5
	3.4	Installing Starter Pack	53 56
	3.5	Installing and Setting Up Device Drivers73.5.1Installing the LAN drivers73.5.2Setting up LAN drivers73.5.3Using InfiniBand board (N8104-146/147)73.5.4Graphics accelerator driver73.5.5Using a SAS controller (N8103-142/184)73.5.6Using a RAID Controller (N8103-179)73.5.7Using a Fibre Channel controller (N8190-157A/158A/159/160)7	70 70 71 72 73 73 73 73 73
	3.6 3.7 3.8 3.9	License Authentication	74 79 81

4.	Settin	ng Up Windows Server 2012	
	4.1	Precautions for Setting Up	
	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 Windows 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 Using EXPRESSBUILDER DVD	
		4.4.2 Using Internal Flash Memory	
		4.4.3 Using EXPRESSBUILDER installed in Windows	
	4.5	Installing and Setting Up Device Drivers	
		4.5.1 Installing the LAN drivers	
		4.5.2 Setting up LAN divers	133
		4.5.4 Graphics accelerator driver	
		4.5.5 Using a SAS controller (N8103-142/184)	
		4.5.6 Using a RAID Controller (N8103-179)	
		4.5.7 Using a Fibre Channel controller (N8190-157A/158A/159/160)	
	4.6	License Authentication	
	4.7	Setup of Windows Server 2012 NIC Teaming (LBFO)	
	4.8	Installing the Applications.	
	4.9	Installation When Multiple Logical Drives Exist	
	1.0		
5.	Settin	ng Up Windows Server 2008 R2	144
9.	5.1	Before Starting Setup	
	5.2	Setup with EXPRESSBUILDER	
		5.2.1 Setup flow	
		5.2.2 Requirements for Setup	
		5.2.3 Setup procedure	
	5.3	Setup with Windows Standard Installer	
		5.3.1 Setup flow	
		5.3.2 Requirements for Setup	170
		5.3.3 Setup procedure	171
	5.4	Installing Starter Pack	
		5.4.1 When using EXPRESSBUILDER DVD	
		5.4.2 When using Internal Flash Memory	
		5.4.3 Using EXPRESSBUILDER installed in Windows	
	5.5	Setting Up Device Drivers	
		5.5.1 Installing the LAN drivers and BACS (teaming utility)	
		5.5.2 Setting up LAN drivers	
		5.5.3 Setting up team/LiveLink (BACS)	
		5.5.4 Setting up team (PROSet)	
		5.5.5 Graphics accelerator driver	
		5.5.6 When using a SAS controller (N8103-142)	
		5.5.7 When using a RAID Controller (N8103-179)	
	- 0	5.5.8 When using a Fibre Channel controller (N8190-57A/158A/159/160)	
	5.6	License Authentication	
	5.7 5 0	Applying Service Pack	
	5.8 2 0	Installing the Applications	
	5.9	Installation When Multiple Logical Drives Exist	214
e	C ~***:	ag Lip Windows Sonver 2009	040
6.		ng Up Windows Server 2008	
	6.1 c	Before Starting Setup	
	6.2	Setup with EXPRESSBUILDER	
		6.2.1 Setup flow 6.2.2 Requirements for Setup	
		6.2.2 Requirements for Setup 6.2.3 Setup procedure	
	6.3	Setup with Windows Standard Installer	
	U. J	6.3.1 Setup flow	
		6.3.2 Requirements for Setup	
		6.3.3 Setup procedure	

	6.4	Installing Starter Pack	258
		6.4.1 When using EXPRESSBUILDER DVD	
		6.4.2 When using Internal Flash Memory	
		6.4.3 Using EXPRESSBUILDER installed in Windows	
	6.5	Setting Up Device Drivers	
		6.5.1 Installing the LAN drivers and BACS (teaming utility)	
		6.5.2 Setting up LAN drivers.	266
		6.5.3 Setting up team/LiveLink (BACS)	
		6.5.4 Graphics accelerator driver	
		6.5.5 When using a SAS controller (N8103-142)	
		6.5.6 When using a RAID Controller (N8103-179)	
		6.5.7 When using a Fibre Channel controller (N8190-159/160)	
	6.6	Specifying PAE Option	
	6.7	License Authentication	
	6.8	Applying Service Pack	
	6.9	Installing the Applications	
	6.10	Installation When Multiple Logical Drives Exist	286
7.	Setup	for Solving Problems	288
	7.1	Specifying Memory Dump Settings (Debug Information)	
		7.1.1 For Windows Server 2012 R2 / Windows Server 2012	
		7.1.2 For Windows Server 2008 R2	293
		7.1.3 For Windows Server 2008	294
	7.2	How to Create a User-mode Process Dump File	295
		7.2.1 For Windows Server 2012 R2 / Windows Server 2012	295
		7.2.2 For Windows Server 2008 R2 and Windows Server 2008	
	7.3	Installing Network Monitor	297
8.	Windo	ws OS Parameter File	298
	8.1	Creating Windows OS Parameter File	
		g	
Char	oter 2	Installing Bundled Software	309
Char			
1.	Bundle	ed Software for the Server	310
1.	<i>I.I</i>	NEC ESMPRO ServerAgentService (for Windows)	
	1.1 1.2	NEC ESMPRO Agent Extension.	
	1.z 1.3	Server Configuration Utility	
	1.9 1.4	NEC ExpressUpdate Agent	
	1.4 1.5	Universal RAID Utility	
	1.9	1.5.1 Setup of Universal RAID Utility	
		1.5.2 Management by NEC ESMPRO Manager	
	16	Express Report Service / Express Report Service (HTTPS)	
	1.6		
	1.7 N	EC Product Info Collection Utility	
~	D		a · -
2.		ed Software for "PC for Management"	
	2.1	NEC ESMPRO Manager	
	2.2	Express Report Service (MG)	316
-			
Glos	sary		317

Notations Used in This Document

Notations used in the text

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

Important	Indicates critical items that must be followed when handling 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 hardware or operating software.
Tips	Indicates information that is helpful to keep in mind when using this server.

Optical disk drive

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 drive* in this document.

- DVD-ROM drive
- DVD Super MULTI drive

Hard disk drive

Unless otherwise stated, hard disk drive described in this document refer to the following.

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

Removable media

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

- USB flash drive
- Flash FDD

Abbreviations of Operating Systems (Windows)

Windows Operating Systems are referred to as follows.

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

Notations in this document	Official names of Windows
Windows Comer 2012 D2	Windows Server 2012 R2 Standard
Windows Server 2012 R2	Windows Server 2012 R2 Datacenter
Windows Comer 2012	Windows Server 2012 Standard
Windows Server 2012	Windows Server 2012 Datacenter
Windows Server 2008 R2	Windows Server 2008 R2 Standard
Windows Server 2006 K2	Windows Server 2008 R2 Enterprise
Windows Server 2008 *	Windows Server 2008 Standard
	Windows Server 2008 Enterprise

* Includes 32-bit Edition unless otherwise stated.

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NEC Express5800 Series Express5800/R120f-2E, T120f



Installing Windows

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

- 1. Before Starting Setup Describes Service Packs and mass storage controllers which is supported with EXPRESSBUILDER.
- 2. Setting Up the Operating System Describes the flow chart of setting up the operating system.
- Setting Up Windows Server 2012 R2
 Describes how to set up Windows Server 2012 R2.
- 4. Setting Up Windows Server 2012 Describes how to set up Windows Server 2012.
- Setting Up Windows Server 2008 R2 Describes how to set up Windows Server 2008 R2.
- Setting Up Windows Server 2008
 Describes how to set up Windows Server 2008.
- 7. Setting Up for Solving Problems Describes how to set up the maintenance tools and the memory dump feature for Windows.
- 8. Windows OS Parameter File Describes how to create the parameter file for the Windows installation.

1. Before Starting Setup

This section describes the points of using EXPRESSBUILDER to set up Windows operating systems.

1.1 Starting EXPRESSBUILDER

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

See Chapter 2 (6. Details of EXPRESSBUILDER) in Maintenance Guide for more information.

EXPRESSBUILDER DVD

Insert the DVD to the optical disk drive of the server, and then restart the server by pressing <Ctrl> + <Alt> + <Delete> keys.

Internal Flash Memory

Remove any removable media and CD/DVD from the server, restart the server and press <F3> key while POST is running.

1.2 Supported Windows OS

EXPRESSBUILDER supports the following editions of Windows operating systems:

- EB : Se
- : Setup with EXPRESSBUILDER
- OS
- : Setup with Windows Standard Installer

Windows		Boot	mode	Setup	
		UEFI	Legacy	EB	OS
Windows Conver 2040 DO	Standard	~	-	√	~
Windows Server 2012 R2	Datacenter	~	-	√	~
Windows Server 2012	Standard	~	-	√	~
windows Server 2012	Datacenter	~	-	√	~
Windows Server 2008 R2	Standard	_	~	✓	~
Windows Server 2008 R2	Enterprise	_	~	✓	~
	Standard	-	√	✓	\checkmark
Windows Server 2008 *	Enterprise	_	\checkmark	\checkmark	~

✓ : Supported by EXPRESSBUILDER -: Not Supported

* : For Windows Server 2008, only the 32-bit Edition is supported.

1.3 Supported Service Pack

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

OS installation media	Service Pack	Combination		
Windows Server 2012 R2	No Service Pack	~		
Windows Server 2012	No Service Pack	✓		
	Service Pack 1 included	Combination		
Windows Server 2008 R2	No Service Pack + Service Pack 1			
	No Service Pack	✓		
	Service Pack 2 included	✓		
Windows Server 2008	No Service Pack + Service Pack 2	✓		
	No Service Pack	✓		

✓ : Supported by EXPRESSBUILDER

1.4 Mass Storage Controllers Supported by EXPRESSBUILDER

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

If an optional board not written below is connected, set it up while reading the instructions that come with the board and *Chapter 1 (1.7 Using a Mass Storage Controller Not Supported by EXPRESSBUILDER*).

	Windows Server 2012 R2	Windows Server 2012	Windows Server 2008 R2	Windows Server 2008
RAID controllers				
Onboard RAID Controller (LSI Embedded MegaRAID)	~	~	~	✓
N8103-176 RAID Controller (1GB, RAID 0/1)	~	~	√	~
N8103-177 RAID Controller (1GB, RAID 0/1/5/6)	~	~	√	√
N8103-178 RAID Controller (2GB, RAID 0/1/5/6)	~	~	✓	~
Other options				
N8103-179 RAID Controller (2GB, RAID 0/1/5/6)	~	~	~	~
N8103-142 SAS Controller	~	\checkmark	\checkmark	\checkmark
N8103-184 SAS Controller	~	\checkmark	_	_
N8190-157A Fibre Channel Controller (1ch)	~	~	~	_
N8190-158A Fibre Channel Controller (2ch)	~	~	✓	_
N8190-159 Fibre Channel Controller (1ch)	~	~	√	√
N8190-160 Fibre Channel Controller (2ch)	~	\checkmark	\checkmark	~

✓: Supported by EXPRESSBUILDER -: Not supported

1.5 Supported Optional LAN board

The table below lists the optional LAN boards for this server, supported by the attached EXPRESSBUILDER.

	Windows Server 2012 R2	Windows Server 2012	Windows Server 2008 R2	Windows Server 2008
LAN board				
None	_	_	_	_
Other options	•			
N8104-150 1000BASE-T Adapter (1ch)	~	~	~	✓
N8104-151 1000BASE-T Adapter (2ch)	~	~	~	\checkmark
N8104-152 1000BASE-T Adapter (4ch)	~	~	~	\checkmark
N8104-153 10GBASE-T Adapter (2ch)	~	~	_	-
N8104-145 1000BASE-T Adapter (2ch)	_	_	~	_
N8104-149 10GBASE Adapter (SFP+/2ch)	~	~	~	✓

✓: Supported by EXPRESSBUILDER

-: Not supported

1.6 InfiniBand Adapters Supported by EXPRESSBUILDER

EXPRESSBUILDER supports the following InfiniBand adapters.

<R120f-2E>

	Windows Server 2012 R2	Windows Server 2012	Windows Server 2008 R2	Windows Server 2008
N8104-146 InfiniBand Adapter, 1ch	~	~	-	-
N8104-147 InfiniBand Adapter, 2ch	1	4	-	-

✓: Supported by EXPRESSBUILDER -: Not supported

1.7 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 a RAID system.
- 3. See Setup with Windows Standard Installer of each Windows family in this guide.

2. Setting Up the Operating System

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



3. Setting Up Windows Server 2012 R2

Set up Windows Server 2012 R2.

3.1 Precautions for Setting Up

Read through the following precautions before starting setup.

- EB
- : Precautions for setting up with EXPRESSBUILDER
- **OS** : Precautions for setting up with Windows standard installer

BIOS	6 settir	ngs		
EB	OS	Change I details.	Boot Mode to UEFI Mode. See Chapter 2 (1. System BIOS) in Maintenar	ace Guide for
		Boot \rightarrow E	Boot Mode $ ightarrow$ UEFI	
EB	08	Select En <i>Guide</i> for	habled for X2APIC feature of processor. See <i>Chapter 2 (1. System BIOS)</i> in details.	Maintenance
		Advance	d \rightarrow Processor Configuration \rightarrow X2APIC \rightarrow Enabled	
			allation, open Boot Priorities in BIOS Setup Utility to make sure that the han Windows Boot Manager is specified for optical disk drive.	igher boot
		E	Example of correct setting	
			[Boot]–[Boot Priorities]	
			– Boot Option #1 [UEFI: Optical Disk Drive]	
			 – Boot Option #2 [Windows Boot Manager] → The OS installation disc can be booted. 	
		E	Example of incorrect setting	
EB	OS		[Boot]–[Boot Priorities]	
			 Boot Option #1 [Windows Boot Manager] 	
			– Boot Option #2 [UEFI: Optical Disk Drive]	
			\rightarrow The OS installation disc cannot be booted.	
		Note	 Be sure to insert OS installation disc into optical disk drive before runni Utility. If Windows Boot Manager is not displayed in Boot Priorities, you ne confirm the boot priority. 	

Hard	ware o	configuration
The	followi	ng hardware configurations require special procedures.
EB	OS	Reinstalling to a mirrored volume When you install Windows Server 2012 R2 in an environment with a mirrored volume created using Windows, disable mirroring before installing the operating system and enable it again after the installation. Use [Computer Management] – [Disk Management] to create, disable, or remove the mirrored volume.
EB	OS	RDX and Magneto Optical (MO) disc, and other peripheral devices 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 other tape media Do not set media that is unnecessary to installation during setup.
EB	OS	Installing in internal or external multiple hard disk drives (logical drives) For details on installing operating systems to a system in which two or more RAID controller exist, or to an external disk drive* that is not subject to setup, see <i>Chapter 1</i> (3.9 Installation When Multiple Logical Drives Exist). * Disk array unit (such as NEC Storage) or hard disk drive in Disk Expansion Unit.
EB	OS	Reinstalling to hard disk drives that have been upgraded to dynamic disks If the hard disk drive has been upgraded to a dynamic disk, the operating system cannot be reinstalled to it with the existing partitions. Set up the operating system with the Windows standard installer.

EB 08 Setup when mass memory is installed If large capacity memory modules are installed in your system, the large size of paging file and dump file are required at installation. If you fail to allocate the dump file, use Windows 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 the destination to save the dump file by reading Chapter 1 (7. Setup for Solving Problems). If the hard disk drive does not have enough space to write the dump file, 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. If sufficient space cannot be allocated for the paging file, perform either of the following after setting up using Windows Standard Installer is complete. Specify a hard disk drive other than the system drive as the location to save the paging file for collecting memory dump Create a paging file of the installed memory size + 400 MB or more in a drive other than the system drive. The paging file that exists in the first drive (in the order of drive letter C, D, E, ...) is used as the temporary memory dump location. The size of the paging file must be "installed memory size + 400 MB" or more. Paging files in dynamic volumes are not used for dumping memory. The setting is applied after restarting the system. Example of correct setting C: No paging file exists D: Paging file size is "installed memory size + 400 MB" or more \rightarrow The paging file in drive D can be used for collecting memory dump because its size satisfies the requirement.

	of incorrect setting 1
	ying file size is smaller than the installed memory size ying file size is "installed memory size + 400 MB" or more
colle	paging file in drive C is used for collecting memory dump, but ction will fail because the size of the paging file is smaller than the Illed memory size.
Example	of incorrect setting 2
D: Pag	ging file size is "installed memory size × 0.5" ging file size is "installed memory size × 0.5" ging file size is 400 MB
but (otal paging file size in all drives is "installed memory size + 400 MB", collection will fail because only the paging file in drive C is used for cting memory dump.
Example	of incorrect setting 3
D: Pag	paging file exists jing file size is "installed memory size + 400 MB" or more lynamic volume)
dum	ng files in a dynamic volume cannot be used for collecting memory p. Thus, collecting memory dump will fail. The other than the system drive for "Dedicated Dump File".
dum ecify a driv eate the reg mp File.	p. Thus, collecting memory dump will fail.
dum cify a driv te the reg p File.	p. Thus, collecting memory dump will fail. The other than the system drive for "Dedicated Dump File". The other the other th
ecify a driv eate the reg mp File.	p. Thus, collecting memory dump will fail. The other than the system drive for "Dedicated Dump File".
ecify a drivent ate the reg np File. Example of Key: Name: Type: Data:	p. Thus, collecting memory dump will fail. The other than the system drive for "Dedicated Dump File". The other the system d
dum ecify a driv eate the reg mp File. Example of Key: Name: Type: Data: lote the foll • Pay st	p. Thus, collecting memory dump will fail. The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other the registry.
dum ecify a driv eate the reg mp File. Example of Key: Name: Type: Data: lote the foll • Pay st • The se	p. Thus, collecting memory dump will fail. The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system. The other than the system. The other than the system. The other than the system.
ecify a driv eate the reg mp File. Example of Key: Name: Type: Data: Note the foll Pay st The se Specif	p. Thus, collecting memory dump will fail. The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other the registry.
dum ecify a driv ate the reg np File. Example of Key: Name: Type: Data: Data: ote the foll • Pay st • The so • Specif • Dedica	p. Thus, collecting memory dump will fail. The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File". The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other than the system drive for "Dedicated Dump File. The other that has free space of "installed memory size + 400 MB" or the other than the system. The other than the system drive for "Dedicated Dump File. The other that has free space of "installed memory size + 400 MB" or the other than the system.

System pa	tition size
EBOS	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
	Server with a GUI Size required to install the OS = 9,200 MB Paging file size (recommended) = installed memory size × 1.5 Dump file size = installed memory size + 400 MB Application size = as required by the application Server Core installation = 6,400 MB Paging file size (recommended) = installed memory size × 1.5 Dump file size = installed memory size × 1.5 Dump file size = installed memory size + 400 MB Paging file size (recommended) = installed memory size × 1.5 Dump file size = installed memory size + 400 MB Application size = as required by the application
	For example, if the installed memory size is 1 GB (1,024 MB), application size is 100 MB, and Server with a GUI is selected, the partition size is calculated as follows: 9,200 MB + (1,024 MB × 1.5) + 1,024 MB + 400 MB + 100 MB = 12,260 MB The above mentioned partition size is the minimum partition size required for system installation. Ensure that the partition size is sufficient for system operations. The following partition sizes are recommended. Server with a GUI : 32,768 MB (32 GB) or more Server Core installation : 32,768 MB (32 GB) or more
	 *1 GB = 1,024 MB Note The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the Windows partition paging file must be large enough to save dump files. Make sure you set a sufficient paging file size. If the paging file is insufficient, there will be a virtual memory shortage that may result in an inability to collect correct debug information. Regardless of the sizes of internal memory and write debug information, the maximum size of the dump file is "size of internal memory + 400 MB". When installing other applications or other items, add the amount of space needed by the application to the partition.



3.2 Setup with EXPRESSBUILDER

This section describes how to install Windows with EXPRESSBUILDER.

This feature automatically finds RAID controllers connected to the server and configures RAID arrays. Therefore the hardware installation of the server needs to be finished by following *User's Guide*.

Important	 Setup with EXPRESSBUILDER deletes all data of the hard disk drive depending on the settings. Pay attention to specify the following parameters: RAID settings Partition Settings Backing up user data is recommended. 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.
Note	 The Scalable Networking Pack (SNP) feature is disabled on systems that have been installed by using EXPRESSBUILDER. The setting of SNP feature may affect the system performance. Contact your sales representative for details. The creation of RAID10 by using the onboard RAID controller (LSI Embedded MegaRAID) is not supported. See <i>Chapter 2 (5. RAID System Configuration)</i> in <i>Maintenance Guide</i> when creating RAID10.
Tips	 Setup with EXPRESSBUILDER allows you to use a pre-specified parameter file or save the parameters specified in setup as a parameter file on removable media or Internal Flash Memory. For details on creating a parameter file, see <i>Chapter 1 (8. Windows OS Parameter File)</i>.

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 disc
 - NEC operating system installation disc (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation disc (hereafter referred to as Windows Server 2012 R2 DVD-ROM)
- > Prepare if needed:
 - Removable media for Windows OS parameter file

3.2.3 Setup procedure

- Turn on a display, and then turn on the server. Confirm BIOS settings are correct by using BIOS Setup Utility. For more precautions, see *Chapter 1* (3.1 Precautions for Setting Up).
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. Choose OS installation *** default ***.

OS Installation *** default *** Teol menu	
Use the + and + keys to select which entry is highlighted. Press enter to boot the selected OS, `e' to edit the commands before booting or `c'	
for a command-line. The highlighted entry will be executed automatically in 9s	

The following screen appears.

Starting EXPRESSBUILDER	

The server starts from EXPRESSBUILDER.



4. Choose English on the language selection window, and then click OK.

-		SBUILDER
C	selection 表示する言語を遅んでください。 Select the language for displaying.	
	日本語 ● English ○ Français ○ Italiano ○ Deutsch ○ Español	
	ок	

5. Click Setup.

Set up	Setup	
Ò	Versions	
٢	Exit	

6. On the **OS selection** menu, select an OS to install or specify a parameter file.
□ When not using parameter file : Go to step 7.
□ When using a parameter file : Go to step 8.

7. Select an OS by either of the following two ways:

1		lect an operating system to install.
ċ		ck Manual Selection to configure a RAID array only)
	e	Automatic Detection
		Manual Selection
C	B	Load Settings

Automatic Detection:

(1) Click Automatic Detection.

1 s	elect an operatii	ng system to insl	all.
	lick Manual Selection t		
FO	Automatic D	otaction	
		election	
Selec auton disc.	t an operating system natically with an installation	ction	
	Load Setting	s	

Insert the OS installation disc, and then click OK.

Insert the OS Insta EXPRESSBUILDER	llation disc. will detect the OS you	want to install.
		[Message ID : B2014]
0		

 Select an operating system to install. (Click Manual Selection to configure a RAID array only) Automatic Detection Manual Selection Load Settings 		OS select	ion Settings	3 Confirmation	4 Installation	
Automatic Detection	-					
Manual Selection					oniy)	C
		e	Automatic [Detection		(
Load Settings			Manual Sel	ection		
u v		₿	Load Settin	gs		

Manual Selection:

(1) Click Manual Selection.

1 s	elect an operating syst	em to instal	L.
(C	ick Manual Selection to configu	re a RAID array only	9
6	Automatic Detect	ion	
	Manual Selection		ø
You on the inst	an select the larget OS of tallation from the menu		

(2) From the Windows list, select Windows Server 2012 R2, and then click OK.

	Select an operating system to install.	
	Windows Server 2012 R2	
0	RAID Configuration Only	

(3) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.

	1 OS select	on Settings	3 Confirmation	4 Installation	
1		lect an operating			
	e	Automatic Det	ection		C
~		Manual Select	ion		
	₿	Load Settings			
				S	etup

8. Click Load Settings.

	ect an operating system to install. k Manual Selection to configure a RAID array only)
e	Automatic Detection
	Manual Selection
	Load Settings

Follow the on-screen instruction to load the parameter file (*.tre).

	Choosing	ja ruo x
	t usr_connect	
Places	Name	V Size Modified
Search Recently Use	edrom t	05 09/2014
🛅 root 🔝 Desktop 🔄 File System		
Documents Music Pictures		
Downloads		
Add	ove)	
		Cancel Open

Tips

For the removable media in which the parameter file is saved, see "/mnt/usr_connect/usb*" (* indicates a number).

Click \bigcirc on the right side of the screen.

OS select	tion 2 Settings Confirmation 4 Installation	
	elect an operating system to install. Ick Manual Selection to configure a RAID array only)	
e	Automatic Detection	
	Manual Selection	
	Load Settings	

When the parameter file is correctly loaded, the settings are determined. Click **Custom** to check and modify the settings in the wizard. Click \bigcirc on the right side of the screen.

	1 OS selec	ion 2 Settings	3 Confirmation	4 Installation	
	2 "	nter installation	settings.		
C	Ø	Default			\bigcirc
	~ 61	Custom			
				Set	tup

 \rightarrow Go to step 10.

9. Specify the setup parameters by using either of the following ways:

2 -	nter installation settings.	
Ø	Default	
Ø	Custom	



(2) Select the edition of the OS to install from the **Edition** list. Type a password, and then click **Finish**.

	lick Custom if you want to use t	ne windows sta	idard installer.		
	Basic Settings				
	Operating system	: Windows Serv	er 2012 R2		
	Edition	: Standard(Ser	ver with a GUI)	0	
	Language	: English	0		
	Password Settings				
	Administrator Password		:		(Required)
	Reenter Administrator Pa	issword	:		(Required)
_					
		nish			Cancel

Note

- Administrator Password needs to meet the following conditions:
 Contains six or more characters
 Contains characters from at least three of the following categories: numbers, uppercase letters (A Z), lowercase letters (a z), and symbols.
- (3) Click \bigcirc on the right side of the screen.

/	ettings.	
Default		٢
Custom		L

 \rightarrow Go to step 10.



2	Enter installation settings	
	Default	
0	Custom	<i>v</i>
Si	pecify all settings for the stallation.	

- (2) Use this menu to configure RAID arrays with a RAID controller found automatically.
 - Wizard An operating system will be in Uninstall all RAID controllers r selected. d to the logical drive on the following RAID controller: be used for the OS installation if the incorrect RAID controller is Device Informat RAID Controller Detail Number of Physical Drives 2 ummary of RAID Array Array #1 RAIDO (1disk) Logical Drive1 (1117GB) RAID Configuratio Skip Configuring RAID Array 1 / 11 Page Next Cancel

Creating new logical drives

Note

Clear the **Skip Configuring RAID Array** check box, and then click **Next**. Specify the parameters for logical drives following the wizard.

Important The existing RAID array are destructed and the contents of hard disk drive will be erased if you proceed with wizard.

This wizard does not support the creation of RAID10 by using the onboard RAID controller (LSI Embedded MegaRAID). See *Chapter 2 (5. RAID System*

Configuration) in Maintenance Guide when creating RAID10.

Skipping the creation of new logical drives

Select the Skip Configuring RAID Array check box, and then click Next.

(3) Check the settings specified for Basic Settings.
 Choose Install Windows using EXPRESSBUILDER, and then click Next.

Choo	ows installation disc. se Install Windows cations at one time.	using EXPRESSBUI	LDER to install both	the operating system ar	nd
ГВ	asic Settings Operating system	: W	ndows Server 2012 F	12	
	O Use Windows s	tandard installer drivers to removable	media		
1	 Install Windows 	using EXPRESSBUILD	ER		
	Edition	: Standard(Server with a GUI)	0	
	Language	: English	0		
	Time Zone	: (UTC-08:0	0) Pacific Time (US 8	Canada) 🗘	
				4 / 11	Page
					0-
		Next		Cancel	

(4) Check the settings specified for Partition Settings.

Modify the settings as needed, and then click Next.

Win	dows will be installed	e system partition for V into the first hard disl disting partition, show	drive or logical dri	
Cu	ment Partitions (the area s	hown with a red frame will	be deleted) :	
1			0	
		NTFS) Data Partition 40.3GB) (0.1GB)	(1076GB)	
Ē	Partition Settings			
	0			
	Create a new parti			
	O Use all space	r	40 (GB)	*1TB=1024GB
	Type a partit			d: 40GB / Maximum: 1116GB)
				5 / 11 Page
	Back	Next		Cancel

 Important
 • Partition size

 Specify a partition size larger than the minimum required for installing the operating system. See Chapter 1 (3.1 Precautions for Setting Up).

 • The entire contents of the destination will be deleted.

(5) Enter the user information, and then click Next.

Personalize the computer. Type Computer Name within 15 charact AdmInistrator Password must be at least three of the four categories (numbers/upp	st six	characters in length and mu: e/lowercase/symbols).	st contain characters fro
User Information			
Computer Name		Automatic Numbering	
		BD4394570815	(Required)
User Name		Administrator	
Administrator Password	:		(Required)
Reenter Administrator Password	:		(Required)
			6 / 11 Page
Back Next)		Cancel

Note

- Administrator Password needs to meet the following conditions:
- Contains six or more characters
- Contains characters from at least three of the following categories: numbers, uppercase letters (A Z), lowercase letters (a z), and symbols.
Tips

If you want to type your computer name, clear the **Automatic Numbering** check box and type the name in text box.

(6) Check the settings specified for **Network Protocols**. Modify the settings as needed, and then click **Next**.

Choose a network protoc Choose Custom Setting	col. gs, click Advanced, if	f you want to type ar	n IP address.
-Network Protocols-			
Standard Se	ttings		
Custom Sett			
Standard Ad	apter - Internet Protoco	ol (IPv4)	Advanced
			7 / 11 Deer
			7 / 11 Page
	Next		Cancel
Back			

- Tips The order of entry in Custom settings does not always match the numbering of LAN ports.
- Note Even when an optional network board is connected, **Custom settings** only shows standard network boards. After finishing installation, specify the optional network settings again.
- (7) Specify the domain or workgroup.
 - Check the settings, modify them as needed, and then click Next.

loin this computer to a domain or a Choose Join a workgroup or Join	a workgroup. a domain , and then enter parameters.
Ioin a workgroup	
Workgroup Name	: WORKGROUP
○ Join a domain	
Domain Name	:
Account Name	÷
Password	:
Reenter Password	:
	8 / 11 Page
Back	Cancel

(8) Check the settings of Windows components. Modify the settings as needed, and then click Next.

Server Roles		
Web Server (IIS)	Print and Document Service	5
DHCP Server	File Services	
DNS Server	Hyper-V	
Windows Features		
SNMP Service		Advanced
Simple TCP/IP Services		Haranced
WINS Server		
		9 / 11 Page
Back	ext	Cancel

nt to install.
Print and Document Services File Services
Hyper-V
Advanced
9 / 11 Page

Server Core Installation

Server with a GUI

(9) Check the settings of applications. Modify the settings as needed, and then click Next

Choose applications you want to install. See Description about each application	
Available Applications	Selected Applications NEC ESMPRO ServerAgentService Express Report Service Express Report Service(HTTPS) Add >> << Delete ExpressUpdate Agent
Back Next	10 / 11 Page Cancel

On the	following	screen,	click	Finish.

The settings are now con Click Finish to close this	plete.	
Click Finish to close this	window.	
		11 / 11 Page
Back	Finish	Cancel

On the following screen, click \bigcirc on the right side of the screen.

2	
Default	
✓ 🕅 Custom)

10. Check the parameter settings.

If you want to save the settings, connect removable media as needed and click Save.

-	Confirm installa	tion cottings	
		uon setungs.	
· ·	(Check if valid installation	on settings are specified)	
	Skip configuring RAID array.		1
10	and a surface of a surface of the		
	C.		
	Operating system	: Windows Server 2012 R2	
	(Install Windows using EXPRESSBU	HLDER)	
	Edition	: Standard(Server with a GUI)	
	Language	: English	



11. Click Start to start the setup.

Ready to set up the computer. A Ready to set up the computer. A partition has already been created (ryou proceed, any data stored on the partition will be lost. • Configuring RAID system • Copying files • Changing media Start						
Vou proceed, any data stored on the partition will be lost. Configuing RAID system Copying files Changing media		Ready	to set up t	he computer	2	
Copying files Changing media		A partition If you proc	has already beer eed, any data st	i created. ored on the partition	n will be lost	
Changing media		* Config	uring RAID syst	em		
)	 Copyin 	ng files			
Start	2	 Chang 	ing media			
Start						
Start						
				Start		
						Setu

12. If the following message appears, insert the EXPRESSBUILDER DVD into the server, and then click **OK**.

Selection			
Inser	t the EXPRESSBUILDE		age ID : J2002]
0			
	ОК	Cancel	

13. Insert the OS installation disc into the server, and then click OK.

ntil completion) puse and keyboard during the setup until the pears.
[Message ID : J2004]

Windows Server 2012 R2 is installed automatically. Wait for completion (about 40 minutes) without performing any operation.

14. Starter Pack and the selected applications are automatically installed. Wait for completion without performing any operation.



15. Read the terms of License Agreement. If you agree, click I Accept (only in the server with a GUI).



16. Press <Ctrl> + <Alt> + <Delete> keys to sign in.



On the following screen, type the password you have set in step 9-(2) or 9-(5).



17. Click OK.

The setup is completed	
The Setup with EXPRESSBUILDER has been successfully completed.	
	ОК

- 18. Follow the instructions described in *Chapter 1 (3.5 Installing and Setting Up Device Drivers)* to install the device drivers.
- 19. Confirm if Windows is activated according to Chapter 1 (3.6 License Authentication).
- 20. See Chapter 1 (3.7 Setup of Windows Server 2012 R2 NIC Teaming (LBFO)) to set up a team as needed.
- 21. Specify the dump file settings by following the instructions described in *Chapter 1 (7. Setup for Solving Problems)*.
- 22. See *Chapter 2 Installing Bundled Software* to install the bundled software or confirm that the software is appropriate to your operating environment.

Windows installation is now complete.

3.3 Setup with Windows Standard Installer

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

This feature automatically finds RAID controllers connected to the server and configures RAID arrays. Therefore the hardware installation of the server needs to be finished by following *User's Guide*.

Important	Setup with Windows standard Installer deletes all data of the hard disk drive depending on the settings. Pay attention to specify the following parameters: –RAID settings Backing up user data is recommended.
Note	The creation of RAID10 by using the onboard RAID controller (LSI Embedded MegaRAID) is not supported. See <i>Chapter 2</i> (<i>5. RAID System Configuration</i>) in <i>Maintenance Guide</i> when creating RAID10.
Tips	 Setup with Windows 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. For details on creating a parameter file, see <i>Chapter 1 (8. Windows OS Parameter File)</i>.

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 disc
 - NEC operating system installation disc (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation disc (hereafter referred to as Windows Server 2012 R2 DVD-ROM)
- > Prepare if needed:
 - Removable media for Windows OS parameter file
 - Removable media for OEM drivers (Windows Server 2012 R2)



3.3.3 Setup procedure

- Turn on a display, and then turn on the server. Confirm BIOS settings are correct by using BIOS Setup Utility. For more precautions, see *Chapter 1* (3.1 Precautions for Setting Up).
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. Choose OS installation *** default ***.



The following screen appears.







4. Choose English on the language selection window, and then click OK.



5. Click Setup.

Setup	Setup	
	Versions	
Ċ	Exit	

6. On the **OS selection** menu, select an OS to install or specify a parameter file.

□ When not using parameter file : Go □ When using a parameter file : Go

: Go to step 7. : Go to step 8.

7. Select an OS by either of the following two ways:

-		elect an operating system to install.
ſ	[2]	Automatic Detection
		Manual Selection
	B	Load Settings

Automatic	Detection:
Hatomatio	Bottootion.

(1) Click Automatic Detection.

Select an operating system to install. (Elick Manual Selection to configure a RAID array only) Image: Automatic Detection Image: Select an operating system to configure a real part of the select an operating system to configure a real part of the select an operating system to configure a real part of the select an operating system to configure a real part of the select an operating system to configure a real part of the select an operating system to configure a real part of the select an operating system to configure a real part of the select and the select	1 OS selection 2 Settings	3 Confirmation	Installation
Automatic Detection			
Select an operating system automatically with an installation ction			oniy)
disc.		ection	v
Load Settings		o n	
	automatically with an installation	511	

Insert the OS installation disc, and then click OK.

	OS installation disc. UILDER will detect t	he OS you want to	install.
		[Mess	age ID : B2014]
2			

(2) Click \bigcirc on the right side of the screen.



(1) Click Manual Selection

1 Selection Settings Sconfirmation	4 Installation
Select an operating system to install. (Click Manual Selection to configure a RAID array only)	
Automatic Detection	
Manual Selection	a C
You can select the larget QS of the installation from the menu.	
	Setup

(2) From the Windows list, select Windows Server 2012 R2, and then click OK.

	Select an operating	g system to Install. Windows Server	2012 B2	
	O RAID Configu			
?	o toub comigu	factori only		

(3) Click \bigcirc on the right side of the screen.



8. Click Load Settings.

1 s	elect an operating system to install.
(0	Click Manual Selection to configure a RAID array only)
e	Automatic Detection
	Manual Selection
B	Load Settings

Follow the on-screen instruction to load the parameter file (*.tre).

Places	Name	✓ Size Modifie	ed
Search Precently Used	Colrom1	05-017	2014
Desktop			
Documents Music Pictures Videos			
Downloads			
Add Bemoy			

Tips

For the removable media in which the parameter file is saved, see "/mnt/usr_connect/usb*" (* indicates a number).

Click \bigcirc on the right side of the screen.

1 s	elect an operating system to in	stall.	
(0	lick Manual Selection to configure a RAID arra	w only)	C
e	Automatic Detection		
	Manual Selection		_
× 🕞	Load Settings		

When the parameter file is correctly loaded, the settings are determined. Click **Custom** to check and modify the settings in the wizard. Click \bigcirc on the right side of the screen.

	1 OS select		4 Installation	
	2	nter installation settings.		
)	~ 01			
			Set	tup

- \rightarrow Go to step 10.
- 9. Click Custom.

	1 2 3 OS selection Settings	mation Installation
	2 Enter installation settings.	
\bigcirc	Default	
	Custom	<i>w</i>
	Specify all settings for the installation.	
		Setup

(1) Use this menu to configure RAID arrays with a RAID controller found automatically.

Note

This wizard does not support the creation of RAID10 by using the onboard RAID controller (LSI Embedded MegaRAID). See *Chapter 2 (5. RAID System Configuration)* in *Maintenance Guide* when creating RAID10.

Uninstall all RAID controll selected.		e logical drive on the follo d for the OS installation if	the incorrect RAID controller is
Device Information—			
RAID Controller Number of Physical	Drives	: 2	Detail
Summary of RAID Arra	y		
Array #1 RAID0 (1disk) Logical Drive1 (11	17GB)		-
Arrov #2			<u> </u>
RAID Configuration	g RAID Array		
			1 / 11 Page
	Next	7	Cancel

Creating new logical drives

Clear the **Skip Configuring RAID Array** check box, and then click **Next**. Specify the parameters for logical drives following the wizard.

Important The existing RAID array is destructed and the contents of hard disk drive will be erased if you proceed with wizard.

Skipping the creation of new logical drives

Select the Skip Configuring RAID Array check box, and then click Next.

(2) Check the settings specified for **Basic Settings**.

Choose Use Windows standard installer, and then click Next.

If you need to copy the OEM driver, select the **Copy OEM drivers to removable media** check box.

 lications at one time. Basic Settings				
Operating system	: W	indows Server 2012	R2	
Use Windows sta	ndard installer			
Copy OEM dri	ivers to removable m	nedia		
Install Windows us	sing EXPRESSBUILD	DER		
Edition	: Standard(Server with a GUI)	0	
Language	English			
Time Zone		0) Pacific Time (US	& Canada)	0
				4 / 11 Pag

On the following screen, click Finish.

The settings are now complete.	
Click Finish to close this window.	
	11 / 11 Page
Back Finish	Cancel

On the following screen, click \bigcirc on the right side of the screen.

2 "	nter installation settings	S.
0	Default	
~ Ø	Custom	

10. Check the parameter settings.

If you want to save the settings, connect removable media as needed and click Save.

	•		
	3 Confirm installa		
	(Check If valid installati	on settings are specified)	
	Skip configuring RAID array.		
)	sup company one anay.		
	Operating system	: Windows Server 2012 R2	
	(Use Windows standard installer)		
	Copying OEM drivers	: No	
		[Save
			Jave

Click \bigcirc on the right side of the screen.

11. Click Start to start the setup.

	1 2 3 4 OS selection Settings Gonfirmation Installation
	Ready to set up the computer.
\wedge	Fyou proceed, any data stored on the partition will be lost: Configuring RAID system Copying OEM drivers
	Changing a CD/DVD Installing an OS
	(Start
	Setup

12. Continue setup according to the on-screen messages.

If the option for copying the OEM driver was chosen at step 9, the following message appears. Connect removable media to the server, and then click **Yes** to copy the OEM driver.

	Copy OEM drivers (Windows Server 2012 R2). Set removable media, and then click Yes .
	[Message ID : G2000]
0	

Insert the OS installation disc into the server, and then click OK.

Ir	nsert an OS install	ation disc for	r installing.	[Message IC) : J2000]	
3						

13. The server restarts 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

The system will start from the OS installation disc set in step 12 because the boot priority of CD/DVD is higher than Internal Flash Memory.

14. Press <Enter> key while "Press any key to boot from CD or DVD..." appears on the top of the screen. The boot sequence proceeds and the message "Windows is loading files..." will appear.

Note

- If "Windows is loading files..." message does not appear, <Enter> key was not pressed correctly. Restart and retry.
- If the OEM driver was copied at step 12, do not disconnect the removable media.

15. Click Next.

	Wi	ndows Setup		
	, Wir	ndows Serve	er 2012 R2	
	Language to install:	English (United States)		•
<u>I</u> im	ne and currency format:			
<u>K</u> ey	board or input method:	US		•
	Enter your language a	nd other preferences an	d click "Next" to continue.	

- If the following message appears, go to step 16.
- If not, go to step 18.

A media driver your computer needs is missing. This could be a DVD, USB or Hard disk driver. If you have a CD, DVD, or USB flash drive with the driver on it, please insert it now. Note: If the installation media for Windows is in the DVD drive or on a USB drive, you can safely remove it for this step. <u>Browse</u> OK Cancel	Load driver				×
can safely remove it for this step.	driver. If yo				
Browse OK Cancel			in the DVD	drive or on a U	SB drive, you
		B	rowse	ОК	Cancel

"CD, DVD, or USB flash drive" is shown in the above message, but use Internal Flash Memory or removable media that copied the OEM drivers at step 12.

16. Select the destination, and then click OK.

Tips



- 17. Select LSI Embedded MegaRAID, and then click Next.
- 18. Type a product key, and then click **Next.**
 - If you are using Backup DVD, this screen does not appear. Go to the next step.

ĺ	🕡 🔬 Windows Setup
	Enter the product key to activate Windows
	It should be on the back of the box that Windows came in or in a message that shows you bought Windows.
	The product key looks like this: X0000-X0000-X0000-X0000X
	Dashes will be added automatically.
	· · · · · · · · · · · · · · · · · · ·
	Privacy statement Next
Collecting information	2 Installing Windows

19. Choose an operating system to install, and then click **Next**. The screen differs depending on the OS installation disc.



- 20. Confirm the license agreement.
 - If you agree, select I accept the license terms and then click Next.

MICROSOFT WINDOWS SERVER 2012 R2 STANDARD These license terms are an agreement between you and: these server manufacture that distributes the software with the server or the software installer that distributes the software with the server. Peace read them: They apply to the software named above, which includes the motil or which you received IL, if any. The terms also apply to any Microsoft.	e server. nich includes
 The server manufacturer that distributes the software with the server or the software installer that distributes the software with the server. Please read them: They apply to the software named above, which includes the media or which you received it. If any The term site sagety to any 	e server. nich includes
the software install or that distributes the software with the server. Please read them. They apply to the software named above, which includes the metica on which you received it, if any. The terms also apply to any	e server. nich includes
Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any	ich includes
the media on which you received it, if any. The terms also apply to any	
· updates,	
P Jaccept the license terms	
in Monda and Monda and	
Net	

21. Choose Custom: Install Windows only (advanced) at the following window.

Which type of installation do you want?	
Upprader Install Windows and keep files, settings, and applications. The file, satings, and applications are reards to Workers with this splan. This option is only evaluate when a supported version of Workers in already rearing on the computer.	
Setters: Install Windows and Johnson and Inspects Windows with the option if you want to the data, satisfy, and applications and many, and the completivation technology mendatation data. We economics disclose up on your files before you continue.	
Liefy me decide	

22. "Where do you want to install Windows?" window appears. If the driver was loaded in step 16 and 17, or if a RAID controller is not used, go to step 26.

Click **Load Driver** in the window. If the following message appears, replace the OS installation disc and the EXPRESSBUILDER DVD in the optical disk drive, and then click **Browse**.

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]

- If using Internal Flash Memory, you do not need to remove the OS installation disc.
 Although "The Installation media can be a floppy disk, CD, DVD, or USB flash drive." appears on the screen, use the EXPRESSBUILDER DVD or Internal Flash Memory.
- 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.)

If using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive: \010\win\winnt\oemfd\ws2012r2\megasr1

24. Select the following driver from the driver list shown, and then click Next.

[LSI Embedded MegaRAID]

Tips

25. If you use the EXPRESSBUILDER DVD, remove it, and then insert the OS installation disc.

 Tips
 If the following message appears, replace the OS installation disc, and then click

 Refresh.
 Image: Windows cannot be installed to this disk. (Show details)

 Create a partition to install an OS. Click **Drive options (advanced)**.

If a	partition r	nas aireac	iy been	created,	go to step	30.

Name Drive 3 Unaflocated Space	Total size Free spa 1861.7 GB 1861.7 (ce Type 58
€s Betrech	Drive opt	ions (gdvanced)
🔁 Load driver		Net

27. Click New.



28. Specify the partition size in the text box, and then click Apply.

Name	llocated Space		127.0 GB	Free space 127.0 GB		
€r Befresh € koad driver	X Delete	€om Size:	nat 130046	+ Ngw	Apply Cancel	
					Next	

Click **OK** at the following window.



 Tips
 When creating a partition, the OS installer creates the following partitions at top of the hard disk drive automatically.

 Recovery Partition

 EFI System Partition (ESP)

 Microsoft Reserved Partition (MSR)

29. Choose the partition created in step 28, and then click Format.

30. Choose the created partition, and then click **Next**.

	🕝 🔏 Windows Setup									
	Where do you wa	ant to install Win	dows?							
	Name Drive 0 Partisi	ion 2 ion 3	Total size 300.0 MB 99.0 M8 128.0 M8 278.4 G8	Pree space Type 273.0 MB Recovery 94.0 MB System 128.0 MB MSR (Reserved) 278.4 GB Primary						
	fa <u>B</u> efresh (● Load driver	Estend		i‡ Ngw						
1 Collecting information	2 Installing Windows									
		been	created	in the cre	ated partiti	on, it mear	ns that yo	u failed to	nd Primary create the p ew partition.	partition
		lf you partit		connected	d a data d	isk to a p	partition,	be carefu	I not to de	lete tha
-	Tips	The n	umber of	f partitions	displayed d	iffers deper	nding on th	ne hardwar	e configuratio	vn.
		-								

When the following message appears, Windows installation starts automatically.



31. The following screen appears according to the operating system selected in step 19.

Server with a GUI

Type a password and click Finish.

	he built-in administrator account that yo	u can use to sign in to this o	computer.
User name	Administration		
Password	1		
Reenter password			

Press <Ctrl> + <Alt> + <Delete> keys to sign-in.



Type the password and press <Enter> key.



Windows	Server	2012	R2	starts.
---------	--------	------	----	---------

Debboard	WELCOME TO SERVER MANAGER			
Local Server All Servers	Quick Start 2) Ac 3) Ac	figure this local serv sd roles and features sd other servers to mans eate a server group		
	ILLINI MORE ROLES AND SERVER GROUPS Name 1 (Server groups 1) Server tale	a a a a a a a a a a a a a a a a a a a		Hide
	Local Server 1 Manageability Dents Services Performance Performance	All Servers Manageability Eventa Services Performance BTA results	1	

Server Core Installation

Click OK.	
	Administrator
	Administrator
	The user's password must be changed before signing in.
	OK Cancel
	H Windows Server 2012 R2

Type a new password.



Click OK.

Administrator Your presented has been changed.	
Windows Server 2012 R2	

Windows Server 2012 R2 starts.

	Administrator: C:\Windows\system32\cmd.exe	- 0
C:\Users\Ad	ministrator)_	

Tips

Refer to Microsoft Website for more details. Configure and Manage Server Core Installations http://technet.microsoft.com/us-en/library/jj574091.aspx

- 32. Install Starter Pack by reading Chapter 1 (3.4 Installing Starter Pack).
- 33. Install drivers and specify detailed settings by reading *Chapter 1 (3.5 Installing and Setting Up Device Drivers)*.
- 34. Confirm if Windows is activated according to Chapter 1 (3.6 License Authentication).
- 35. See Chapter 1 (3.7 Setup of Windows Server 2012 R2 NIC Teaming (LBFO)) to set up a team as needed.
- 36. Install the applications as needed by reading Chapter 1 (3.8 Installing the Applications).
- 37. Specify the dump file settings by following the instructions described in *Chapter 1 (7. Setup for Solving Problems)*.

Windows installation 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 Windows.

Important	Also install Starter Pack in the following cases. – The hardware configurations have changed – Windows is restored using a restore process or backup tool
Note	The Scalable Networking Pack (SNP) feature is disabled upon Starter Pack installation is complete. The setting of SNP feature may affect the system performance. Contact your sales representative for details.
Tips	If the OS is installed by EXPRESSBUILDER without using Windows Standard Installer, Starter Pack is already installed. If the hardware configuration is not changed, you do not need to apply Starter Pack again.

3.4.1 Using EXPRESSBUILDER DVD

- 1. Sign-in to Windows on the server with the built-in administrator account.
- 2. Insert the EXPRESSBUILDER DVD into the optical disk drive.
- 3. Run the installer of Starter Pack according to the Windows installation type.

Server with a GUI

(1) Click Integrated Installation on the menu.



(2) Click Starter Pack, and then click Install.

EXPRE							
	Integrated Installation						
8	Install the following software. - Unable to select [Applications] when S - Uninstall the application prior to reinst						
	Starter Pack						
1	NEC ESMPRO ServerAgentService	Rev1.03	Installed(Rev1.03)				
	Express Report Service	Rev3.5E	Installed(Rev3.5E)				
	Express Report Service (HTTPS)	Rev3.4	Not installed				
	Universal RAID Utility	Rev4.00	Not installed				
	Product Info Collection Utility	Rev2.8.1	Installed(Rev2.8.1)				
-	NEC ExpressUpdate Agent	Rev3.14	Not installed				
8							
-			Install				
と							
07-0							

(3) Wait for about 1 to 3 minutes without operating a key and mouse until the copy process completes.

Server Core installation

 Type the following command at the command prompt. In the example below, the optical disk drive is drive D.

cd /d D:\010\win\winnt\bin

```
C:\Users\administrator>cd /d D:\010\win\winnt\bin
```

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

pkgsetup.vbs

D:\010\win\winnt\bin>pkgsetup.vbs

- (3) Wait for about 1 to 3 minutes without operating a key and mouse until the copy process completes.
- 4. Click OK to proceed to the installation.



Wait for about 3 to 5 minutes without operating a key and mouse until the installation completes.

5. The following message appears when the Starter Pack installation is complete. Remove the EXPRESSBUILDER DVD from the server.



6. Click **OK** to restart the system.

Installation of Starter Pack is now complete.

3.4.2 Using Internal Flash Memory

- 1. Remove removable media and CD/DVD from the server and restart the server.
- 2. Press <F3> key at the following message during POST.

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

3. Choose **OS installation** *** default *** at the following screen.

					GNU	GRUB	B version 2.00
OS ins Tool n	stallation neru	80408	default	30838			
Pr fc	ress enter or a comma	to b nd-11	boot the ine.	selec	ted OS	s, `e'	ntry is highlighted. e' to edit the commands before booting or `c' tomatically in 9s

The following screen appears.



The server starts from EXPRESSBUILDER.



4. <u>Choose English on the language selection window, and then click OK.</u>



5. Click Utilities.

Se Se	tup	
Y Uti	ilities D	>
Move to Utilities	Menu.	
() Exi	t	

6. Click Starter Pack Installation.



7. Click Yes to proceed to the installation.

Selection	ction	-
	Starter Pack will be installed on your Windows system. Proceed? [Message ID : P2000]	-
(1	
	Yes No	

8. Click Close on the following window.

1nformat	on
	Copying Starter Pack is complete.
	Click Close to restart the computer.
	To install Starter Pack, follow the message after logging on to Windows.
0	Run the following file on the system drive when installing with Server Core mode.
	[System Drive]:\StartPKG\app_pkg.bat
	[Message ID : P1003]
	Close

The server will restart. Do not press <F3> key and start Windows.

9. Install Starter Pack according to the Windows installation type.

Server with a GUI

Go to the next step.

Server Core installation

 Type the following command at the command prompt. cd /d C:\StartPKG

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

(2) Type the following command.

app_pkg.bat

C:\StartPKG>app_pkg.bat

10. Wait for about 1 to 3 minutes without operating a key and mouse until the preparation completes.

Applying Starter Pack is in preparation. Please wait for a while.

11. Click **OK** to proceed to the installation.

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

Wait for about 3 to 5 minutes without operating a key and mouse until the installation completes.

12. Click OK to restart Windows.

Starter Pack	x
Installing Starter Pack was completed. The setup reboots for installing drivers. After taking out it from Optical Disc Drive, if the media is set in Optical Disc Drive, click [OK].	
ОК	

Installation of Starter Pack is now complete.

3.4.3 Using EXPRESSBUILDER installed in Windows

If EXPRESSBUILDER has been installed in Windows, you can use it as a Windows application. For details of EXPRESSBUILDER, see *Chapter 2 (6. Details of EXPRESSBUILDER)* in *Maintenance Guide*.

- 1. Run the shortcut or NEC EXPRESSBUILDER from Windows Start menu.
- 2. See step 3 and the subsequent steps in *Chapter 1 (3.4.1 Using EXPRESSBUILDER DVD*) for further procedure.

3.5 Installing and Setting Up Device Drivers

Install and set up device drivers provided as standard.

For details of an optional device, refer to the manual that comes with the optional device.

3.5.1 Installing the LAN drivers

(1) LAN drivers

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

Important	 Teaming of network adapters by using BACS or PROSet is not supported. Wake On LAN (WOL) is supported by the standard network adapters only.
Note	 To change the LAN or BACS driver settings, sign in to Windows from a local console using an administrator 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. N8104-149/150/151/152/153

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

The LAN driver is not installed if N8104-153 is not connected to the server before installing Windows with EXPRESSBUILDER or installing Starter Pack. Perform the steps below to install the N8104-153 LAN driver manually.

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

Tips

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory.

2. Open Command Prompt, and run install.bat in the following folder.

Using EXPRESSBUILDER DVD:

EXPRESSBUILDER DVD:\010\win\winnt\ws2012r2\lan

- If Starter Pack was installed from Internal Flash Memory: System Drive:\StartPKG\ws2012r2\lan
- 3. When the following message appears, remove the EXPRESSBUILDER DVD from the optical disk drive, and then restart Windows.

Installation Completed.

Using an optional LAN board, perform procedure in *Chapter 1 (3.5.2 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.

Network adapters for the standard configuration

Broadcom NetXtreme Gigabit Ethernet #xx(*1)

Optional LAN board:

N8104-149: Broadcom BCM57810 NetXtreme II 10 GigE (NDIS VBD Client) #xx (*1)

N8104-150/151/152: Broadcom NetXtreme Gigabit Ethernet #xx (*1)

N8104-153: Intel(R) Ethernet Controller X540-AT2 #xx(*1)

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

Tips

ID of N8104-149 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.

Tips

When using N8104-149, you can specify "10 Gb Full" for network adapter and "Auto Negotiation" to switching hub.

- 1. Open the Device Manager.
- 2. Expand **Network Adapters**, and then double-click the name of the network adapter. The properties of the network adapter will be displayed.
- 3. On the Advanced tab, 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 Windows.

The link speed setting is now complete.

(2) Using N8104-150/151/152

When using N8104-150/151/152 with the server, follow the procedure below to set it.

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

Tips

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory.

2. Double-click pgdyavd_disable.vbs in the following folder.

When using EXPRESSBUILDER DVD:

EXPRESSBUILDER DVD:\010\win\winnt\ws2012r2\lan\bcom\ws2012_r2\lan

If Starter Pack was installed from Internal Flash Memory:

System drive:\StartPKG\ws2012r2\lan\bcom\ws2012_r2\lan

3. When the following message appears, click **OK**.



Tips

The message "Action: Non" indicates that the LAN driver is already set.

4. Remove the EXPRESSBUILDER DVD from the optical disk drive, and then restart the Windows.

Setup is now completed.

3.5.3 Using InfiniBand board (N8104-146/147)

The driver for InfiniBand board (N8104-146/147) is installed automatically when Windows or Starter Pack is installed from EXPRESSBUILDER.

To install the driver for InfiniBand board separately, refer to the manual that comes with the board.

Note

If InfiniBand board is disabled after installing Starter Pack, enable Mellanox ConnectX-3 VPI (MT04099) Network Adapter in Device Manager.
3.5.4 Graphics accelerator driver

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

In the Server Core installation, the graphics accelerator driver is not installed automatically. Follow the steps below to install it.

To reinstall drivers separately, follow the steps below.

Tips

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

> Tips EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory.

- Double-click the install.bat icon in the following folder.
 Using EXPRESSBUILDER DVD:
 - EXPRESSBUILDER DVD:\010\win\winnt\ws2012r2\video
 - If Starter Pack was installed from Internal Flash Memory: System drive:\StartPKG\ws2012r2\video

You will be prompted to confirm the End User License Agreement during this process. Click **ACCEPT** to continue.

3. Remove the EXPRESSBUILDER DVD from the optical disk drive, and then restart Windows.

Graphic accelerator driver installation is now complete.

3.5.5 Using a SAS controller (N8103-142/184)

The driver for SAS controller N8103-142/184 is automatically installed by Windows Plug-and-Play.

3.5.6 Using a RAID Controller (N8103-179)

The driver for RAID controller N8103-179 is automatically installed by Windows Plug-and-Play.

3.5.7 Using a Fibre Channel controller (N8190-157A/158A/159/160)

The driver for Fibre Channel controller N8190-157A/158A/159/160 is automatically installed by Windows Plug-and-Play.

If Fibre Channel controller (N8190-157A/158A/159/160) is additionally installed after the OS has been installed, install Starter Pack again.

3.6 License Authentication

To use Windows Server 2012 R2, perform the license authentication procedure.

Confirm if your license is authenticated. If not, perform the following procedures to have your license authenticated.

Connect to the Internet or use the telephone to perform the authentication procedure.

(1) Server with a GUI

1. Click Settings on Charms Bar.



2. Click Server info.



- 3. Check Windows license authentication.
 - If "Windows is activated" is displayed, you do not need to perform this procedure.

		System					
🕖 🍥 🕤 🕇 🕎 א Control P	Panel + System and Security + Sy	stem					
Control Panel Home	View basic information	about your computer					
Device Manager	Windows edition						
Remote settings	Windows Server 2012 R2 X	Windows Server 2012 R2 XXXXXXXXXXX					
Advanced system settings	© 2013 Microsoft Corporat	tion. All rights reserved.					
	System						
	Processor:	Intel(R) Xeon(R) CPU E3-1265L v3 @ 2.50GHz 2.50 GHz					
	Installed memory (RAM):	2.00 GB					
	System type:	64-bit Operating System, x64-based processor					
	Pen and Touch:	No Pen or Touch Input is available for this Display					
	Computer name, domain, and	workgroup settings					
	Computer name:	XXXXXXXXXXXXXXXX					
	Full computer name:	XXXXXXXXXXXXXXXX					
	Computer description:						
	Workgroup:	WORKGROUP					
_	Windows activation						
	Windows is activated Rea	d the Microsoft Software License Terms					
	Product ID: 00000-00000-0	0000-00000					

 If "Windows is not activated" is displayed, perform license authentication by using the Internet or telephone.



Using the Internet:

Click Activate Windows.

Computer name:	****	Thange settings
Full computer name:	XXXXXXXXXXXXXXXXXX	
Computer description:		
Workgroup:	WORKGROUP	
Windows activation Windows is not activated.	Read the Microsoft Software License Terms	
Product ID: 00000-00000-0	Activate Windows	

Type the product key.

Recycle Bat	
	Enter a product key Yaar product key should be on the box that the Windows DVD came in or in an email that shows you board Windows The product key tools similar to the: PRODUCT KEY 100000 100000 100000 100000
	Product key Danhes will be added automatically Cancel
	Windows Server 2012 R2

Follow the messages to complete license authentication process.

Using telephone:



On the next screen, select your country, and then click Next.

~	

Remember the installation ID at the following screen.

									lation ID (IID). Some tries or regions.
	all free: ot ovaile	ible							
	HL: 71) (4) 3	891 7000							
tr	stallati	on ID:							
0	1	2 0000000	3 0000000	4	5 0000000	6 0030000	7 0000000	8 0000000	9 000000

Call the Microsoft license activation hotline and then tell your installation ID. Type the acquired confirmation ID, and then click **Activate Windows**.

۲	Enter your confirmation ID The automated phone system will tell you what to enter.								
	A	8	с	D	t	r	G	н	
						Activate W	Indows	Cancel	

(2) Server Core installation

1. Type the following at the command prompt, and then press <Enter> key.

C:\Users\administrator>**slmgr -dli**

If license authentication is required, go to the next step. If your license is already authenticated, skip the next and the subsequent steps.

2. Change the product key as follows.

Using Backup DVD:

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

C:\Users\administrator>slmgr -ipk <Product key on COA label>

Using Windows Server 2012 R2 DVD-ROM:

You do not need to change the product key. Go to the next step.

3. Perform license authentication by using the Internet or telephone.

```
Using the Internet:
Type the following command, and then press <Enter> key.
```

```
C:\Users\administrator>slmgr -ato
```

The authentication is now finished.

Using telephone:

Type the following command to get an installation ID for authentication, and then press <Enter> key.

C:\Users\administrator>slmgr -dti

Refer to the file <code>%systemroot%\system32\sppui\phone.inf</code> to confirm the telephone number of Microsoft Licensing Center.

Call Microsoft Licensing Center and tell your installation ID. Type the confirmation ID in the following command, and then press <Enter> key.

C:\Users\administrator>slmgr -atp <Confirmation ID>

The authentication is now finished.

3.7 Setup of Windows Server 2012 R2 NIC Teaming (LBFO)

Set up the network adapter teaming feature as shown below.

(1) Launching the NIC teaming setup tool

- 1. Launch Server Manager.
- 2. Select Local Server.
- 3. In the **Properties** window, click **Enable** or **Disable** for **NIC teaming**. The NIC teaming setup tool will launch.
 - Tips

The NIC teaming setup tool can also be launched by opening the **Run** dialog box, typing lbfoadmin, and then press <Enter> key.

(2) Creating a team

Create a team by using the NIC teaming setup tool.

- In the Servers section, select the name of the server to set up. If there is only one server connected, the name of the server is selected automatically.
- 2. In the Teams section, under Tasks, select New Team. The New Team wizard will start.
- 3. Type the name of the team to create, and then select the network adapter to include in the team from the **Member adapters** list.
- 4. Click Additional properties.
- 5. Specify the required settings, and then click OK.

Teaming mode

Static Teaming	Configures static aggregation between the NIC and switches.				
Switch Independent	Configures teaming on the NIC side without depending on the switch settings.				
LACP	Configures dynamic aggregation between the NIC and switches.				

Load balancing mode

Address Hash	Distributes the load based on IP addresses and port numbers.					
Hyper-V Port	Distributes the load to each of the virtual switch ports used by the virtual machines.					
Dynamic	 Distributes the load based on IP addresses and port numbers in sending. Distributes the load same to "Hyper-V Port" in receiving. 					

Standby adapter

Select one adapter to be set to standby mode from the adapters in the team. Setting all adapters to active mode is also possible.

Primary team interface

Any VLAN ID can be specified for the primary team interface.

(3) Notes and restrictions

- NIC teaming on a guest OS is not supported.
- Teaming of virtual NICs on the host OS is not supported in the Hyper-V environment.
- When STP (Spanning Tree Protocol) is enabled on network switch ports to which network adapters of the team are connected, network communications may be disrupted. Disable STP, or configure "PortFast" or "EdgePort" to the ports.
 - * About setting the network switch of the connection destination, see the manual of the network switch.
- All NICs in the team must be connected to the same subnet.
- Teaming of different speed NICs is not supported.
- Teaming of different vendor's NICs is not supported.

Refer to the following website for the latest information.

http://www.58support.nec.co.jp/global/download/w2012r2/index.html

- [Technical Information] - [NIC Teaming (LBFO)]

Installing the Applications 3.8

Some applications in EXPRESSBUILDER can be installed collectively by performing the procedures described below. When installing these applications individually, see Chapter 2 (Installing Bundled Software). This feature is only available on the server with a GUI.

- 1. Sign-in to Windows with the built-in administrator account.
- 2. Insert the EXPRESSBUILDER DVD into the optical disk drive.

If EXPRESSBUILDER has been installed in Windows, you can use it as a Windows application. Run the shortcut or NEC EXPRESSBUILDER from Windows Start menu.

3. Click Integrated Installation on the menu.

EXPRESSBL	JILDER		NEC
		Instruction Manuals	
	0	Versions	
	¥	Integrated Installation	
		Applications	
		Files for Setup	
	٩	Maintenance	
	₿ z	Exit	
			Version x.xx-xxx.xx (xxx)

4. On the following screen, select the check boxes to install, and then click Install.

Integrated Installation		
Install the following software. - Unable to select [Applications] when S - Uninstall the application prior to reinst		
Applications		
NEC ESMPRO ServerAgentService Express Report Service	Rev1.03 Rev3.5E	Installed(Rev1.03) Installed(Rev3.5E)
Express Report Service Express Report Service (HTTPS)	Rev3.5E	Not installed
Universal RAID Utility	Rev4.00	Not installed
Product Info Collection Utility	Rev2.8.1	Installed(Rev2.8.1)
NEC ExpressUpdate Agent	Rev3.14	Not installed
		Install

are selected by default.

The selected applications are automatically installed.

- 5. When the completion message appears, click **OK**, and then remove the EXPRESSBUILDER DVD from the optical disk drive.
- See Chapter 2 Installing Bundled Software to install the bundled software or confirm that the software is 6. appropriate to your system.

Now installation of applications is completed.

3.9 Installation When Multiple Logical Drives Exist

Back up the user data before starting installation.

(1) Installation procedure

- Setup with EXPRESSBUILDER

Important
 Before starting setup, be sure to disconnect hard disk drives from the RAID controller that is not used for setup, if the server has two or more RAID controllers installed.
 Disconnect an external disk (*) from the server by turning the power of it off or disconnecting cables. Install those hard disk drives and cables after setup has completed. Conducting setup with those being connected with the server may cause existing data to be erased unintentionally.

* Disk array unit (such as NEC Storage) or hard disk drive in Disk Expansion Unit

See Chapter 1 (3.2 Setup with EXPRESSBUILDER), and proceed with setup. In this case, EXPRESSBUILDER installs the Windows on the first found hard disk drive or logical drive.

- Setup with Windows standard installer
 - 1. See Chapter 1 (3.3 Setup with Windows 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 *might not match the server's slot* of the hard disk drives. *Distinguish between the hard disk drives by viewing the hard disk drive capacity and partition size* 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. See *Chapter 1 (3.3 Setup with Windows Standard Installer)*, and proceed to setup Windows with Windows 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. However, these steps cannot change drive letter assignments for the system volume or boot volume.

- 1. On 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 Assign next drive letter, and then select the drive letter you want to assign.
- 5. Click OK.
- 6. Close the Server Manager.

4. Setting Up Windows Server 2012

Set up Windows Server 2012.

4.1 Precautions for Setting Up

Read through the following precautions before starting setup.

- EB
- : Precautions for setting up with EXPRESSBUILDER
- **OS** : Precautions for setting up with Windows standard installer

BIOS	BIOS settings										
EB	OS	Change Boot Mode to UEFI Mode. See Chapter 2 (1. System BIOS) in Maintenance Guide for details.									
		Boot \rightarrow	$\textbf{Boot} \rightarrow \textbf{Boot} \ \textbf{Mode} \rightarrow \textbf{UEFI}$								
EB	08	Select Enabled for X2APIC feature of processor. See <i>Chapter 2 (1. System BIOS)</i> in <i>Maintenance Guide</i> for details.									
		Advand	$\textbf{ed} \rightarrow \textbf{Processor Configuration} \rightarrow \textbf{X2APIC} \rightarrow \textbf{Enabled}$								
			stallation, open Boot Priorities in BIOS Setup Utility to make sure that the h han Windows Boot Manager is specified for optical disk drive.	igher boot							
			Example of correct setting								
			[Boot]–[Boot Priorities]								
			– Boot Option #1 [UEFI: Optical Disk Drive]								
			 Boot Option #2 [Windows Boot Manager] 								
		\rightarrow The system can boot from OS installation media.									
50	00	Example of incorrect setting									
EB	OS	[Boot]–[Boot Priorities]									
			 Boot Option #1 [Windows Boot Manager] 								
			 Boot Option #2 [UEFI: Optical Disk Drive] 								
			ightarrow The system cannot boot from OS installation media.								
		Note	Be sure to insert OS installation disc into optical disk drive before running Utility.	BIOS Setup							
			 If Windows Boot Manager is not displayed in Boot Priorities, you need the boot priority. 	not to confirm							

Hard	ware o	configuration
The f	ollowir	ng hardware configurations require special procedures.
EB	OS	Reinstalling to a mirrored volume When you install Windows Server 2012 in an environment with a mirrored volume created using Windows, disable mirroring before installing the operating system and enable it again after the installation. Use [Computer Management] – [Disk Management] to create, disable, or remove the mirrored volume.
EB	OS	RDX and Magneto Optical (MO) disc, and other peripheral devices 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 other tape media Do not set media that is unnecessary to installation during setup.
EB	OS	Installing in internal or external multiple hard disk drives (logical drives) For details on installing operating systems to a system in which two or more RAID controller exist, or to an external disk drive* that is not subject to setup, see <i>Chapter 1 (4.9 Installation When Multiple Logical</i> <i>Drives Exist).</i> * Disk array unit (such as NEC Storage) or hard disk drive in Disk Expansion Unit.
EB	OS	Reinstalling to hard disk drives that have been upgraded to dynamic disks If the hard disk drive has been upgraded to a dynamic disk, the operating system cannot be reinstalled to it with the existing partitions. Set up the operating system with the Windows standard installer.

EB OS Setup when mass memory is installed If large capacity memory modules are installed in your system, the large size of paging file and dump file are required at installation. If you fail to allocate the dump file, use Windows 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 the destination to save the dump file by reading Chapter 1 (7. Setup for Solving Problems). If the hard disk drive does not have enough space to write the dump file, 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. If sufficient space cannot be allocated for the paging file, perform either of the following after setting up using Windows Standard Installer is complete. Specify a hard disk drive other than the system drive as the location to save the paging file for collecting memory dump Create a paging file of the installed memory size + 400 MB or more in a drive other than the system drive. The paging file that exists in the first drive (in the order of drive letter C, D, E, ...) is used as the temporary memory dump location. The size of the paging file must be "installed memory size + 400 MB" or more. Paging files in dynamic volumes are not used for dumping memory. The setting is applied after restarting the system. Example of correct setting C: No paging file exists D: Paging file size is "installed memory size + 400 MB" or more \rightarrow The paging file in drive D can be used for collecting memory dump because its size satisfies the requirement.



Syst	em nai	rtition size
Oy3t		
EB	OS	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
		Server with a GUI
		Size required to install the OS = 9,400 MB
		Paging file size (recommended) = installed memory size × 1.5
		Dump file size = installed memory size + 400 MB
		Application size = as required by the application
		Server Core installation
		Size required to install the OS = 6,300 MB
		Paging file size (recommended) = installed memory size × 1.5
		Dump file size = installed memory size + 400 MB
		Application size = as required by the application
		For example, if the installed memory size is 1 GB (1,024 MB), application size is 100 MB, and Server
		with a GUI is selected, the partition size is calculated as follows:
		9,400 MB + (1,024 MB × 1.5) + 1,024 MB + 400 MB + 100 MB
		= 12,460 MB
		The above mentioned partition size is the minimum partition size required for system installation. Ensure that the partition size is sufficient for system operations.
		The following partition sizes are recommended.
		Server with a GUI : 32,768 MB (32 GB) or more
		Server Core installation : 32,768 MB (32 GB) or more
		*1 GB = 1,024 MB
		 Note The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the Windows partition paging file must be large enough to save dump files.
		Make sure you set a sufficient paging file size. If the paging file is insufficient, there will be a virtual memory shortage that may result in an inability to collect correct debug information.
		 Regardless of the sizes of internal memory and write debug information, the maximum size of the dump file is "size of internal memory + 400 MB".
		• When installing other applications or other items, add the amount of space needed by the application to the partition.
		If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.



4.2 Setup with EXPRESSBUILDER

This section describes how to install Windows with EXPRESSBUILDER.

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

Important	 Setup with EXPRESSBUILDER deletes all data of the hard disk drive depending on the settings. Pay attention to specify the following parameters: RAID settings Partition Settings Backing up user data is recommended. 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.
Note	 The Scalable Networking Pack (SNP) feature is disabled on systems that have been installed by using EXPRESSBUILDER. The setting of SNP feature may affect the system performance. Contact your sales representative for details. The creation of RAID10 by using the onboard RAID controller (LSI Embedded MegaRAID) is not supported. See <i>Chapter 2 (5. RAID System Configuration)</i> in <i>Maintenance Guide</i> when creating RAID10.
Tips	 Setup with EXPRESSBUILDER allows you to use a pre-specified parameter file or save the parameters specified in setup as a parameter file on removable media or Internal Flash Memory. For details on creating a parameter file, see <i>Chapter 1 (8. Windows OS Parameter File)</i>.

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 disc
 - NEC operating system installation disc (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation disc (hereafter referred to as *Windows Server 2012 DVD-ROM*)
- Prepare if needed:
 - Removable media for Windows OS parameter file

4.2.3 Setup procedure

- Turn on a display, and then turn on the server. Confirm BIOS settings are correct by using BIOS Setup Utility. For more precautions, see *Chapter 1* (4.1 Precautions for Setting Up).
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. Choose OS installation *** default ***.

NS installation⇒ Tool menu	*** default ***			

The following screen appears.

Starting EXPRESSBUILDER

The server starts from EXPRESSBUILDER.



4. Choose English on the language selection window, and then click OK.

-	EXPRESSBUILDER
0	Selection 表示する言語を選んでください。 Select the language for displaying.
	 □ 日本語 ● English ○ Français ○ Italiano ○ Deutsch ○ Español
	οκ

5. Click Setup.

	Setup	₽
•	Versions	
	Exit	
Ċ	Exit	

6. On the **OS selection** menu, select an OS to install or specify a parameter file.

□ When not using parameter file	
When using a parameter file	

: Go to step 7. : Go to step 8. 7. Select an OS by either of the following two ways:

1	Select an operating system to install.
	(Click Manual Selection to configure a RAID array only)
E	Automatic Detection
	Manual Selection
0	Load Settings

Automatic Detection:

(1) Click Automatic Detection.

1 se	elect an operat	ing system to ins	tall.
		to configure a RAID array	
1	Automatic [Detection	<i>"</i>
Select autom disc.	an operating system atically with an installation	stion	
disc.	Load Settin	ØS	
		-	

Insert the OS installation disc, and then click **OK**.

	the OS installation d			
EXPRI	ESSBUILDER will dete		nt to install. Message ID : B2014	1
		1	measuge 10 - B2014	
3				

- (2) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9. 1 OS selection 2 Settings 4 Installation 3 Confirmation Select an operating system to install. (Click Manual Selection to configure a RAID array only) E Automatic Detection Manual Selection Load Settings Manual Selection: (1) Click Manual Selection. 4 Installation 1 OS selection 2 Settings 3 Cont Select an operating system to install. (Click Manual Selection to configure a RAID array only) FO Automatic Detection Manual Selection = lect the target OS of ion from the menu.
- (2) From the Windows list, select Windows Server 2012, and then click OK.

	Select an operating system to Install. Windows Server 2012	1
	O RAID Configuration Only	
0		

(3) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.

	1 OS select	on Settings Confirmation	4 Installation
1		ect an operating system to in: k Manual Selection to configure a RAID arra	
	E	Automatic Detection	
~		Manual Selection	
	B	Load Settings	
			Setup

8. Click Load Settings.

	lect an operating system to install.
(Cli	ck Manual Selection to configure a RAID array only)
Ľ	Automatic Detection
	Manual Selection
	Load Settings

Follow the on-screen instruction to load the parameter file (*.tre).

	Gildusing a r	
	usr_connect	
Places	Name	✓ Size Modified
Search Recently Use	d colorm 1	05-08-2014
Toot Desktop		
Documents Music Pictures Videos		
Downloads		
Add	29/8	Cancel Open

Tips

For the removable media in which the parameter file is saved, see "/mnt/usr_connect/usb*" (* indicates a number).

Click \bigcirc on the right side of the screen.

1		lect an operating system to install.	
•	(ciii	Automatic Detection	ſ
		Manual Selection	
× (I	}	Load Settings	

When the parameter file is correctly loaded, the settings are determined. Click **Custom** to check and modify the settings in the wizard. Click \bigcirc on the right side of the screen.

	1 OS select	ion Settings	3 Confirmation	4 Installation	
	2 "	iter installation	settings.		
C	Ø	Default			\bigcirc
	~ 0 1	Custom			
				Set	:UP

 \rightarrow Go to step 10.

9. Specify the setup parameters by using either of the following ways:

	nter installation settings.	
0	Default	
8	Custom	



(1) Click Default.



(2) Select the edition of the OS to install from the Edition list. Type a password, and then click Finish.

	ngs to set up the computer. It to use the Windows stand	ard installer.	
Basic Settings Operating system	: Windows Server	2012	
Edition	: Standard(Serve	r with a GUI)	0
Language	: English	0	
Password Setting	5		
Administrator P	assword		(Required)
Reenter Admini	strator Password		(Required)
	Finish		Cancel



(3) Click \bigcirc on the right side of the screen.

ິງ ⊪	iter installation settings.	
	Default	
63	Custom	
		Setu

 \rightarrow Go to step 10.



	1 OS selection 2 Settings	3 Confirmation
	2 Enter installation setti	ngs.
0	Default	
	Custom	₽
	Specify all settings for the installation.	
		Setup

- (2) Use this menu to configure RAID arrays with a RAID controller found automatically.
 - This wizard does not support the creation of RAID10 by using the onboard RAID controller (LSI Embedded MegaRAID). See *Chapter 2 (5. RAID System Configuration)* in *Maintenance Guide* when creating RAID10.

	An operating system will be installed Uninstall all RAID controllers not to b selected.			
	Device Information RAID Controller	:		Detail
	Number of Physical Drives	:	2	
2	Summary of RAID Array Array #1 RAID0 (1disk) Logical Drive1 (1117GB)			E
	RAID Configuration Skip Configuring RAID Arra	Ŋ		
				1 / 11 Page
Ŀ	Next			Cancel

Creating new logical drives

Note

Clear the **Skip Configuring RAID Array** check box, and then click **Next**. Specify the parameter for logical drives following the wizard.

- Important The existing RAID arrays are destructed and the contents of hard disk drive will be erased if you proceed with wizard.
- Skipping the creation of new logical drives

Select the Skip Configuring RAID Array check box, and then click Next.

(3) Check the settings specified for Basic Settings. Choose Install Windows using EXPRESSBUILDER, and then click Next.

Wi	cose Use Windows standard Installer to install Windows by using the installer contained in th ndows installation disc. cose Install Windows using EXPRESSBUILDER to install both the operating system and plications at one time.
[Basic Settings Operating system : Windows Server 2012
	Use Windows standard installer Copy OEM drivers to removable media
	Install Windows using EXPRESSBUILDER
	Edition : Standard(Server with a GUI)
	Language : English ♀ Time Zone : (UTC-08:00) Pacific Time (US & Canada) ♀
	4 / 11 Page
	Back Next Cancel

(4) Check the settings specified for **Partition Settings**. Modify the settings as needed, and then click **Next**.

Windows will be installed i All data currently on an ex		k drive or logical driv	
Current Partitions (the area sh	own with a red frame wil	l be deleted) :	
(0.3GB) (Total:4	(TFS) Data Partition 0.3GB) (0.1GB)	(1076GB)	
Partition Settings			
Create a new partit	ion		
O Use all space			10.4557777777575
 Type a partiti 		40 (GB) 40GB / Recommende	*1TB=1024GB d: 40GB / Maximum: 1116GB)
			5 / 11 Page

Important • Partition size

Specify a partition size larger than the minimum required for installing the operating system. See *Chapter 1 (4.1 Precautions for Setting Up)*. The entire contents of the destination will be deleted.

(5) Enter the user information, and then click Next.

Personalize the computer. Type Computer Name within 15 charac Administrator Password must be at lea three of the four categories (numbers/upp	st six	characters in length and mus e/lowercase/symbols).	t contain characters l
User Information			
Computer Name	а.	Automatic Numbering	
		BD4394570815	(Required)
User Name	:	Administrator	
Administrator Password	:		(Required)
Reenter Administrator Password	1		(Required)
			6 / 11 Page

Note	Administrator Password needs to meet the following conditions:
	 Contains six or more characters
	 Contains characters from at least three of the following categories: numbers, uppercase letters (A - Z), lowercase letters (a - z), and symbols.
	If you want to type your computer name, clear the Automatic Numbering check box and type the name in text box.

(6) Check the settings specified for Network Protocols. Modify the settings as needed, and then click Next.

Cho	oose a network protoc oose Custom Setting	ol. gs, click Advanced, i	f you want to type a	n IP address.
F	Network Protocols			
	Standard Se			
	Custom Setti			
	Standard Ada	apter - Internet Protoc	ol (IPv4)	Advanced
				7 / 11 Page
_				
				Cancel

- Tips
 The order of entry in Custom settings does not always match the numbering of LAN ports.

 Note
 Even when an optional network board is connected, Custom settings only shows standard network boards.

 After finishing installation, specify the optional network settings again.
- (7) Specify the domain or workgroup.

Check the settings, modify them as needed, and then click Next.

loin this computer to a domain or a Choose Join a workgroup or Join	workgroup. a domain, and then enter param	eters.
Ioin a workgroup	* <u></u>	
Workgroup Name	: WORKGROUP	
O Join a domain		
Domain Name	:	
Account Name	:	
Password	:	
Reenter Password	:	
		8 / 11 Page
Back Nex	rt	Cancel

 (8) Check the settings of Windows components. Modify the settings as needed, and then click Next.

Choose Windows components you v	rant to install.	
Server Roles		
Web Server (IIS)	Print and Document Service	es
DHCP Server	File Services	
DNS Server	Hyper-V	
Windows Features		
SNMP Service		Advanced
Simple TCP/IP Services		
WINS Server		
		9 / 11 Page
Back		Cancel

Server	with	а	GUI

Choose Windows components you	want to install.
Server Roles	
Web Server (IIS)	Print and Document Services
DHCP Server	File Services
DNS Server	Hyper-V
Windows Features	9
SNMP Service	Advanced
WINS Server	
	9 / 11 Pag
Back	ext Cancel

Server Core Installation

(9) Check the settings of applications.

Modify the settings as needed, and then click Next.

se applications you Description about		k.	
Available App	olications		Selected Applications
		A	NEC ESMPRO ServerAgentService Express Report Service
		Add >>	Express Report Service Express Report Service Express Report Service(HTTPS) Universal RAID Utility Microsoft .NET Framework Version 3.5.1
		<< Delete	ExpressUpdate Agent
 escription			
			10 / 11 Page
Back	Next		Cancel

On the	following	screen,	click	Finish.

The settings are now con	plete.	
Click Finish to close this	window.	
		11 / 11 Page
Back	Finish	Cancel

On the following screen, click \bigcirc on the right side of the screen.

2 Enter installation settings.
Custom

10. Check the parameter settings.

If you want to save the settings, connect removable media as needed and click Save.

	Confirm inst	allation settings.		
	1	allation settings are specified)		
)	Skip configuring RAID array.			\bigcirc
	Operating system	: Windows Server	2012	
	(Use Windows standard inst	aller)		
	Copying OEM drivers	: No		_
			Save	

Click \bigcirc on the right side of the screen.

11. Click Start to start the setup.

	1 2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Ready to set up the computer.
	A partition has already been created. If you proceed, any data stored on the partition will be lost.
	* Configuring RAID system
0	* Copying files
\sim	Changing media
	Start
	Setup

12. If the following message appears, insert the EXPRESSBUILDER DVD into the server, and then click **OK**.

Insert the B	EXPRESSBUILDER o		
		[Mes	sage ID : J2002]
2			

13. Insert the OS installation disc into the server, and then click OK.

during the setup until the
[Message ID : J2004]

Windows Server 2012 is installed automatically. Wait for completion (about 40 minutes) without performing any operation.

14. Starter Pack and the selected applications are automatically installed. Wait for completion without performing any operation.



15. Read the terms of License Agreement. If you agree, click **I accept the license terms for using Windows** check box, and then click **Accept** (only in the server with a GUI).

1	Tease read the license terms.
l	RECOONET SOFTWARE LIKENSE TRANS IECONOMY WIRKOWS SIRVER 3012 STANDARD Than Looms time or a possence between you and
	the software installer that distributes the software with the server.
	fease read them. They apply to the software named above, which includes the media on which you received it, if any. The terms via gply to any Microsoft
	updates,
	supplements,
	Internet-based services, and
	support services
	or this judherer, unless other terms accompany those items. If an, those terms apply. If you obtain updates or supplements dencily rem Moundy, Moupol, and for the memorylacian or antidate, itemats there is you. Invited pages itemas terms, which may come with the antimetry, the blood of our or correle locate terms.
1	Lacorpt the license terms for using Windows

16. Press <Ctrl> + <Alt> + <Delete> keys to sign in.



On the following screen, type the password you have set in step 9-(2) or 9-(5).



17. Click OK.

The setup is completed	
The Setup with EXPRESSBUILDER has been successfully completed.	
	ОК

- 18. Follow the instructions described in *Chapter 1 (4.5 Installing and Setting Up Device Drivers)* to install the device drivers.
- 19. Confirm if Windows is activated according to Chapter 1 (4.6 License Authentication).
- 20. See Chapter 1 (4.7 Setup of Windows Server 2012 NIC Teaming (LBFO)) to set up a team as needed.
- 21. Specify the dump file settings by following the instructions described in *Chapter 1 (7. Setup for Solving Problems)*.
- 22. See *Chapter 2 Installing Bundled Software* to install the bundled software or confirm that the software is appropriate to your operating environment.

Windows installation is now complete.

4.3 Setup with Windows Standard Installer

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

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

Important	Setup with Windows standard Installer deletes all data of the hard disk drive depending on the settings. Pay attention to specify the following parameters: – RAID settings Backing up user data is recommended.
Note	The creation of RAID10 by using the onboard RAID controller (LSI Embedded MegaRAID) is not supported. See <i>Chapter 2</i> (<i>5. RAID System Configuration</i>) in <i>Maintenance Guide</i> when creating RAID10.
Tips	 Setup with Windows 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. For details on creating a parameter file, see <i>Chapter 1 (8. Windows OS Parameter File)</i>.

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 disc
 - NEC operating system installation disc (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation disc (hereafter referred to as Windows Server 2012 DVD-ROM)
- > Prepare if needed:
 - Removable media for Windows OS parameter file
 - Removable media for OEM drivers (Windows Server 2012)

Note OEM driver is required when using the onboard RAID controller (LSI Embedded MegaRAID) on the server equipped with internal optical disk drive.



4.3.3 Setup procedure

- Turn on a display, and then turn on the server. Confirm BIOS settings are correct by using BIOS Setup Utility. For more precautions, see *Chapter 1* (4.1 Precautions for Setting Up).
- 2. Start EXPRESSBUILDER according to Chapter 1 (1.1 Starting EXPRESSBUILDER).
- 3. Choose OS installation *** default ***.



The following screen appears.



The server starts from EXPRESSBUILDER.



4. Choose **English** on the language selection window, and then click **OK**.



5. Click Setup.

Set up	Setup	\$
•	Versions	
Ċ	Exit	

- 6. On the **OS selection** menu, select an OS to install or specify a parameter file.
 □ When not using parameter file: Go to step 7.
 □ When using a parameter file: Go to step 8.
- 7. Select an OS by either of the following two ways:

-		elect an operating system to install.	
ſ	e	Automatic Detection	
		Manual Selection	
	B	Load Settings	

Automatic	Detection:

(1) Click Automatic Detection.

1 OS selection 2 Settings 3 Confirmation	Installation
Select an operating system to insta (Click Manual Selection to configure a RAID array o	
Automatic Detection	
Select an operating system automatically with an installation disc.	
Load Settings	
	Setur

Insert the OS installation disc, and then click **OK**.

EXP	t the OS installation of RESSBUILDER will det		ant to install.	
		t	Message ID : B2014	1
2				

(2) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.

	1 OS select	ion 2 Settings	3 Confirmation	4 Installation	
1	Se	lect an operatin	ig system to ir	nstall.	
I	(Cli	ck Manual Selection to	o configure a RAID arr	ay only)	
*	6	Automatic De	etection		
		Manual Sele	ction		_
	₿	Load Setting	s		
				Se	ේදිය යැති

1 OS sele	ction 2 Settings	Confirmation	4 Installation
		ting system to ins	
(0	Click Manual Selection	n to configure a RAID array	only)
E	Automatic	Detection	
	Manual Sel	lection	
You o	can select the target OS of istallation from the menu.	5	

(2) From the Windows list select Windows Server 2012, and then click OK.

	Windows	g system to install. Windows Server 2012	0	
?	O RAID Configu	ration Only		

(3) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.



8. Click Load Settings.

4	
	lect an operating system to install.
Ľ	Automatic Detection
	Manual Selection
B	Load Settings
Load in	stallation settings.

Follow the on-screen instruction to load the parameter file (*.tre).

Places	Name	✓ Size Modified
Search Becently Used	cottom 1	05.08/2014
Toot Desktop File System		
Documents Music Pictures		
Videos		
Downloads		
Add		
		Cancel Open

For the removable media in which the parameter file is saved, see "/mnt/usr_connect/usb*" (* indicates a number).

Click \bigcirc on the right side of the screen.

Tips

	Select an operating system to install. Click Manual Selection to configure a RAID array only)
E	Automatic Detection
	Manual Selection
V B	Load Settings

When the parameter file is correctly loaded, the settings are determined. Click **Custom** to check and modify the settings in the wizard. Click \bigcirc on the right side of the screen.

	1 OS sele	tion 2 3 Conf	irmation 4	
	2	nter installation settings.		
C	0	Default		C
	~ 01	Custom		
			Set	UD

 \rightarrow Go to step 10.

9. Click Custom.

	1 2 OS selection Settings	3 Confirmation
	2 Enter installation se	ttings.
\bigcirc	Default	
	Specify all settings for the	s.
	installation.	
		Setup

(1) Use this menu to configure RAID arrays with a RAID controller found automatically.



This wizard does not support the creation of RAID10 by using the onboard RAID controller (LSI Embedded MegaRAID). See *Chapter 2 (5. RAID System Configuration)* in *Maintenance Guide* when creating RAID10.

selected.	D controllers not to be	used for the OS installation i	f the incorrect RAID controller is
Device Info	mation		
RAID Cor	troller	:	Detail
Number	of Physical Drives	: 2	
Summary of	RAID Array		
Array #1 RAID0 (1c Logical Dr	lisk) ive1 (1117GB)		
-RAID Config	uration -		
	Configuring RAID Array		
	eeningering render interj		
			1 / 11 Page

Creating new logical drives

Clear the **Skip Configuring RAID Array** check box, and then click **Next**. Specify the parameters for logical drives following the wizard.

Important The existing RAID array is destructed and the contents of hard disk drive will be erased if you proceed with wizard.

Skipping the creation of new logical drives

Select the Skip Configuring RAID Array check box, and then click Next.

(2) Check the settings specified for **Basic Settings**.

Choose Use Windows standard installer, and then click Next.

If you need to copy the OEM driver, select the **Copy OEM drivers to removable media** check box.

Win Cho	oose Use Windows star dows installation disc. oose Install Windows u lications at one time.				
Γ	Basic Settings Operating system	: W	Indows Server 2012		
		rivers to removable m			
	Edition Language Time Zone	: Standard(: : English	Server with a GUI)	Canada)	2
					4 / 11 Page
	Back	Next		_	Cancel

On the following screen, click Finish.

The settings are now complete. Click Finish to close this window.	
	11 / 11 Page

On the following screen, click \bigcirc on the right side of the screen.



10. Check the parameter settings.

If you want to save the settings, connect removable media as needed and click Save.

	1 2 3 4 OS selection Settings Confirmation Installation
	3 Confirm installation settings.
0	(Check If valid installation settings are specified) Skip configuring RAID array.
	Operating system : Windows Server 2012 Use Windows standard installer)
	Copying OEM drivers : No
	Save
	Setup

Click \bigcirc on the right side of the screen.

11. Click Start to start the setup.

	1 2 3 4 C6 selection Settings Confirmation Installation
\bigcirc	Ready to set up the computer. A partition has already been created B you proceed, any data stored on the partition will be lost Configuring RAID system Copying OEM drivers Changing a CD/DVD Installing an OS
	<u>start</u> Settup

12. Continue setup according to the on-screen messages.

If the option for copying the OEM driver was chosen at step 9, the following message appears. Connect removable media to the server, and then click **Yes** to copy the OEM driver.

	Copy OEM drivers (Windows Server 2012). Set removable media, and then click Yes .
	[Message ID : G2000]
0	
	-

Insert the OS installation disc into the server, and then click OK.

	Insert an O	S installation disc	for installing.	[Message ID : .	12000]
?					

13. The server restarts 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

The system will start from the OS installation disc set in step 12 because the boot priority of CD/DVD is higher than Internal Flash Memory.

14. Press <Enter> key while "Press any key to boot from CD or DVD..." appears on the top of the screen. The boot sequence proceeds and the message "Windows is loading files..." will appear.

Note

- If "Windows is loading files..." message does not appear, <Enter> key was not pressed correctly. Restart and retry.
- If the OEM driver was copied at step 12, do not disconnect the removable media.

15. Click Next.



16. Click Install now.

Windows setup starts.

*	Wi	indows Setup	×
	H Wi	ndows Server 201	2
		Install now	
<u>R</u> epair your cor	nputer		
	rporation. All rights reserv	ed.	

- If the following message appears, go to step 17.
- If it does not, go to step 19.

ad driver	×	
	ter needs is missing. This could be a DVD, USB or Hard disk D, or USB flash drive with the driver on it, please insert it	
Note: If the installation med can safely remove it for this	ia for Windows is in the DVD drive or on a USB drive, you step.	
	Browse OK Cancel	
Tips	"CD, DVD, or USB flash drive" is show Flash Memory or removable media that	n in the above message, but use Internal copied the OEM drivers at step 12.

17. Select the destination, and then click OK.

Using removable media for OEM drivers (created at step 12)
Removable media:\OEM_driver\ws2012\megasr1
Using Internal Flash Memory
Internal Flash Memory:\010\win\winnt\oemfd\ws2012\megasr1
Tips The volume label of Internal Flash Memory is INTER-FLASH.

18. Select LSI Embedded MegaRAID, and then click Next.

- 19. Type a product key, and then click **Next.**
 - If you are using Backup DVD, this screen does not appear. Go to the next step.



20. Choose an operating system to install, and the click **Next**. The screen differs depending on an OS installation disc.



- 21. Confirm the license agreement.
 - If you agree, select I accept the license terms and then click Next.

MICROSOFT SOFTWARE LICENSE TERMS
These license terms are an agreement between you and
the server manufacturer that distributes the software with the server; or
the server installer that distributes the software with the server.
Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
updates,
· supplements,
supprenens,
Taccent the Firense terms
Net
Tior
T (gccept the license terms

22. Choose Custom: Install Windows only (advanced) at the following window.



23. "Where do you want to install Windows?" window appears. If the driver was loaded in step 17 and 18, or if a RAID controller is not used, go to step 27.

Click **Load Driver** in the window. If the following message appears, replace the OS installation disc and the EXPRESSBUILDER DVD in the optical disk drive, and then click **Browse**.

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]

If using Internal Flash Memory, you do not need to remove the OS installation disc.
Although "The Installation media can be a floppy disk, CD, DVD, or USB flash drive." appears on the screen, use the EXPRESSBUILDER DVD or Internal Flash Memory.

 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.)

If using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive: \010\win\winnt\oemfd\ws2012\megasr1

25. Select the following driver from the driver list shown, and then click Next.

[LSI Embedded MegaRAID]

Tips

26. If you used the EXPRESSBUILDER DVD, remove it and then insert the OS installation disc.



27. Create a partition to install an OS.Click **Drive options (advanced)**.If a partition has already been created, go to step 31.



28. Click New.

	ante ive 3 Unallocated Space	Total size 1861.7 GB	Free space Type 1861.7 GB	
€p Batricah € Lond de		Eormat	🗰 Ngw	
			19	

29. Specify the partition size in the text box, and then click Apply.

Name		Total				
Drive 3 Unal	located Space	1861.7	GB 1951.7 G	8		
49 Befresh	ADelete	@Ecemat	+ Nov			
Load driver	a Estend	Sizes 1900	5394 ÷ M8	Apply	Cancel	
					Net	
_			_			

Windows Setup	
	II Windows features work correctly, Windows might create ions for system files.
	OK Cancel
Tips	When creating a partition, the OS installer creates the following partitions at top of the hard disk drive automatically.
	- Recovery Partition
	- EFI System Partition (ESP)
	 Microsoft Reserved Partition (MSR)

- 30. Choose the partition created in step 29, and then click Format.
- 31. Choose the created partition, and then click Next.

Q Dive 0 Patition 1 Recovery 300.048 272.048 Paceway Q Dive 0 Patition 2 100.0148 555.048 System Q Dive 0 Patition 1 122.048 555.048 System Q Dive 0 Patition 1 122.048 122.048 RESNER Q Dive 0 Patition 1 122.048 122.048 RESNER Q Dive 0 Patition 4 272.408 Pomery 4g Extenth X Dive 0 Format Q Load Alver Q Extend Velocities	Name	Total size	Free space	
Image: Drive D Partition 3 122.0 MB 122	-	300.0 MB		
Dive D Particion 4 278.4 GB 278.4 GB Primary Fig Behnch X Dates © Format © Nave	-			
fg Eelresh X Delete ♀ Eormat ∰ Ngw	1			
			iji Ngw	

ImportantIf the four partition types Recovery, System, MSR (Reserved), and Primary have not
been created in the created partition, it means that you failed to create the partition.
Delete the partition you attempted to create, and then create a new partition.If you have connected a data disk to a partition, be careful not to delete that partition.

Tips

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

When the following message appears, Windows installation starts automatically.

-		
	🚜 Windows Setup	
	Installing Windows	
	Your computer will restart several times. This might take a while.	
	Copying Windows Res (0%) Getting files ready for installation Installing yorktin	
	incularing operations Fineshing up	
Collecting information	2 Installing Windows	

32. Type a password and click Finish.

	Setting Type a password for the to this computer.	S • built-in administrator account that you can	use to sign in
	User name	Administrator	
	Password		
	Reenter password		
сь			Finish

33. <u>Press <Ctrl> + <Alt> + <Delete> keys to sign in.</u>



34. Type the password and press <Enter> key.



Windows Server 2012 starts.

35. The following screen appears according to the installation type selected (or displayed) in step 18.

Server with a GUI

Recycle Bin			
6	Serve	er Manager 📃 💻 🗖	×
د الله الله المعالم المعام المعام المعام المعام (Baseline and Baseline and Baselin	bard	• 🗇 🚩 Manage Iook Yew Help	
Excal Server Local Server All Server File And Storage Services	WELCOME TO SER	Configure this local server Configure this local server Add roles and features Add other servers to manage Create a server group	
	LEARN MORE ROLES AND SERVE	Nide	

Server Core Installation

-	Administrator: C:\Windows\system32\cmd.exe	×
C:\Users\Ads	vinistrator>_	

Tips

Refer to Microsoft Website for more details. **Configure and Manage Server Core Installations** <u>http://technet.microsoft.com/us-en/library/ijj574091.aspx</u>

- 36. Install Starter Pack by reading Chapter 1 (4.4 Installing Starter Pack).
- 37. Install drivers and specify detailed settings by reading *Chapter 1 (4.5 Installing and Setting Up Device Drivers)*.
- 38. Confirm if Windows is activated according to Chapter 1 (4.6 License Authentication).
- 39. See Chapter 1 (4.7 Setup of Windows Server 2012 NIC Teaming (LBFO)) to set up a team as needed.
- 40. Install the applications as needed by reading Chapter 1 (4.8 Installing the Applications).
- 41. Specify the dump file settings by following the instructions described in *Chapter 1 (7. Setup for Solving Problems)*.

Windows installation 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 Windows.

Important	Also install Starter Pack in the following cases. – The hardware configurations have changed – Windows is restored using a restore process or backup tool
Note	The Scalable Networking Pack (SNP) feature is disabled upon Starter Pack installation is complete. The setting of SNP feature may affect the system performance. Contact your sales representative for details.
Tips	If the OS is installed by EXPRESSBUILDER without using Windows Standard Installer, Starter Pack is already installed. If the hardware configuration is not changed, you do not need to install Starter Pack again.

4.4.1 Using EXPRESSBUILDER DVD

- 1. Sign-in to Windows on the server with the built-in administrator account.
- 2. Insert the EXPRESSBUILDER DVD into the optical disk drive.
- 3. Run the installer of Starter Pack according to the Windows installation type.

Server with a GUI

(1) Click Integrated Installation on the menu.

EXPRESSBU	ILDER		NEC
		Instruction Manuals	
	0	Versions	
C	F	Integrated Installation	
		Applications	
		Files for Setup	
	٩	Maintenance	
	Ы	Exit	
			Version x.xx-xxx.xx (xxx)

(2) Click Starter Pack, and then click Install.

EXPR	ESSBUILDER		NE
	Integrated Installation		
	Install the following software. - Unable to select [Applications] when Si - Uninstall the application prior to reinst		
	Starter Pack		
(2	NEC ESMPRO ServerAgentService	Rev1.03	Installed(Rev1.03)
	Express Report Service	Rev3.5E	Installed(Rev3.5E)
	Express Report Service (HTTPS)	Rev3.4	Not installed
	Universal RAID Utility	Rev4.00	Not installed
	Product Info Collection Utility	Rev2.8.1	Installed(Rev2.8.1)
	NEC ExpressUpdate Agent	Rev3.14	Not installed
?			Install

(3) Wait for about 1 to 3 minutes without operating a key and mouse until the copy process completes.

Server Core installation

 Type the following command t the command prompt. In the example below, the optical disk drive is drive D.

cd /d D:\010\win\winnt\bin

```
C:\Users\administrator>cd /d D:\010\win\winnt\bin
```

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

Pkgsetup.vbs

D:\010\win\winnt\bin>**pkgsetup.vbs**

- (3) Wait for about 1 to 3 minutes without operating a key and mouse until the copy process completes.
- 4. Click OK to proceed to the installation.

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

Wait for about 3 to 5 minutes without operating a key and mouse until the installation completes.

5. The following message appears when the Starter Pack installation is complete. Remove the EXPRESSBUILDER DVD.



6. Click **OK** to restart the system.

Installation of Starter Pack is now complete.

4.4.2 Using Internal Flash Memory

- 1. Remove removable media and CD/DVD from the server and restart the server.
- 2. Press <F3> key at the following message during POST.

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

3. Choose OS installation *** default *** at the following screen.



The following screen appears.



The server starts from EXPRESSBUILDER.



4. <u>Choose English on the language selection window, and then click OK.</u>



5. Click Utilities.

Setup)
Q Utilities		<i>a</i> (
Move to Utilities Menu.		
Ö Exit		

6. Click Starter Pack Installation.

.	RAID Configuration Data	
	File Execution	
	Starter Pack Installation	
	all Starter Pack to the installed	
Inst Win	h Memory	

7. Click Yes to proceed to the installation.

0 36	lection				
	Starter I	Pack will be installed		vs system. Proceed Message ID : P2000	
•	2				
		Yes	No]	

8. Click **Close** on the following screen.

 Informat 	ion
	Copying Starter Pack is complete.
	Click Close to restart the computer.
	To install Starter Pack, follow the message after logging on to
	Windows.
0	Run the following file on the system drive when installing with
	Server Core mode.
	[System Drive]:\StartPKG\app_pkg.bat
	[Message ID : P1003]
	Close

The server will restart. Do not press <F3> key and start Windows.

9. Install Starter Pack according to the Windows installation type.

Server with a GUI

Go to the next step.

Server Core installation

(1) Type the following command at the command prompt.

cd /d C:\StartPKG

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

(2) Type the following command.

app_pkg.bat

C:\StartPKG>**app_pkg.bat**

10. Wait for about 1 to 3 minutes without operating a key and mouse until the preparation completes.

Applying Starter Pack is in preparation. Please wait for a while.

11. Click **OK** to proceed to the installation.

Starte	r Pack ×
Setup is going to install Star If you install it, click [OK], If you wish to cancel it, click This process disables Scalab If you use SNP function, ena	[Cancel]. le Networking Pack(SNP) function.
	OK Cancel

Wait for about 3 to 5 minutes without operating a key and mouse until the installation completes.

12. Click OK to restart Windows.



Installation of Starter Pack is now complete.

4.4.3 Using EXPRESSBUILDER installed in Windows

If EXPRESSBUILDER has been installed in Windows, you can use it as a Windows application. For details of EXPRESSBUILDER, see *Chapter 2 (6. Details of EXPRESSBUILDER)* in *Maintenance Guide*.

- 1. Run the shortcut or NEC EXPRESSBUILDER from Windows Start menu.
- 2. See step 3 and the subsequent steps in *Chapter 1 (4.4.1 Using EXPRESSBUILDER DVD)* for further procedure.

4.5 Installing and Setting Up Device Drivers

Install and set up device drivers provided as standard. For details of an optional device, refer to the manual that comes with the optional device.

4.5.1 Installing the LAN drivers

(1) LAN drivers

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

Important	 Teaming of network adapters by using BACS or PROSet is not supported. Wake On LAN (WOL) is supported by the standard network adapters only. However, Wake On LAN in the shutdown state is not supported in the following case: Select [Control Panel] - [System and Security] - [Power Options] - [Choose what the power button does], and if [Turn on fast startup] is selected in [Shutdown settings] on [System Settings] screen. When [Turn on fast startup] is not displayed, fast startup feature is
Note	 disabled. To change the LAN or BACS driver settings, sign in to Windows from a local console using an administrator 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. N8104-149/150/151/152/153

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

The LAN driver is not installed if N8104-153 is not connected to the server before installing Windows with EXPRESSBUILDER or installing Starter Pack. Perform the steps below to install the N8104-153 LAN driver manually.

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

Tips

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory.

2. Open Command Prompt, and run install.bat in the following folder.

Using EXPRESSBUILDER DVD:

EXPRESSBUILDER DVD:\010\win\winnt\ws2012\lan

If Starter Pack was installed from Internal Flash Memory:

System Drive:\StartPKG\ws2012\lan

 When the following message appears, remove the EXPRESSBUILDER DVD from the optical disk drive, and then restart Windows.

Installation Completed.

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.

Network adapters for the standard configuration

Broadcom NetXtreme Gigabit Ethernet #xx (*1)

Optional LAN board:

N8104-149: Broadcom BCM57810 NetXtreme II 10 GigE (NDIS VBD Client) #xx (*1)

N8104-150/151/152: Broadcom NetXtreme Gigabit Ethernet #xx (*1)

```
N8104-153:
Intel(R) Ethernet Controller X540-AT2 #xx(*1)
```

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

Tips

ID of N8104-149 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.

Tips

When using N8104-149, you can specify "10 Gb Full" for network adapter and "Auto Negotiation" to switching hub.

- 1. Open the Device Manager.
- 2. Expand **Network Adapters**, and then double-click the name of the network adapter. The properties of the network adapter will be displayed.
- 3. On the Advanced tab, 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 Windows.

The link speed setting is now complete.

(2) Using N8104-150/151/152

When using N8104-150/151/152 with the server, follow the procedure below to set it.

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

Tips

EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory.

2. Double-click pgdyavd_disable.vbs in the following folder.

Using EXPRESSBUILDER DVD:

EXPRESSBUILDER DVD:\010\win\winnt\ws2012\lan\bcom\ws2012x64\lan

If Starter Pack was installed from Internal Flash Memory:

System drive: \StartPKG\ws2012 \lan\bcom ws2012x64 \lan

3. When the following message appears, click OK.

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

Tips

The message "Action: Non" indicates that the LAN driver is already set.

4. Remove the EXPRESSBUILDER DVD from the optical disk drive, and then restart the Windows.

Setup is now completed.

4.5.3 Using InfiniBand board (N8104-146/147)

The driver for InfiniBand board (N8104-146/147) is installed automatically when Windows or Starter Pack is installed from EXPRESSBUILDER.

To install the driver for InfiniBand board separately, refer to the manual that comes with the board.

Note

If InfiniBand board is disabled after installing Starter Pack, enable Mellanox ConnectX-3 VPI (MT04099) Network Adapter in Device Manager.

4.5.4 Graphics accelerator driver

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

To reinstall drivers separately, follow the steps below.

- 1. Insert the EXPRESSBUILDER DVD into the optical disk drive. When Autorun Menu appears, close the menu.
 - **Tips** EXPRESSBUILDER DVD is unnecessary if Starter Pack was installed from Internal Flash Memory.
- 2. Double-click the install.bat icon in the following folder.
 - Using EXPRESSBUILDER DVD: EXPRESSBUILDER DVD:\010\win\winnt\ws2012\video
 - If Starter Pack was installed from Internal Flash Memory: System drive:\StartPKG\ws2012\video

You will be prompted to confirm the End User License Agreement during this process. Click **ACCEPT** to continue.

3. Remove the EXPRESSBUILDER DVD from the optical disk drive, and then restart Windows.

Graphic accelerator driver installation is now complete.

4.5.5 Using a SAS controller (N8103-142/184)

The driver for SAS controller N8103-142/184 is automatically installed by Windows Plug-and-Play.

4.5.6 Using a RAID Controller (N8103-179)

The driver for RAID controller N8103-179 is automatically installed by Windows Plug-and-Play.

4.5.7 Using a Fibre Channel controller (N8190-157A/158A/159/160)

The driver for Fibre Channel controller N8190-157A/158A/159/160 is automatically installed by Windows Plug-and-Play.

If Fibre Channel controller (N8190-157A/158A/159/160) is additionally installed after the OS has been installed, install Starter Pack again.

4.6 License Authentication

To use Windows Server 2012, perform the license authentication procedure.

Confirm if your license is authenticated. If not, perform the following procedures to have your license authenticated.

Connect to the Internet or use the telephone to perform the authentication procedure.

(1) Server with a GUI

1. Click **Search** on Charms Bar or click **Run** on the menu that appeared by right-clicking the bottom left corner on the screen.



2. Type "slui" in Search or Open, and then press <Enter> key.



3. Follow the on-screen message to continue the license authentication procedure.

	Windows Activation			- 0
T 🏲 + Cort	trol Fanel + System and Security + Action Center + Windows Activation	ΥĢ	Search Control Far	el
580	Windows isn't activated			
1	Windows can't be activated right now. Try activating Windows later. If this issue persists, cort Support online to activate Windows.	act Microsoft Customer (levice and	
	Activate			
	Current edition Windows Server 2012 Standard			
	Current product key			
	Center: Microsoft Customer Service and Support online			
	What is a product key! Read the Microsoft Software License Terms			
	Activation datalls		•	
				Can
				-

Tips

If your license is already authenticated, you do not need to perform this procedure.

Windows activation is now complete.

(2) Server Core installation

1. Type the following command at the command prompt, and then press <Enter> key. slmgr -dli

 $C: \verb|Users|administrator> \texttt{slmgr} -\texttt{dli}$

If license authentication is required, go to the next step. If your license is already authenticated, skip the next and the subsequent steps.

2. Change the product key as follows.

Using Backup DVD:

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

C:\Users\administrator>slmgr -ipk <Product key on COA label>

Using Windows Server 2012 DVD-ROM:

You do not need to change the product key.

Go to the next step.

3. Perform license authentication by using the Internet or telephone.

Using the Internet:

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

 $C: \verb|Users|administrator> \texttt{slmgr} - \texttt{ato}$

The authentication is now finished.

Using telephone:

Type the following command to get an Install ID for authentication, and then press <Enter> key.

C:\Users\administrator>slmgr -dti

Refer to the file <code>%systemroot%\system32\sppui\phone.inf</code> to confirm the telephone number of Microsoft Licensing Center.

Call Microsoft Licensing Center and tell your Install ID.

Type the confirmation ID in the following command, and then press <Enter> key.

C:\Users\administrator>slmgr -atp <Confirmation ID>

The authentication is now finished.

4.7 Setup of Windows Server 2012 NIC Teaming (LBFO)

Set up the network adapter teaming feature as shown below.

(1) Launching the NIC teaming setup tool

- 1. Launch Server Manager.
- 2. Select Local Server.
- 3. In the Properties window, click Enable or Disable for NIC teaming.

The NIC teaming setup tool will launch.

Tips

The NIC teaming setup tool can also be launched by opening the **Run** dialog box, typing lbfoadmin, and then press <Enter> key.

(2) Creating a team

Create a team by using the NIC teaming setup tool.

- In the Servers section, select the name of the server to set up.
 If there is only one server connected, the name of the server is selected automatically.
- 2. In the Teams section, under Tasks, select New Team. The New Team wizard will start.
- 3. Type the name of the team to create, and then select the network adapter to include in the team from the **Member adapters** list.
- 4. Click Additional properties.
- 5. Specify the required settings, and then click OK.

Teaming mode

Static Teaming	Configures static aggregation between the NIC and switches.
Switch Independent	Configures teaming on the NIC side without depending on the switch settings.
LACP	Configures dynamic aggregation between the NIC and switches.

Load balancing mode

Address Hash	Distributes the load based on IP addresses and port numbers.
Hyper-V Port	Distributes the load to each of the virtual switch ports used by the virtual machines.
Dynamic	 Distributes the load based on IP addresses and port numbers in sending. Distributes the load same to "Hyper-V Port" in receiving.

Standby adapter

Select one adapter to be set to standby mode from the adapters in the team.

Setting all adapters to active mode is also possible.

Primary team interface

Any VLAN ID can be specified for the primary team interface.

(3) Notes and restrictions

- NIC teaming on a guest OS is not supported.
- Teaming of virtual NICs on the host OS is not supported in the Hyper-V environment.
- When STP (Spanning Tree Protocol) is enabled on network switch ports to which network adapters of the team are connected, network communications may be disrupted. Disable STP, or configure "PortFast" or "EdgePort" to the ports.
 - * About setting the network switch of the connection destination, see the manual of the network switch.
- All NICs in the team must be connected to the same subnet.
- Teaming of different speed NICs is not supported.
- Teaming of different vendor's NICs is not supported.

Refer to the following website for the latest information.

http://www.58support.nec.co.jp/global/download/w2012/index.html

Installing the Applications 4.8

Some applications in EXPRESSBUILDER can be installed collectively by performing the procedures described below. When installing these applications individually, see Chapter 2 (Installing Bundled Software). This feature is only available on the server with a GUI.

- Sign-in to Windows with the built-in administrator account. 1.
- 2. Insert the EXPRESSBUILDER DVD into the optical disk drive. If EXPRESSBUILDER has been installed in Windows, you can use it as a Windows application. Run the shortcut or NEC EXPRESSBUILDER from Windows Start menu.
- 3. Click Integrated Installation on the menu.

EXPRESSE	BUILDER		NEC
		Instruction Manuals	
	0	Versions	
ſ	P	Integrated Installation	
		Applications	
		Files for Setup	
	٩	Maintenance	
	Ы	Exit	
			Version x.xx-xxx.xx (xxx)

On the following screen, select the check boxes to install, and then click Install. 4.

Integrated Installation		
Install the following software. - Unable to select (Applications) when S - Uninstall the application prior to reinst		
O Starter Pack		
Applications NEC ESMPRO ServerAgentService Express Report Service Dxpress Report Service (HTTPS)	Rev1.03 Rev3.5E Rev3.4	Installed(Rev1.03) Installed(Rev3.5E) Not installed
Universal RAID Utility Product Info Collection Utility NEC ExpressUpdate Agent	Rev4.00 Rev2.8.1 Rev3.14	Not installed Installed(Rev2.8.1) Not installed
		Install
Note	Applicat	tions available for ins

are selected by default.

The selected applications are automatically installed.

- When the completion message appears, click OK, and then remove the EXPRESSBUILDER DVD from 5. the optical disk drive.
- 6. See Chapter 2 Installing Bundled Software to install the bundled software or confirm that the software is appropriate to your system.

Now installation of applications is completed.

4.9 Installation When Multiple Logical Drives Exist

Back up the user data before starting installation.

(1) Installation procedure

- Setup with EXPRESSBUILDER

Important	Before starting setup, be sure to disconnect hard disk drives from the RAID
	controller that is not used for setup, if the server has two or more RAID
	controllers installed.
	 Disconnect an external disk (*) from the server by turning the power of it off
	or disconnecting cables. Install those hard disk drives and cables after
	setup has completed. Conducting setup with those being connected with
	the server may cause existing data to be erased unintentionally.
	* Disk array unit (such as NEC Storage) or hard disk drive in Disk Expansion Unit

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

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

- Setup with Windows standard installer
 - 1. See Chapter 1 (4.3 Setup with Windows Standard Installer), and start setup.
 - 2. 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 *might not match the server's slot* of the hard disk drives. *Distinguish between the hard disk drives by viewing the hard disk drive capacity and partition size* 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: <u>http://support.microsoft.com/kb/937251/en-us</u>
	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
	after setup is complete. Make sure that the drive letters assigned in this
	window are correct, and then proceed with setup.

3. See *Chapter 1 (4.3 Setup with Windows Standard Installer)*, and proceed to setup Windows with Windows 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. However, these steps cannot change drive letter assignments for the system volume or boot volume.

- 1. On 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 Assign next drive letter, and then select the drive letter you want to assign.
- 5. Click OK.
- 6. Close the Server Manager.

5. Setting Up Windows Server 2008 R2

Set up Windows Server 2008 R2.

5.1 Before Starting Setup

Read through the cautions explained here before starting setup.

- **EB** : Confirm during Setup with EXPRESSBUILDER
- **OS** : Confirm during Setup with Windows standard installer

BIOS	BIOS setting		
EB	08	Change Boot Mode to Legacy Mode. See <i>Chapter 2 (1. System BIOS)</i> in <i>Maintenance Guide</i> for details.	
		$\textbf{Boot} \rightarrow \textbf{Boot} \ \textbf{Mode} \rightarrow \textbf{Legacy}$	
EB	OS	Select Disabled for x2APIC feature of processor. See <i>Chapter 2 (1. System BIOS)</i> in <i>Maintenance Guide</i> for details.	
		Advanced \rightarrow Processor Configuration \rightarrow x2APIC \rightarrow Disabled	
Hardware configuration			
The following hardware configurations require special procedures.			
		Reinstalling to a mirrored volume	
EB	08	When you install Windows Server 2008 R2 in an environment with a mirrored volume created using Windows, disable mirroring before installing the operating system and enable it again after the installation. Use [Computer Management] – [Disk Management] to create, disable, or remove the mirrored volume.	
EB	08	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, or similar media Do not set any media such as DAT or LTO while installing an OS.	
		Installing in internal or external multiple logical drives	
		For details on installing operating systems to a system in which two or more RAID Controller exist, or	
EB	OS	to an external disk drive* that is not subject to setup, see Chapter 1 (5.9 Installation When Multiple	
		Logical Drives Exist).	
		* Disk array unit (such as iStorage) or hard disk drive in Disk Expansion Unit.	
EB	08	Reinstalling to hard disk drives that have been upgraded to dynamic disks If the hard disk drive has been upgraded to a dynamic disk, the operating system cannot be reinstalled to it with the existing partitions. Set up the operating system with the Windows standard installer.	
Setup when mass memory is installed EB **0**S 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 Windows 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 the 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. If sufficient space cannot be secured for the paging file, perform either of the following after setting up using Windows Standard Installer is complete. Specify a hard disk drive other than the system drive as the location to store the paging file for collecting memory dump Create a paging file of the installed memory size + 300 MB or more in a drive other than the system drive. The paging file that exists in the first drive (in the order of drive letter C, D, E, ...) is used as the temporary memory dump location. Therefore, the size of the paging file must be "installed memory size + 300 MB" or more. Paging files in dynamic volumes are not used for dumping memory. The setting is applied after restarting the system. Example of correct setting C: No paging file exists D: Paging file whose size is "installed memory size + 300 MB" or more \rightarrow The paging file in drive D can be used for collecting memory dump because its size satisfies the requirement.

Example	e of incorrect setting 1
	nging file whose size is smaller than the installed memory size nging file whose size is "installed memory size + 300 MB" or more
coll	e paging file in drive C is used for collecting memory dump, b lection may fail because the size of the paging file is smaller than the talled memory size.
Example	e of incorrect setting 2
D: Pa	nging file whose size is "installed memory size × 0.5" nging file whose size is "installed memory size × 0.5" nging file whose size is 300 MB
but	total paging file size in all drives is "installed memory size + 300 MB collection may fail because only the paging file in drive C is used for ecting memory dump.
Example	e of incorrect setting 3
D: Pa	o paging file exists Iging file whose size is "installed memory size + 300 MB" or mor dynamic volume)
-	ing files in a dynamic volume cannot be used for collecting memor np. Thus, collecting memory dump fails.
-	ive other than the system drive for "Dedicated Dump File".
ate the r licated Du	egistry shown below by using the Registry Editor and specify th Imp File.
ate the r licated Du When spe	egistry shown below by using the Registry Editor and specify th ump File. ecifying the file named "dedicateddumpfile.sys" in drive D>
ate the r licated Du	egistry shown below by using the Registry Editor and specify th Imp File.
ate the r licated Du When spe	egistry shown below by using the Registry Editor and specify th ump File. ccifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM
ate the r licated Du When spe Key:	egistry shown below by using the Registry Editor and specify th ump File. ecifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl
ate the r licated Du When spe Key: Name:	egistry shown below by using the Registry Editor and specify th ump File. ecifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile
ate the r dicated Du When spe Key: Name: Type: Data:	egistry shown below by using the Registry Editor and specify the ump File. ecifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile REG_SZ D:\dedicateddumpfile.sys
ate the r dicated Du When spe Key: Name: Type: Data: ote the fo	egistry shown below by using the Registry Editor and specify the ump File. ecifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile REG_SZ D:\dedicateddumpfile.sys
ate the r licated Du When spe Key: Name: Type: Data: ote the fo	egistry shown below by using the Registry Editor and specify the ump File. acifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile REG_SZ D:\dedicateddumpfile.sys Illowing when specifying Dedicated Dump File: strict attention to edit the registry.
ate the r dicated Du When spe Key: Name: Type: Data: ote the fo • Pay s • The s	egistry shown below by using the Registry Editor and specify the specifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile REG_SZ D:\dedicateddumpfile.sys Ilowing when specifying Dedicated Dump File: strict attention to edit the registry. setting is applied after restarting the system.
ate the r dicated Du When spe Key: Name: Type: Data: Ote the fo • Pay s • The s • Spec	egistry shown below by using the Registry Editor and specify the specifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile REG_SZ D:\dedicateddumpfile.sys Ilowing when specifying Dedicated Dump File: strict attention to edit the registry. setting is applied after restarting the system.
ate the r dicated Du When spee Key: Name: Type: Data: Ote the fo • Pay s • The s • Spec • Dedic • To co	egistry shown below by using the Registry Editor and specify the ump File. ecifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile REG_SZ D:\dedicateddumpfile.sys Illowing when specifying Dedicated Dump File: strict attention to edit the registry. setting is applied after restarting the system. ify a drive that has free space of "installed memory size + 300 MB" of cated Dump File cannot be placed in dynamic volumes. Illoct memory dump by using Dedicated Dump File, a paging file is re
ate the r licated Du When spee Key: Name: Type: Data: Ote the fo Data: • Pay s • The s • Spec • Dedic • To co drive.	egistry shown below by using the Registry Editor and specify the imp File. actifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile REG_SZ D:\dedicateddumpfile.sys Illowing when specifying Dedicated Dump File: strict attention to edit the registry. setting is applied after restarting the system. ify a drive that has free space of "installed memory size + 300 MB" of cated Dump File cannot be placed in dynamic volumes. Illect memory dump by using Dedicated Dump File, a paging file is reference.
ate the r licated Du When spec Key: Name: Type: Data: Data: ote the fo • Pay s • The s • Spec • Dedic • To co drive. • Dedic	egistry shown below by using the Registry Editor and specify the ump File. ecifying the file named "dedicateddumpfile.sys" in drive D> HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl DedicatedDumpFile REG_SZ D:\dedicateddumpfile.sys Illowing when specifying Dedicated Dump File: strict attention to edit the registry. setting is applied after restarting the system. ify a drive that has free space of "installed memory size + 300 MB" of cated Dump File cannot be placed in dynamic volumes. Illoct memory dump by using Dedicated Dump File, a paging file is re-

OS	The system partition size can be calculated by using the following formula. Size required to install the OS + paging file size + dump file size + application size				
	Full installations				
	Size required to install the OS	= 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				
	Dump file size	= installed memory size + 300 MB			
	Application size	= as required by the application			
	Server Core installations				
	Size required to install the OS	= 11,100 MB			
		(Windows Server 2008 R2 + Service Pack 1)			
		= 3,700 MB			
		(Windows Server 2008 R2 with Service Pack 1) = 3,500 MB			
		(Windows Server 2008 R2)			
	Paging file size (recommended	d) = installed memory size × 1.5			
	Dump file size	= installed memory size + 300 MB			
	Application size	= as required by the application			
	8,000 MB + (1,024 MB × 1.5) + = 10,960 MB The above mentioned partition size Ensure that the partition size is suffi The following partition sizes are rec	e is the minimum partition size required for system installatio cient for system operations.			
	Full installations	: 32,768 MB (32 GB) or more			
	Server Core installations	: 10,240 MB (10 GB) or more			
	*1 GB = 1,024 MB				
	(dump file). The initi enough to store dun Make sure you set a	a sufficient paging file size. If the paging file is insufficient, I memory shortage that may result in an inability to collect			
	concet debug miem				
	Regardless of the si	zes of internal memory and write debug information, the e dump file is "size of internal memory + 300 MB".			

	F	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. $\qquad \qquad $
Hyper-V 2.0	0 support	
EBOS		bllowing web site for information related to Hyper-V 2.0.
Using BitL	ocker	
	_	cker, note the following. o keep the recovery password secure. Do not keep it near a server running BitLocker.
	Important	If the recovery password is not entered, the OS cannot be started, and the content of the partition encrypted by BitLocker cannot be referenced any more.
		The recovery password might be required at startup of the OS after the following:
		 Replacement of motherboard
EBOS		Change of BIOS setting
		 Initialization of trusted platform module (TPM) * * Depending on your system, it may not be supported.
	 To reinstance 	Refer to the document about hardware. all the operating system into a partition that is encrypted with BitLocker, delete the
		-encrypted partition prior to reinstallation.
	that you	releases software updates for BitLocker encryption. If using BitLocker, it is important read through the information provided by Microsoft. Also read through the checklist d by Microsoft.
	-	ls, visit <u>http://support.microsoft.com/kb/975496/en-us.</u>

Insta	lling S	ervice Pack
EB	08	 If the OS installation media contains Service Pack 1, you do not need to apply the service pack again. You can install the Service Pack on the server. When the Service Pack is not attached to your system, prepare it by yourself.
Licer	nse au	thentication
		License authentication is required depending on the installation of Windows. For details, see <i>5.6 License Authentication</i> .
EB	08	 Activate within 30 days following installation. A virtual product key is used when installing in a virtual environment. It is not used when directly installing an operating system to a physical server.

5.2 Setup with EXPRESSBUILDER

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.

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 EXPRESSBUILDER may delete all data of the hard disk drive depending on the settings. Pay attention to input parameters. You must be especially careful when configuring the following: RAID settings Partition Settings At re-installation, backing up user data is recommended. Before starting setup, be sure to disconnect hard disk drives from the RAID Controller that is not to be setup. Install those hard disk drives after setup has completed. Conducting setup with hard disk drives being connected with RAID Controller may cause existing data to be erased unintentionally. It is recommended to make backup copy of user data before starting setup.
Note	 The Scalable Networking Pack (SNP) function is disabled on systems that have been installed by using EXPRESSBUILDER. The setting of SNP function may affect the system performance. Contact your sales representative for details. When using an onboard RAID controller (LSI Embedded MegaRAID):
	Do not support the creation of RAID10 by using the onboard RAID controller. See <i>Chapter 2</i> (5. <i>RAID System Configuration</i>) in <i>Maintenance Guide</i> when creating RAID10.
Tips	• Setup with EXPRESSBUILDER allows you to use a pre-specified parameter file or save the parameters specified in setup as a parameter file on removable media or Internal Flash Memory.
	• For details on creating a parameter file, see Chapter 1 (8. Windows OS Parameter File).

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
 - 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
- > Prepare if needed:
 - Removable media for Windows OS parameter file
 - Service Pack

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

Tips

The OS can be installed in this server by starting EXPRESSBUILDER stored in the Internal Flash Memory without using the EXPRESSBUILDER DVD.

5.2.3 Setup procedure

Setup with EXPRESSBUILDER uses wizard to configure parameters and allows you to save the parameters specified in setup on removable media as a parameter file.

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. Select OS installation *** default ***.
 - You will automatically advance to step 4, with no need for further input.



The following window appears.



The server starts from EXPRESSBUILDER.



4. <u>Select English on the language selection window, and then click OK.</u>



5. Click Setup.

Set up the	Setup	₽
	Versions	
O	Exit	

6. On the OS selection menu, select the OS to install or specify the parameter file.

□ When not using parameter file □ When using a parameter file

: Go to Step 7. : Go to Step 8.

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

7. When not using a parameter file, select an OS by either of the following two ways:

	n operating system		
(Click Manu	al Selection to configure a	RAID array only)	_
E Auto	omatic Detection	1)
🔲 Mar	nual Selection)
🕒 Loa	d Settings		

hatically deter Automatic De				
CS selection	2 Settings	3 Confirmation	4 Installation	
Select	an operatin	g system to inst	all.	

	Automatic Detection	ø
Select an automatic disc.	operating system ally with an installation	
B	Load Settings	

Insert the OS installation media, and then click OK.

	OS installation disc. BUILDER will detect t	ne OS you want to	install.
		[Messa	age ID : B2014]
3			

(2) Click \bigcirc on the right side of the screen.



	Settings	3 Confirmation	4 Installation
		system to inst configure a RAID array	
E9 A	utomatic De	tection	
	lanual Selec	tion	De
	t the target OS of n from the menu 5		

(2) From the Windows list, select Windows Server 2008 R2, and then click OK.

	Select an operating system to install. Windows Windows Server 2008 R2
	VMware
2	C RAID Configuration Only
	C RAD Configuration Only

(3) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.

	1 OS select	ion Settings	3 Confirmation	4 Installation	
1		lect an operating	-		
	e	Automatic Det	tection		\bigcirc
~		Manual Select	ion		
	ß	Load Settings			
				Se	tup

8. When using the parameter file, click Load Settings.

1 Se	lect an operating system to install.
(Cli	ck Manual Selection to configure a RAID array only)
e	Automatic Detection
	Manual Selection
Þ	Load Settings
Load in	LOAd Settings

Follow the on-screen instruction to load the parameter file (*.tre).

	Choosing a l	File
mnt 🗐	usr_connect	
Places	Name	✓ Size Modified
Search Becently Used	i carom t	05/08/2014
Desktop		
Documents Music Pictures		
Videos Downloads		
Add	ve	
		Cancel Open

Tips

For the removable media in which the parameter file is saved, see "/mnt/usr_connect/usb*" (* indicates a number).

Click \bigcirc on the right side of the screen.

	elect an operating system to instal	
_	ick Manual Selection to configure a RAID array only	»
E	Automatic Detection	
	Manual Selection	\supset
× B	Load Settings	

When the parameter file is correctly loaded, the setting is determined. Click **Custom** to check and modify the setting in the wizard. Click \bigcirc on the right side of the screen.

	1 OS select	2 Settings	3 Confirmation	4 Installation	
	2 "	ter installation sett	ings.		
\bigcirc	¢	Default			\bigcirc
	~ 01	Custom			
				Set	up

 \rightarrow Go to step 10.

9. Specify the setup parameters by using either of the following methods:

Default Custom	2 "	ter installation settings.	
Custom	0	Default	
	63	Custom	

Use Default:

(1) Click Default.

	1 OS selection 2 Settings 3 Confi	rmation Installation
	2 Enter installation settings.	
3	Default	₽
\sim	Specify minimum settings for the installation. Default values are used for other settings.	
		Setup

(2) Select the edition of the OS to install from the **Edition** list. Type the password, and then click **Finish**.

1000	Operating system	: Windows Se	rver 2008 R2		
	Edition	: Standard(F	ull Installation)	0	
	Language	: English	0		
	Password Settings				
	Administrator Pass	word	-		(Required)
	Reenter Administra		:		(Required)
	Reenter Administra	nor Password	· L		(Reduired)

 Note
 Computer name and Administrator Password are required parameters.

 Enter Administrator Password that satisfies the following conditions:
 –

 Contains 6 or more characters
 –

 Contains characters from at least three of the following categories:

- Contains characters from at least three of the following categories: numbers, uppercase letters (A through Z), lowercase letters (a through z), and symbols.
- (3) Click \bigcirc on the right side of the screen.

2 Enter installation settings.			Installation	
	2 ▫	ter installation setting	s.	
	~ o	Default		
	4			Ľ

 \rightarrow Go to step 10.

Use Custom:

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

When using an onboard RAID controller (LSI Embedded MegaRAID):

Do not support the creation of RAID10 by using the onboard RAID controller. See *Chapter 2* (5. *RAID System Configuration*) in *Maintenance Guide* when creating RAID10.

_	A 11	10	10	14	
3	Wizard				
U U	An operating system will be Jninstall all RAID controllers selected.			ring RAID controller: he incorrect RAID controller is	
	Device Information			Detail	1
	Number of Physical D	rives :	2	Detail	
	Summary of RAID Array-				ī
$\langle \rangle$	Array #1 RAID0 (1disk) Logical Drive1 (1117	7GB)			
	RAID Configuration				J
	Skip Configuring F	RAID Array			
				1 / 11 Page	
		Next		Cancel	
					-

When creating new logical drives

Note

With the **Skip Configuring RAID Array** check box cleared, click **Next**. Set up the logical drives according to the wizard.

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 Select the Skip Configuring RAID Array check box, and then click Next.

(3) Check the settings specified for Basic Settings. Choose Install Windows using EXPRESSBUILDER, and then click Next.

Windows Choose Ir	Ise Windows stand installation disc. Install Windows us ons at one time.			-	aller contained in the
Basic	Settings				
0	perating system	: W	indows Server 200	8 R2	
(Use Windows star				
- 0	Install Windows us	ivers to removable			
	Edition	· · · · · · · · · · · · · · · · · · ·	Full Installation)	0	
	Language	English	0	-	
	Time Zone	: (UTC-08:0	0) Pacific Time (U	S & Canada)	•
					4 / 11 Page
				0	
	Back	Next			Cancel

(4) Check the settings specified for **Partition Settings**. Modify the settings as needed, and then click **Next**.

[Wizard	
	Specify the settings of the system partition for Windows. Windows will be installed into the first hard disk drive or logical drive. The maximum partition size for the system partition is 2TB. All data currently on an existing partition, shown with a red frame, will be deleted. Current Partitions (the area shown with a red frame will be deleted) : UD 06/F4732 [10 07/NTFS] [Data Partition] Free Space (0.3G8) (Total-40.3G8) (0.1G8) (1076G8)	
0	Partition Settings Create a new partition ○ Use all space ④ Type a partition size :	
	Back Next Cancel	
		r than the minimum required for em. (See <i>Chapter 1 (5.1 Before Starting</i>
	 The maximum partition size 	is 2,097,152 MB.

(5) Enter the user information, and then click **Next**.

Ty	rsonalize the computer. pe Computer Name within 15 charac iministrator Password must be at leas ree of the four categories (numbers/upp	st six	characters in length and mu se/lowercase/symbols).	st contain characters fro
ſ	User Information			
	Computer Name	32	Automatic Numbering	
			BD4394570815	(Required)
	User Name		Administrator	
	Administrator Password	:		(Required)
	Reenter Administrator Password	:		(Required)
				6 / 11 Page

Note	 Computer name and Administrator Password are required parameters. Enter 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 (A through Z), lowercase letters (a through z), 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 Reenter Administrator password text boxes.

All the contents stored in the disk on which to install the OS are cleared.

(6) Check the settings specified for **Network Protocols**. Modify the settings as needed, and then click **Next**.

Choose Custom Settin	ocol. ngs, click Advanced, if you	i want to type an IP	address.
Network Protocols-			
Standard S	5		
Custom Set	1575		
Standard Ac	lapter - Internet Protocol (I	Pv4) C	Advanced
			7 / 11 Pag



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

Note

Even when an optional network board is connected, **Custom settings** only shows standard network boards.

After finishing Setup with EXPRESSBUILDER, specify the optional network settings again.

(7) Specify the domain or workgroup.

Check the settings, modify them as needed, and then click Next.

in this computer to a domain or a noose Join a workgroup or Join	a domain, and then enter pa	arameters.
 Ioin a workgroup 		
 Join a workgroup Workgroup Name 	: WORKGROUP	
- O Join a domain		
Domain Name	:	
Account Name	:	
Password	:	
Reenter Password	:	
		8 / 11 Page

 (8) Check the settings of Windows components. Modify the settings as needed, and then click Next.

noose Windows components you v	vant to install.	
Server Roles		
Web Server (IIS)	Print and Document Services	
DHCP Server	File Services	
DNS Server	□ Hyper-V	
Windows Features		
SNMP Service		Advanced
Simple TCP/IP Services		
U WINS Server		
		9 / 11 Page
Back Nex	đ	Cancel

Full installations

Choose Windows components you w	vane to install.
- Server Roles	
Web Server (IIS)	Print and Document Services
DHCP Server	File Services
DNS Server	□ Hyper-V
Windows Features	
SNMP Service	Advanced
WINS Server	
	9 / 11 Page
Back	t Cancel

Server Core installations

(9) Check the settings of applications.

Modify the	e settings	as needed,	and then click Next.	

Available Applications		Selected Applications
	8	NEC ESMPRO ServerAgentService Express Report Service
	Add >>	Express Report Service Express Report Service(HTTPS) Universal RAID Utility Microsoft .NET Framework Version 4.0.1
	<< Delete	ExpressUpdate Agent
	2	
Description		

The applications listed below are supported only in full installations.

- NEC ESMPRO ServerAgentService
- Express Report Service
- Express Report Service (HTTPS) _
- Microsoft .NET Framework Version 4.0.0 _

On the following screen, click Finish.

Tips

The settings are now complete. Click Finish to close this window.	
	11 / 11 Page
Back Finish	Cancel

On the following screen, click \bigcirc on the right side of the screen.

1 OS select	ion Settings	3 Confirmation	Installation	
2 "	ter installation s	ettings.		
0	Default			٢
~ Ø	Custom			C
			Seí	tu

10. Check the parameter settings. To save the settings, click **Save**.

	Confirm insta	llation settings.	
	(Check if valid instal	lation settings are specified)	
5	Skip configuring RAID array.		
)	Sup comparing routs unay.		\bigcirc
	Operating system	: Windows Server 2008 R2	
	(Install Windows using EXPRES	SBUILDER)	
	Edition	: Standard(Full Installation)	
	Language	: English	
		Save	

Click \bigcirc on the right side of the screen.

11. The setup process starts.





12. If the server has started from the EXPRESSBUILDER DVD, insert the EXPRESSBUILDER disk into the optical disk drive, and then click **OK**.

If EXPRESSBUILDER DVD is already set, this message will not appear.

Selection				
	Insert the EXPRESSBU		Message ID : J2002]	
			-	
0				
	ОК	Cancel	1	-

13. Insert the OS installation media into the optical disk drive, and then click OK.

	Insert an OS ins	stallation disc for	Message ID : J20	001
3				

Windows Server 2008 R2 is installed automatically.

Wait for completion (about 40 minutes) without performing any operation.

14. The Starter Pack and the selected applications are automatically installed. Wait for completion without performing any operation.



Screen displayed when Starter Pack is being installed



Screen displayed when an application is being installed

15. When the software license agreement window appears, select **I accept the license terms**, and then click **Start** (Full installation only).

Please read the license t	erms	
MICROSOFT SOFTWAR	RE LICENSE TERMS	Ξ
MICROSOFT WINDOW	S SERVER 2008 R2 STANDARD	
where you live, one of i	an agreement between Microsoft Corporation (or based on ts affiliates) and you. Please read them. They apply to the which includes the media on which you received it, if any. The Microsoft	
· updates,		
· supplements,		
· Internet-based serv	rices, and	
· sunnort services		
I accept the license terms		

16. When the following message appears, press <Ctrl> + <Alt> + keys to log on.



Full installations:

When the following screen appears, enter your password you have set in step 9-(2) or 9-(5) into the text box, and then click ③.



Server Core installations:

When the following screen appears, enter your password you have set in step 9-(2) or 9-(5) into the text box, and then click ③.



17. Click OK.



- 18. Follow the instructions described in *Chapter 1 (5.5 Setting Up Device Drivers)* to set up the device drivers.
- 19. Confirm if Windows is activated according to Chapter 1 (5.6 License Authentication).
- 20. Apply Service Pack as needed according to Chapter 1 (5.7 Applying Service Pack).
- 21. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).
- 22. See *Chapter 2 Installing Bundled Software* to install the bundled software or confirm that the software is appropriate to your operating environment.

Setup with EXPRESSBUILDER is now complete.

5.3 Setup with Windows Standard Installer

This section describes how to install Windows with Windows 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
	At re-installation, 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. See <i>Chapter 2</i> (5. <i>RAID System Configuration</i>) in <i>Maintenance Guide</i> when creating RAID10.
Tips	• Setup with OS Standard Installer allows you to use a pre-specified parameter file or save the parameters specified in setup as a parameter file on removable media or Internal Flash Memory.
	 For details on creating a parameter file, see Chapter 1 (8. Windows OS Parameter File).

5.3.1 Setup flow



5.3.2 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
- 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 do not need to apply the service pack again.)



5.3.3 Setup procedure

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. Select OS installation *** default ***.

You will automatically advance to step 4, with no need for further input.

OS installation default Tool meau (Redirection mode) Tool meau (Redirection mode) Press (Tab) to edit options Automatic boot in 10 seconds		Boot selection
	Tool neau	(Normal mode)
Automatic boot in 10 seconds		
		Automatic boot in 10 seconds

The following window appears.



The server starts from EXPRESSBUILDER.



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

C	Selection	
	表示する言語を選んでください。 Select the language for displaying.	
	日本語 ● English ○ Français ○ Italiano ○ Deutsch ○ Español	
	ОК	

5. Click Setup.

Set up th	Setup	₽
Ō	Versions	
٥	Exit	

6. On the **OS selection** menu, select the OS to install or specify the parameter file.

□ When not using parameter file :	Go
□ When using a parameter file :	Go

Note

Go to Step 7. Go to Step 8.

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

7. When not using a parameter file, select an OS by either of the following two ways:

	lect an operating system to	
E	Automatic Detection	
	Manual Selection	
₿	Load Settings	

To automatically detect the OS on the OS installation media:

(1) Click Automatic Detection.

1 2 3 Confirmation 4 Installation
Select an operating system to install. (Click Manual Selection to configure a RAID array only)
Automatic Detection
Select an operating system automatically with an installation disc:
Load Settings
Setup

Insert the OS installation media, and then click OK.

	Insert the OS installation EXPRESSBUILDER will		want to install.	
	Diff Resident Der fill	detect the ob you	[Message ID :	B2014]
0				

(2) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9

	05 select	ion 2 Settings	3 Confirmation	n AInstallatio	n
-		lect an operation			
*	· 🖻	Automatic D	etection		C
		Manual Sele	ection		L
	₿	Load Setting	s		
				S	etup

To select an OS from the menu:

(1) Click Manual Selection.

1 s	elect an operating system to i	install.
(C	lick Manual Selection to configure a RAID a	rray only)
6	Automatic Detection	
	Manual Selection	a (
You of the in	an select the target OS of stallation from the menu.	

(2) From the Windows list, select Windows Server 2008 R2, and then click OK.

	Select an operating system to install.
	Windows Windows Server 2008 R2
0	○ VMware
	C RAID Configuration Only

(3) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.



8. When using the parameter file, click Load Settings.

	lect an operating system to install.
(Clic	k Manual Selection to configure a RAID array only)
6	Automatic Detection
	Manual Selection
	Load Settings

Follow the on-screen instruction to load the parameter file (*.tre)

a second s	Chicks	ang a the
💌 💷 mnt	usr_connect	
Places	Name	✓ Size Modified
Search Precently Used	Corom1	05/01/2014
Desktop		
Documents Music Pictures Videos		
Downloads		
Add Bemoy		
		Cancel Open

Tips

For the removable media in which the parameter file is saved, see "/mnt/usr_connect/usb*" (* indicates a number).

Click \bigcirc on the right side of the screen.

	elect an operating system to install.
- (E	Automatic Detection
	Manual Selection
 ✓ B 	Load Settings

When the parameter file is correctly loaded, the setting is determined. Click **Custom** to check and modify the setting in the wizard. Click \bigcirc on the right side of the screen.

	1 OS selec	tion 2 Settings	3 Confirmation	4 Installation	
	2 -	nter installation	settings.		
)	Ø	Default			\bigcirc
	~ Ø	Custom			
				Sø	tup

 \rightarrow Go to step 10.

9. Click Custom.

	1 OS selec	tion Settings	3 Confirmation	4 Installation
	2 "	nter installation set	tings.	
\bigcirc	0	Default		
	ß	Custom		<i>s</i>
	Specifinital	y all settings for the tion.		
				Setup

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



When using an onboard RAID controller (LSI Embedded MegaRAID):

Do not support the creation of RAID10 by using the onboard RAID controller. See *Chapter 2* (5. *RAID System Configuration*) in *Maintenance Guide* when creating RAID10.

selec	stall all RAID controllers not to be sted.	e used for the OS installation if	the incorrect RAID controller is
Г₽	evice Information		
	RAID Controller	:	Detail
	Number of Physical Drives	: 2	
L_S	ummary of RAID Array		
	Array #1		<u>_</u>
	RAIDO (1disk) Logical Drive1 (1117GB)		
	Array #2		
_ □ R	AID Configuration		
	Skip Configuring RAID Array	ý	
			1 / 11 Page
	Next		Cancel

When creating new logical drives

With the **Skip Configuring RAID Array** check box cleared, click **Next**. Set up the logical drives according to the wizard.

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 Select the Skip Configuring RAID Array check box, and then click Next.

(2) Check the settings specified for Basic Settings.

Choose Use Windows standard installer, and then click Next.

If you need to copy the OEM driver, select the Copy OEM drivers to removable media check box.

apt	Basic Settings				
	Operating system	: V	/indows Server 2008	3 R2	
		standard installer I drivers to removable	media		
÷		s using EXPRESSBUIL			
	Edition	: Standard	Full Installation)		
	Language	: English	0		
	Time Zone		00) Pacific Time (US	& Canada)	0
-					
					4 / 11 Page

On the following screen, click Finish.

The settings are now com	plete.	
Click Finish to close this	window.	
		11 / 11 Page
Back	Finish	Cancel

On the following screen, click \bigcirc on the right side of the screen.

2	nter installation settings	;;
~	Default	
~ 01	Custom	
0 70 ~		

10. Check the parameter settings.

1 2 os selection Settin	3 Confirmation	4 Installation
OS selection Settin	Confirmation	Installation
-		
Confirm insta	llation settings.	
(Check If valid Instal	llation settings are specified)	
Skip configuring RAID array.		
Operating system	: Windows Server 2008 R	2
Operating system (Use Windows standard install		2
		2
(Use Windows standard install	er)	2
(Use Windows standard install	er)	2 Save

Click \bigcirc on the right side of the screen.

11. The setup process starts.

1 OS selection 2 Settings 3 Confirmation Installation	
Ready to set up the computer.	
 If you proceed, any data stored on the partition will be lost Configuring RAID system 	
Copying OEM drivers	
Changing a CD/DVD	
 Installing an OS 	
Start	
Setuj)

 Continue setup according to the on-screen messages. When copying the OEM driver, the following message appears. Insert the removable media into the disk drive, and then click Yes.

 Copy OEM drivers (Windows Server 2008 R2).	
Set removable media, and then click Yes.	
[Message ID : G2000]	

Insert the OS installation media into the disk drive, and then click OK.

	[Message ID : J2000]
0	

13. The server reboots automatically.

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

Press	<f2></f2>	Setup,	<f3></f3>	Internal	Flash	Memory,	<f4></f4>	ROM	Utility,	<f12></f12>	Network
		Note		Boot the syste	m from C	S installatio	n media	a and p	proceed instal	lation of \	Windows.

14. Run from the OS installation media.

If OS has already been installed, the message "Press any key to boot from CD or DVD..." is displayed on the top of the screen. Press <Enter> key to boot the system from media.

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



This step is unnecessary if no operating system is installed.

15. Click **Next** at default settings.



- 16. Click Install Now 🗐.
 - Windows Server 2008 R2 installation starts.

Windows Server 2008 4	
Install now 🧿	

Int vi

- If the following message appears, go to step 17.
- If it does not, go to step 19.

I driver your computer needs is missing. This could be a DVD, USB or you have a CD, DVD, or USB flash drive with the driver on it, please in the driver on it, please in	
the installation media for Windows is in the DVD drive or on a USB dri ly remove it for this step.	ive, you

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.
- 17. Select the destination, and then click OK.



18. Select LSI Embedded MegaRAID, and then click Next.
19. Select the edition of the Windows you are going to install and the installation method. The screen display differs depending on an OS installation media you are using.

Windswer Server 2008 P2 Standard (Sveru Mindsvor) Server 2008 P2 Standard (Sveru Windsvor) Server 2008 P2 Intergravit (Full Installistion) 44 77.14/2009 Windsvor Server 2008 P2 Intergravit (Sveru Windsvor Server 2008 P2 Intergravit (Sveru Windsvor Server 2008 P2 Obstenetie (Sveru Windsvor Wei Server 2008 P2 Obstenetie (Sveru Windsvor Wei Server 2008 P2 Obstenetie (Sveru Windsvor Wei Server 2008 P2 (Sveru Cere Installation) 44 77.14/2009 Windsvor Wei Server 2008 P2 (Starver Cere Installation) 44 77.14/2009 77.14/2009 Windsvor Wei Server 2008 P2 (Starver Cere Installation) 44 77.14/2009 77.14/2009 Windsvor Wei Server 2008 P2 (Starver Cere Installation) 44 77.14/2009 77.14/2009 Description: Thick opports all of the server roles. This installation includes the endure installation includes the endure interface, and it supports all of the server roles.	Operating system	Architecture	Date modified
Windows Server 2008 R2 Enterprise (Full Installineon) 64 77.14.2009 Windows Server 2008 R2 Enterprise (Server Core Installation) 64 77.14.2009 Windows Server 2008 R2 Datacenter (Full Installation) 64 77.14.2009 Windows Server 2008 R2 Datacenter (Even Core Installation) 64 77.14.2009 Windows Web Server 2008 R2 Datacenter (Even Core Installation) 64 77.14.2009 Windows Web Server 2008 R2 Unitation) 64 77.14.2009 Windows Web Server 2008 R2 Unitation) 64 77.14.2009 Windows Web Server 2008 R2 Datacenter (Even Venderstählten) 64 77.14.2009 Windows Web Server 2008 R2 Datacenter (Even Venderstählten) 64 77.14.2009 Windows Web Server 2008 R2 Datacenter (Even Venderstählten) 64 77.14.2009 Deciption: Net Server Core Installation) 64 77.14.2009 Deciption: Net Server 2008 R2 Datacenter (Even Venderstählten) 64 77.14.2009			
Windows Server 2008 R2 Extension (Server Core Installation) 44 7.14.2009 Windows Server 2008 R2 Distancet (FUI Installation) 44 7.14.2009 Windows Server 2008 R2 Distancet (FUI Installation) 44 7.14.2009 Windows Server 2008 R2 Distancet (FUI Installation) 44 7.14.2009 Windows Web Server 2008 R2 Unitstallation) 44 7.14.2009 Description: 44 7.14.2009 Description: 44 7.14.2009			
Windows Server 2008 R2 Distancement Full Installation) 44 7.14.2009 Windows Server 2008 R2 Distancement Server Care Installation) 45 7.14.2009 Windows Wes Server 2008 R2 Installation) 464 7.14.2009 Windows Wes Server 2008 R2 Installation) 464 7.14.2009 Windows Wes Server 2008 R2 Installation) 464 7.14.2009 Description: 54 7.14.2009 Description: 54 7.14.2009			
Winders Server 2008 R2 Distancement Gener Credit Institution) 44 77.14/2009 Winders Wie Server 2008 R2 Unitation) 44 77.14/2009 Winders Wie Server 2008 R2 Unitation) 44 77.14/2009 Decription 44 77.14/2009 Decription 44 77.14/2009			
Windows Web Server 2008 R2 (Full Institution) 464 7.1.44.2009 Windows Web Server 2008 R2 (Server Core Installation) 464 7.1.44.2009 Description: This option installs the complete installation of Windows Server. This installation includes the entit			
Windows Web Server 2008 H2 (Server Core Installation) x64 7/14/2009 Description: This option installs the complete installation of Windows Server. This installation includes the entit			
 Description: This option installs the complete installation of Windows Server. This installation includes the enti			

- 20. Read the content of the license agreement.
 - If you agree, select I accept the license terms and then click Next.



21. Select the installation type.



- 22. "Where do you want to install Windows?" window appears.
 - If the driver was loaded in steps 17 and 18, or if a RAID Controller is not used, go to step 26.

When you select Load Driver, the following message appears.

Replace the OS installation media with EXPRESSBUILDER DVD in the optical disk drive.

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

- 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.)
 - When using the N8103-176/177/178 RAID Controller: \010\win\winnt\oemfd\ws2008r2\megasas2
 - When using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive: $\010\win\winnt\0008r2\megasr1$
- 24. Select the necessary driver from the driver list, and then click Next.

N8103-176/177/178 RAID Controller: [LSI MegaRAID SAS 9362-8i]

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

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



26. 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 29.

Name		Total Size	Free Space Type
Oisko U	nallocated Space	74.5 GB	74.5 68
fg Befresh € Load Driver	Relete De fatend	P [cmat	∲Не <u>н</u>

27. Click New.

Enter the partition size into the size text box, and then click Apply.

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

- 28. Select the partition created in step 27, and then click Format.
- 29. Select the created partition, and then click Next.

Name		Total Size	Free Space	Туре
*	tition 1: System Reserved	100.0 MB	86.0 MB	System
Disk 0 Par	tition 2	39.9 68	39.9 GB	Primary
fø Befresh	X Delete		÷ Ngw	
C Load Driver	a Eatend			
				6

Tips

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

When the following message appears, Windows installation starts automatically.

That's all the information we need right now. Your computer will restart several times during installation.
Copying Windows files Expanding Windows files (0%) Installing features Installing oddets Completing installation

30. After the installation of Windows Server 2008 R2 is completed, the following window appears, prompting you to change your password. Click **OK**.



31. Change your password, and then click the ジ button.



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 (A through Z), lowercase letters (a through z), and symbols.

32. Click OK.



33. Confirm the following according to the settings selected (displayed) in Step 17.

Full installations:

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

Provide Computer Informatio	n		Spectying computer information	
Activitie Windows	Product ID:	Not accivited		
Set time zone	Time Zone:	UTC-8E30(Pacitic Tree 5/5 & Canadas		
Erefique retworking	Local Area Connection:	Not convected		
heveds computer name and domain	Full Computer Name: Workgroup:	WIN CEDRUMIN'S WORKERPUP		
Update This Server			Usdatro sour Wirdows server	
🤱 Enable automatic updating and feedback	Updateu: Feedlach	Rot certificand Wedowa Dise Papating off Rot participating in Caronier Experience	Ingenerated Program	
Devertical and initial updates	Checked for Updates. Installed Opdates:	Never Never		
Customize This Server			Customang your server	
The Add roles	Roles:	Nore		
and Ante Sandarana	Features	Nore		
🔦 Erabie Flemite Desicop	Remote Desktop:	Deabled		
Configure Windows Trewall	firmal.	Public: On		-

Server Core installations:

The command prompt will appear. Set the user information.



Tips

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

- 34. Install Starter Pack by referring to Chapter 1 (5.4 Installing Starter Pack).
- 35. Install drivers and specify detailed settings by referring to Chapter 1 (5.5 Setting Up Device Drivers).
- 36. Confirm if Windows is activated according to Chapter 1 (5.6 License Authentication).
- 37. Apply Service Pack as needed according to Chapter 1 (5.7 Applying Service Pack).
- 38. Install the applications as needed by referring to Chapter 1 (5.8 Installing the Applications).
- 39. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with Windows standard installer is now complete.

5.4 Installing Starter Pack

Starter Pack contains drivers customized for this server.

Be sure to apply Starter Pack before running the system.

Important	Also install Starter Pack in the following cases.
	 The hardware configurations have changed (If an internal optional device is installed or removed, apply the Starter Pack. If a dialog box prompting system reboot is displayed, reboot the system according to the on-screen instructions, and then apply the Starter Pack.)
	 If the system was restored using a restore process
	 If a system has been restored using the backup tool
Note	The Scalable Networking Pack (SNP) function is disabled upon Starter Pack installation is complete. The setting of SNP function may affect the system performance. Contact your sales representative for details.
Tips	If the OS is installed by using EXPRESSBUILDER, Starter Pack is already applied. If the configuration is not changed, you do not need to apply Starter Pack again.

5.4.1 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

Click Integrated Installation on the menu.

	NEC EXPRESSBUILDER	
EXPRESSBL	JILDER	NEC
	Instruction Manuals	
Û	Versions	\supset
2	Integrated Installation	
	Applications	
	Files For Setup	
٩	Maintenance	
M	Exit	Version 7.10-000.01(001)

When the following screen appears, make sure that the **Starter Pack** option is selected, and then click **Install**.

	(Applications) when Starter Pack is not installed. plication prior to reinstalling the application. ServerAgentService Rev1.0 Not installed t Service (HTTPS) Rev3.4 Not installed Service (HTTPS) Rev3.4 Not installed Framework Version 4.0.0 Not installed DUBIN Rev4.00 Not installed DUBIN Rev4.00 Not installed		Integrated Installation			
Population Rev1.0 Not installed Express Report Service Rev1.0 Not installed Express Report Service (HTTPS) Rev3.4 Not installed Empress Report Service (HTTPS) Rev3.4 Not installed Empress Report Service (HTTPS) Not installed	t Service Rev3.5E Not installed t Service Rev3.4 Not installed 'Framework' Version 4.0.0 Not installed JUIIIIy Rev4.00 Not installed vollety Rev4.7.3 Not installed	-	- Unable to select [Applications] when S			
INC CSMRXD ServerAgerKService Rev1.0 Not installed Express Report Service Rev2.5E Not installed Express Report Service (HTTPS) Rev3.4 Not installed Express Report Service (HTTPS) Rev3.4 Not installed	t Service Rev3.5E Not installed t Service Rev3.4 Not installed 'Framework' Version 4.0.0 Not installed JUIIIIy Rev4.00 Not installed vollety Rev4.7.3 Not installed		© Starter Pack			
Express Report Service (HTTPS) Rev3.4 Not installed Microsoft .NET Framework Version 4.0.0 Not installed	t Service (HTTPS) Rev3.4 Not installed Fremework Version 4.0.0 Not installed Utility Rev4.00 Not installed iollection Utility Rev2.7.3 Not installed	Y		Rev1.0	Not installed	
Microsoft .NET Framework Version 4.0.0 Not installed	Framework Version 4.0.0 Not installed D Utility Rev4.00 Not installed collection Utility Rev2.7.3 Not installed	_	Express Report Service	Rev3.5E	Not installed	
	D Utility Rev4.00 Not installed iollection Utility Rev2.7.3 Not installed		Express Report Service (HTTPS)	Rev3.4	Not installed	
Universal RAID Utility Rev4.00 Not installed	collection Utility Rev2.7.3 Not installed		Microsoft .NET Framework Version 4.0.	0	Not installed	
			Universal RAID Utility	Rev4.00	Not installed	
Product Info Collection Utility Rev2.7.3 Not installed	pdate Agent Rev3.14 Not installed		Product Info Collection Utility	Rev2.7.3	Not installed	
NEC ExpressUpdate Agent Rev3.14 Not installed			NEC ExpressUpdate Agent	Rev3.14	Not installed	
		12.				Install

Tips

If Starter Pack is already installed, the **Applications** option is selected by default. To install Starter Pack again, select the **Starter Pack** option.

Server Core installations

- (1) At the command prompt, type the following command. (In the example below, the optical disk drive is D drive.)
 - Cd /d D:\010\win\winnt\bin

C:\Users\administrator>cd /d D:\010\win\winnt\bin

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

```
D:\010\win\winnt\bin>pkgsetup.vbs
```

Wait for several minutes (about 1 to 3 minutes) without attempting any further operation until files are copied.

On Full Installation, the following progress message appears while the Starter Pack is installed.



4. Read the message, and then click **OK**.

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

Wait until installation completes (about 3 or 4 minutes).

On Full Installation, the following progress message appears while the Starter Pack is installed.

Starter Pack		
Installing Starter Pack.		
Please wait for a while		
 >> Copying Files. >> Checking the system information. Updating drivers. Performing the last process. 		

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

Follow the instructions in the message, and remove EXPRESSBUILDER DVD.

Starter Pa	ack	×
1	Installing Starter Pack was completed. The setup reboots for installing drivers. After taking out it from Optical Disc Drive, if the media is set in Optical Disc Drive, dick [OK].	
	OK	

6. Click **OK** to restart the system.

Installation of Starter Pack is now complete.

5.4.2 When using Internal Flash Memory

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

Note

2. When "Press <F2> Setup, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network" appears during POST, press <F3> key.

Before pressing <F3> key, 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.

OS installation and default and Tool mean (Redirection mode) Tool mean (Redirection mode) Press (Tob) to edit options Automatic beat in 10 seconds	Tool memu (Normal mode) Tool memu (Redirection mode)	Tool news (Normal mode) Tool news (Redirection mode) Press (Tab) to edit options	Boot selection
			Tool mesu (Normal mode)

The following window appears.



The server starts from EXPRESSBUILDER.



4. <u>Select English on the language selection window, and then click OK.</u>



5. Click Utilities.

P	Setup	
4	Utilities	<i>₽</i>
Move to	Utilities Menu.	
٢	Exit	

6. Click Starter Pack Installation.

.	RAID Configuration Data	
	File Execution	
	Starter Pack Installation	
Install St Window	arter Pack to the installed n Memory	

7. Read the contents, and then click Yes.



8. When files are copied, click **Close** on the following screen.

1nformat	ion
	Copying Starter Pack is complete.
	Click Close to restart the computer.
	To install Starter Pack, follow the message after logging on to Windows.
A.	Run the following file on the system drive when installing with
-	Server Core mode.
	[System Drive]:\StartPKG\app_pkg.bat
	[Message ID : P1003]
	Close

The server then restarts. Do not press <F3> key and allow OS to start.

9. Proceed to apply Starter Pack according to the installation type.

Full installations

Go to the next step.

Server Core installations

(1) Enter the following command at the command prompt, and then open the folder under the system drive (drive C).

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

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

app_pkg.bat

C:\StartPKG>**app_pkg.bat**

10. The following screen appears.

Starter Pack is in preparation for application. Wait for a while (about 1 to 3 minutes.) Applying Starter Pack is in preparation. Please wait for a while.

Note	On Full Installation, this message below may appear at lower right of the screen.
	There is no problem in system operation.
	This message will disappear automatically.
	"Device driver software was not successfully installed"

11. Read the message, and then click **OK**. Starter Pack installation starts.



Wait until the installation of the Starter Pack is complete. (About 3 to 5 minutes) On Full Installation, the following progress message appears while the Starter Pack is installed.

Starter Pack	
Installing Starter Pack.	
Please wait for a while	
>> Copying Files.	
>> Checking the system information.	
Updating drivers.	
Performing the last process.	

12. Click **OK** to restart the system.

Starter P	ack	×
i	Installing Starter Pack was completed. The setup reboots for installing drivers. After taking out it from Optical Disc Drive, if the media is set in Optical Disc Drive, dick [OK].	
	ОК	

Installation of Starter Pack is now complete.

5.4.3 Using EXPRESSBUILDER installed in Windows

If EXPRESSBUILDER has been installed in Windows, you can use it as a Windows application. For details of EXPRESSBUILDER, see *Chapter 2 (6. Details of EXPRESSBUILDER)* in *Maintenance Guide*.

- 1. Select NEC from Windows Start menu to launch NEC EXPRESSBUILDER.
- 2. See Step 3 and the subsequent steps in Chapter 1 (5.2 Setup with EXPRESSBUILDER 5.2.3 Setup procedure) for further procedure.

5.5 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.

5.5.1 Installing the LAN drivers and BACS (teaming utility)

(1) LAN drivers and BACS

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

```
Important Wake On LAN (WOL) is supported by the standard network adapters only.
```

Note

- To change the LAN driver and BACS 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. Optional LAN boards: N8104-145/149/150/151/152

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

The LAN driver is not installed if N8104-145 is not installed at the time of installation of the OS by using EXPRESSBUILDER or at installation of Starter Pack, or on a pre-installation model. Perform the steps below to install the N8104-145 LAN driver manually.

- 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. Open Command Prompt, and execute install.bat in the following folder. When using EXPRESSBUILDER DVD:

EXPRESSBUILDER DVD:\010\win\winnt\ws2008r2\lan

If Starter Pack was installed from Internal Flash Memory:

System Drive:\StartPKG\ws2008r2\lan

3. When the following message appears, remove the EXPRESSBUILDER DVD from the optical disk drive, and then restart the system.

Installation Completed.

Setup is now completed.

Note

If the LAN driver has been installed in N8104-145, PROSet (Teaming utility) is also installed.

When using an optional LAN board, perform the procedure in *Chapter 1* (5.5.2 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 (*1)

If connecting with an optional LAN board:

```
N8104-145:
```

Intel(R) Ethernet Server Adapter I340-T2 #xx (*1)

N8104-149 :

Broadcom BCM57810 NetXtreme II 10 GigE (NDIS VBD Client) #xx (*1)

N8104-150/151/152:

Broadcom NetXtreme Gigabit Ethernet #xx (*1)

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

Tips

N8104-149 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.

5.5.2 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.

Tips

When using N8104-149, you can specify "10 Gb Full" for network adapter and "Auto Negotiation" to switching hub.

- 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 Advanced or Link Speed tab, 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) When using N8104-150/151/152

When using N8104-150/151/152 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 pgdyavd_disable.vbs in the following folder.

When using EXPRESSBUILDER DVD:

EXPRESSBUILDER DVD:\010\win\winnt\ws2008r2\lan\bcom\ws2008_r2\lan

If Starter Pack was installed from Internal Flash Memory:

System drive:\StartPKG\ws2008r2\lan\bcom\ws2008_r2\lan

3. When the following message appears, click OK.

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

Tips

The message "Action: Non" indicates that the LAN driver is already set.

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

Setup is now completed.

5.5.3 Setting up team/LiveLink (BACS)

This section describes procedures for creating and deleting team, and for configuring LiveLink.

The supported network adapters are as follows:

- Network adapters for the standard configuration
- Optional LAN boards: (N8104-149/150/151/152)

Note

- For how to delete an adapter team, see Chapter 1 (5.5.3 Setting up team/LiveLink (BACS) (4) Procedure for deleting team).
 Check the following points when deleting an adapter team.
 - If a team exists, delete the team first. If the team is bound to a Hyper-V virtual adapter, unbind the Hyper-V adapter before deleting the team.
- When replacing the motherboard or optional LAN boards after an adapter team is configured, delete the adapter team first.
- Be sure to specify the same Jumbo Mtu (Jumbo Packet) setting to all the adapters that compose a team.
- Do not configure the teams with adapters that use the iSCSI function.

(1) Team types and LiveLink

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-Fallback 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.

• FEC/GEC Generic Trunking

The combination of multiple adapters into a single channel to provide greater bandwidth.

Note

FEC and GEC modes require switch support.

(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.

Important	When using Smart Load Balancing and Failover (without Standby Member), be sure to set up LiveLink at creation of a team.
Tips	 When using Smart Load Balancing (Auto-Fallback Disable) (with Standby Member), setup for LiveLink is not essential. LiveLink is not supported with FEC/GEC mode.

(3) Setting up team/LiveLink

Note	Possible combinations of network adapters that compose a team are as follows.
	When the number of adapters that composes the team is up to four:
	Between standard network adapters
	Between optional LAN boards excluding N8104-149
	Standard network adapters and optional LAN board excluding N8104-149
	Between N8104-149 adapters
Tips	To edit a team, right-click on the BACS team, and then select Edit Team.
	Then see 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.

Tips

Use icon view on Control Panel.

2. Set **Filter** to **TEAM VIEW**, right-click the adapter to be used for the team, and then select **Create Team** from the short-cut menu.

Scalcom Advanced Control Suite 4 File View Action Filter Context Tools Teams (SOSI Help		_ 🗆 ×
Filter: TEAM VIEW 💽 Information 💽 🔽 Vital Signs	Driver Information	
Explorer View 🗗	Information Configurations Diagnostic	s Statistics
🖻 000 Hosts	Property	Value
Chassiened Adapters Chassiened Adapters Constant VetXtreme Girabit Ethernet Constant VetXtreme Girabit Ethernet Constant Vet #2 Constant Vet#2 Constant Vet#2	Vital Sinne MAC Address MCA Address Permanent MAC Address Orive Address Orive Address Orive Information Driver Version Driver Version Driver Name Driver Status	50E54966AD60 50E54966AD60 169254156174 LSO.CO 1500 150.09 10.03/2011 b57xp92.sys Loaded
	Vital Signs The Vital Signs section of the Information tab network adapters that are installed in your sys adapter and general network connectivity.	
BROADCOM	<u>h</u>	SFILLER H

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:	
Team 1	
A team name has a maximum length of 39 characters. The name can use any &&#/#*O["</td><td>/ symbolic character except</td></tr><tr><td>Cancel K Back Next ></td><td>Preview 🔟</td></tr></tbody></table>	

5. Under Team Type, select the type of team you want to create, and then click Next.

eating/Modifying a Team: Team Type lect 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	
Enable HyperV Mode OP Offload Engine (TOE) support is supported only on a SLB team type. If a team ornections will be offloaded.	n type other than SLB is selected, no TCP

Note



"Verify that the network switch connected to the team members is configured correctly for the team type."

When using Hyper-V, select Enable HyperV Mode.

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		
08] Broadcom NetXtreme Gigabit Ethernet #2	No	Yes	Yes	No	Yes	5.1	1500	
Add								<u>R</u> emove
Team Members	TOE	LSO	CO	RSS	samab	NDIS	MTU	
07] Broadcom NetXtreme Gigabit Ethernet	No	Yes	Yes	No	Yes	5.1	1500	
				MTU: 1				

Note If **FEC/GEC Generic Trunking** is selected, go to step 15.

- 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.

		~~
	f you want a standby member for the team.	
	re a standby member. (1) ing member as a standby member:	
	NetXtreme Gigabit Ethernet	
1	allback, Disable mode	

- Smart Load Balancing (Auto-Fallback 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-Fallback Disable mode.

Important The operation when Auto-Fallback Disable mode is unchecked is not supported.

(4) Click Next.

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

8. When configuring LiveLink, select **Yes**, click **Next**, and then go to step 9.

again.

When configuring LiveLink is unnecessary, select No, click Next, and then go to ste	When configuring	g LiveLink is unnecessary,	select No, click Next	and then go to step
---	------------------	----------------------------	-----------------------	---------------------

BROADCOL

9. 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 Probe Target 1		IP Address	<u> </u>
Probe Target 2 Probe Target 3			
Tobe Ingers	Edit Turant ID Adda		
	Edit Target IP Addres	·S	

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 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.
	• When using Tagged VLAN, input the VLAN ID for Probe VLAN ID .

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

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

Note

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

If communication with the all 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	-	
robe Maximum Retries	5		
robe VLAN ID (Optional: 0-4094)	0		
Target		IP Address	_
Probe Target 1 Probe Target 2			
Probe Target 3			<u>•</u>
	Edit Target IP Address		

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

Target Members	IPv4 Address	IPv6 Address	
007] Broadcom NetXtreme Gigabit E	hemet		
008] Broadcom NetXtreme Gigabit E	ihemet#2		
	Edit Member IP Address		
	Edit Member IP Address_		
	Edit Member IP Address		
	Edit Member IP Address		

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

Name:	
	[0009] Broadcom BCM57810 NetXtreme II 10 GigE (NDIS VBD Client) #161
IPv4 Address:	
IFV4 MUDRESS:	
IPv6 Address:	

Note

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

which communication is possible.

14. Click Next.

?			idcom Teaming Wizard
ROADCOM	B	ink (continued) r.	ing/Modifying a Team: Configuring Live gure the IP address for each team meml
	IPv6 Address	IPv4 Address	Target Members
] Broadcom NetXtreme Gigabit Ethernet
] Broadcom NetXtreme Gigabit Ethernet #2
		it Member IP Address	Every member must have a static IP a
e	Pr	dress. <u>Eack N</u> ext	Every member must have a static IP a

15. Make sure that **Skip manage VLAN** is selected under **Manage VLAN**, and then click **Next**. Below is an example when you do not want to use the VLAN.

Broadcom Teaming Wizard	212
Creating/Modifying a VLAN: Configure VLAN Support Specify whether you want to create or delete a VLAN.	BROADCOM.
Manage VLAN	
C Add VLAN	
C Edit VLAN	
🕫 Skip Manage VLAN	
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**.

<mark>iii</mark> Broadcom Tea	ning Wizard	<u>? ×</u>
	The Teaming Wizard has finished nation. How would you like to	BROADCOM
-Commit changes		
	es to system and Exit the wizard and continue to manage more teams	
i) Apj and	lying the changes will temporarily interrupt the network the connection will resume afterwards.	connection. The process may take several minutes
	Cancel K Back	Finish 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 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 to 14 again and correct the LiveLink settings.

When all network adapters that configure the team are in the link down status, this is indicated as shown in the window below. Check the LiveLink settings while all adapters are linked up.



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 Team Name Team Type Team Offload Capabilities Team MTU	Value Team 1 Smart Load Balancing(TM) and Failover
Teams Teams BASP Vetual Adapters BASP Vetual Adapters Base Team 1 (0020) BASP Vetual Adapter>	Team Name Team Type Team Offload Capabilities	
Toom 1 Provide the second se	- Team Type - Team Offload Capabilities	
Team1 Protect Adapter: Protect Adapter: Protect Adapter: Protect Adapter: Protect Adapter:	- Team Offload Capabilities	Smart Load Balancing (TM) and Failover
BASP Virtual Adapters		
E B Team 1 (0020] BASP Virtual Adapter>	- Team MTU	LSO, CO
		1500
Ci Cinani Adaptera	Driver Name	Baspop32.sys
	- Driver Version	6331
	- Driver Date	6/15/2011
- III [0007] Broadcom Net/0reme Gigabit Ethernet	- Probe Interval	2000
- III [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.	

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

	Ø Information Statistics		
E- 888 Hosts	Property	Value	
e 🖪.	Team Properties		
E Teams	Team Name	Team 1	
Diam 1	- Team Type	SLB (Auto-Fallback Disable)	
	- Team Mode	Primary	
E E/ BASP Virtual Adapters	- Team Offload Capabilities	LSO, CO	
Team 1 (0020] BASP Virtual Adapter)	- Team MTU	1500	
El- Primary Adapters	- Driver Name	Baspop32 sys	
	- Driver Version	6331	
- 110 [0007] Broadcom Net/Oreme Gigabit Ethernet	- Driver Date	6/15/2011	
E Standby Adapters	- Probe Interval	2000	
0008) Broadcom NetXtreme Gigabit Ethernet #2	- Probe Max Retries	5	
20 ····	Probe Vlan ID	0	
	Team Probe Target 1		
	Team Properties Displays information about the team.		

- FEC/GEC Generic Trunking

Broadcom Advanced Control Suite 4 File View Action Filter Context Tools Teams ISCSI Help				×
Explorer View	Information	Statistics		
Hosts Hotts H	Team Properti	Name Type Offload Capabilities MTU Name Version Date	1500 Beep sys 15.3 12/19/2011	
BROADCOM			BALSH	7

Team setup is now complete.

(4) Procedure for deleting team

```
Note
```

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

 Double-click the Broadcom Control Suite icon on the Control Panel window. Broadcom Advanced Control Suite starts.

Tips

Use icon view on Control Panel.

 Set Filter to TEAM VIEW, right-click the adapter to be used for the team, and then select Delete Team from the short-cut menu.

plorer View 8	Information Statistics	
3- 888 Hosts	Property	Value
Berling B	Eam Process Team Name Team Type Team Official Capabilities Team MTU Driver Name Driver Version	Team 1 Smart Load Balancing(TM) and Fallover LSO, CO 1500 Batpup32.sys 6.331
HE DOOT Broadcan NetWrene Gigabit Ethernet	Drive Date Probe Max Petries Probe Max Petries Probe Vian ID Team Probe Torget 1	6/15/2011 22000 5 0
	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."

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

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

- 4. Double-click addlvlanstats.vbs in the following folder.
 - When using EXPRESSBUILDER DVD: EXPRESSBUILDER DVD:\010\win\winnt\ws2008r2\lan\bcom\ws2008_r2\lan
 - If Starter Pack was installed from Internal Flash Memory: System drive:\StartPKG\ws2008r2\lan\bcom\ws2008_r2\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.

5.5.4 Setting up team (PROSet)

This section describes procedures for creating, deleting, and configuring a team by network adapter. The optional LAN board N8104-145 only is supported.

Note	 For how to delete an adapter team, see <i>Chapter 1</i> (5.5.4 Setting up team (<i>PROSet</i>) - (3) Procedure for deleting team). Check the following points when deleting an adapter team.
	 If a team exists, delete the team first. If the team is bound to a Hyper-V virtual adapter, unbind the Hyper-V adapter before deleting the team.
	• When replacing the motherboard or optional LAN boards after an adapter team is configured, delete the adapter team first.
	Do not configure a team with network adapter that is using iSCSI feature.
	• Be sure to set up LiveLink when creating a team in the following cases.
	 Smart Load Balancing and Failover (without Standby Member).
	 Smart Load Balancing (Auto-Fallback Disable) (with Standby Member) using more than two network adapters
	 When using Smart Load Balancing (Auto-Fallback Disable) (with Standby Member) using two network adapters, setup for LiveLink is not essential.
	 When configuring Created Adapter Fault Tolerance (AFT) or Adaptive Load Balancing (ALB) by using two network adapters, disable probes by referring to the following procedure.
	1. Open the Device Manager.
	 Expand Network adapters and double-click the team adapter. The properties of network adapter are displayed.
	3. Select the Advanced tab.
	 Select Probes, and then click Properties. The Probe is displayed.
	5. Clear Send probes, and then click OK.

6. Click OK, and then restart the system.

(1) Team types

The following team types are supported.

• Adapter Fault Tolerance (AFT)

Adapter Fault Tolerance (AFT) is a feature that creates a group containing and automatically converts the process of the working adapter to the other adapter in the group when any trouble occurred on that adapter.

Adaptive Load Balancing (ALB)

Adaptive Load Balancing (ALB) is a feature that creates a group containing more than one adapter and enhances the throughput by operating packet transmission from the server by all the adapters. This feature includes AFT feature.

• Static Link Aggregation (SLA)

Static Link Aggregation (SLA) accounts for the GEC and 802.3ad static protocols. SLA is a switch-assisted teaming mode and requires configuring ports at both ends of the link:server interfaces and switch ports.

Switch Fault Tolerance (SFT)

Switch Fault Tolerance (SFT) is a feature that provides a failover relationship between two ports when each port is connected to a separate switch. SFT supports two ports per team.

(2) Setting up team

composes the team is up to four.

- 1. Open the Device Manager.
- 2. Open Network adapters, and then the Intel(R) xxx properties.
- 3. On the **Teaming** tab, select the **Team this adapter with other adapters** check box. Click **New Team**.
- 4. Type the name of the team in Specify a name for the team and click Next.
- 5. Select an adapter to be included in the team, and then click Next.
- 6. Select a team type, and then click Next.

Note

 Click Finish. The properties of the selected team are displayed.

8. On the **Settings** tab, click **Modify Team** button.

- 9. Perform the following procedure to set the team member adapter priority status.
 - Set Primary

Select the adapter and click Set Primary.

Set Secondary
 Select the adapter and click Set Secondary.

When primary and secondary adapters are specified, click OK to close the window.

Tips	Adapter priority can be confirmed by the following procedure:
	1) Click Settings tab in team adapter properties.
	2) Confirm Primary/Secondary specified for each adapter in Team list .

10. On the **Settings** tab, click **Test Switch**. Click **Run test** on the **Test Switch** screen. Test completes when a message indicating successful operation is displayed.

If you are using SFT (Switch Fault Tolerance), go to Step 11 because **Test Switch** is not supported.

Note	Before running the test, confirm whether the adapter status is "Active" or "Standby"
	on the Settings tab. If any error is displayed, read the message and change the
	setting of the switching hub.
	Also make sure that all adapters in team are linked up.

ImportantEven if the test result is correct, the message below may appear.Check the setting of the switching hub (L2) port. If no problem is found,

ignore the message. "The switch is configured with aggregated ports, but the team type does not support port aggregation. The switch is configured

with VLAN tagging, but the team has no VLANs."

"Reconfigure the switch for link aggregation, or disable VLAN tagging on the switch."

11. Restart the system.

(3) Procedure for deleting team

- 1. Open the Device Manager.
- 2. Expand **Network adapters** and double-click the team adapter. The properties of network adapter in the team are displayed.
- 3. Click the Setting tab. Click the Remove Team button.
- 4. Click **Yes** to the popup message.
- 5. Confirm that the TEAM: "Team name" adapter does not exist in the Network adapters tree.
- 6. Restart the system.

5.5.5 Graphics accelerator driver

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

Tips

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

To install drivers separately, complete the following steps.

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

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

2. Double-click the install.bat icon in the following folder.

When using EXPRESSBUILDER DVD: EXPRESSBUILDER DVD:\010\win\winnt\ws2008r2\video

If Starter Pack was installed from Internal Flash Memory: System drive:\StartPKG\ws2008r2\video

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

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

Graphic accelerator driver installation is now complete.

5.5.6 When using a SAS controller (N8103-142)

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

5.5.7 When using a RAID Controller (N8103-179)

The driver for RAID Controller N8103-179 is automatically installed by Windows Plug-and-Play.

5.5.8 When using a Fibre Channel controller (N8190-57A/158A/159/160)

The driver for Fibre Channel controller N8190-157A/158A/159/160 is automatically installed by Windows Plug-and-Play.

If Fibre Channel controller (N8190-157A/158A/159/160) is additionally installed after the OS has been installed, you need install Starter Pack again.

5.6 License Authentication

Confirm if your license is authenticated. If not, perform the following procedures to have your license authenticated.

(1) Full installations

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

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

System		the second s	: العالم	
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: Installed memory (RAM):	Intel(R) Xeon(R) CPU E5506 @ 2.13GHz 2.13 GHz 4.00 G8		
	System type:	64-bit Operating System		
	Pen and Touch:	No Pen or Touch Input is available for this Display		
	Computer name, domain, and w	orkgroup settings		
	Computer name:	WIN-ROSHORSEO4	Change settings	
	Full computer name:	WIN-ROBHQIRSEQ4		
	Full computer name: Computer description:	WIN-ROSHQRISEQ1		
		WIN-ROSHQRISEQ4		
	Computer description:			
	Computer description: Workgroup:		and all	
	Computer description: Workgroup: Windows activation	WORKSROLP	genuine	
See also Actors Center	Computer description: Workgroup: Windows activation Windows is activated	WORKSROLP	genuine Microsoft	

2. If Windows is installed from Backup DVD-ROM, replace the product key. When the following window appears, click **Change product key**.

🖉 System				_16
G Control Panel •	System and Security + System		Search Cont	rol Panel
		ar kan randarra	and a second second second	
Control Panel Home	Windows editon			
Device Manager	Windows Server 2008 R2 Standard			\frown
Remote settings	Copyright (b) 2009 Microsoft Corporation. All rights reserved.			
Advanced system settings				
	System	500 M R. C. C. C. C. C. C.		an jaran menterin
	Processor:	Intel(R) Xeon(R) CPU	E5506 @ 2.130Hz	2.13 @42
	Installed memory (RAM):	4.00 GB		
	System type:	64-bit Operating System		
	Pen and Touch:	No Pen or Touch Input is a	vailable for this Displa	IY .
	Computer name, domain, and w	orkgroup settings		
	Computer name:	WIN-ROGHQKR5EQ4		Change settings
	Full computer name:	WIN-ROBHQKR5EQ4		
	Computer description:			
	Workgroup:	WORKGROUP		
See also	Windows activation			
Action Center	2 days until automatic	activation. Activate Windows n		
Windows Update	Product ID: x0000+000+000			
	Product ID: MINIMUM	Charge proce	a starting	

3. Enter the product key found on the COA label, and then click **Next**.

Ҟ Wi	ndows Activation	×
Θ	💫 Windows Activation	
	Type your product key	
	The Windows Server 2008 R2 Standard product key can be found on the installation disc holder inside the Windows package. Activation will register the product key to this computer.	
	The product key looks like this:	
	PRODUCT KEY: XXXXX-XXXXX-XXXXX-XXXXX	
	Where do I find my Windows product key?	
	Product Key:	
	What is activation? Read the privacy statement online	
	Next Cancel	

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

🔁 w	indows Activation	X
0	🕅 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	J
	What is activation?	
	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

Administrator: C:\Windows\system32\cmd.exe	
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 Server(R), channel Partial Product Key: xxxxx License Status: Licensed	OEM_SLP	
[OK	

 If Windows is installed from Backup DVD-ROM, replace the product key. At the command prompt, enter the following, and then press <Enter> key. Specify the product key found on the COA label in *PID*. slmgr -ipk *PID*



 Obtain an installation ID for Windows activation. At the command prompt, enter the following, and then press <Enter> key. slmgr -dti



- 4. Open %systemroot%\system32\sppui\phone.inf to confirm 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.
- 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.

5.7 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

5.8 Installing the Applications

Some applications stored in EXPRESSBUILDER can be installed collectively by performing the procedures described below. When installing these applications individually, see *Chapter 2* (*Installing Bundled Software*). This feature is only available for Full installations.

- 1. Log on to the system with the built-in administrator, which has administrative privileges.
- 2. Insert the EXPRESSBUILDER DVD into the optical disk drive.

Or, if EXPRESSBUILDER has been installed in Windows, you can use it as a Windows application. Select **NEC** from Windows Start menu to launch **NEC EXPRESSBUILDER**.

3. Click Integrated Installation on the menu.



4. On the following screen, select **Applications** option. Select the check boxes corresponding to the applications you want to install, and then click **Install**.

EXP	RESSBUILDER		NEC	
	Integrated Installation			
0	Install the following software. - Unable to select [Applications] when Start - Uninstall the application prior to reinstalli C Starter Pack			
		Rev1.0 Not installed Rev3.5 Not installed Rev3.4 Not installed Not installed Rev4.00 Not installed Rev2.7.3 Not installed Rev3.14 Not installed		
1 2			Install	
	Note	If your system	environme tall it. (For	r installation are selected by default. ent does not satisfy the prerequisite for an application, r details, refer to the on-screen information and the oplication.)

The selected applications are automatically installed.

- 5. When a message appears, click **OK**, and then remove the EXPRESSBUILDER disk from the optical disk drive.
- 6. See *Chapter 2 Installing Bundled Software* to install the bundled software or confirm that the software is appropriate to your operating environment.

Now installation of applications is completed.

5.9 Installation When Multiple Logical Drives Exist

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

(1) Setup procedure

- Setup with EXPRESSBUILDER



See Chapter 1 (5.2 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 Windows standard installer
 - 1. See Chapter 1 (5.3 Setup with Windows 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.

 For details, refer to the following Microsoft website: <u>http://support.microsoft.com/kb/937251/en-us</u>
 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. See *Chapter 1 (5.3 Setup with Windows 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.

- 1. On the **Start** menu, right-click **Computer** and then select **Management**. Next, launch the 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.

6. Setting Up Windows Server 2008

Set up Windows Server 2008.

6.1 Before Starting Setup

Read through the cautions explained here before starting setup.

EB : Confirm during Setup with EXPRESSBUILDER				
0S : Confirm during Setup with OS standard installer				
BIOS	BIOS setting			
EB	OS	Change Boot Mode to Legacy Mode. See Chapter 2 (1. System BIOS) in Maintenance Guide for details. Boot → Boot Mode → Legacy		
EB	OS	Select Disabled for x2APIC feature of processor. See <i>Chapter 2 (1. System BIOS)</i> in <i>Maintenance Guide</i> for details.		
		Advanced \rightarrow Processor Configuration \rightarrow x2APIC \rightarrow Disabled		
Hard	ware o	configuration		
		The following hardware configurations require special procedures.		
EB	08	Reinstalling to a mirrored volume When you install Windows Server 2008 in an environment with a mirrored volume created using Windows, disable mirroring before installing the operating system and enable it again after the installation. Use [Computer Management] – [Disk Management] to create, disable, or remove the mirrored volume.		
ЕВ	08	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, or similar media Do not set any media that is unnecessary to installation during setup.		
EB	08	Installing in internal or external multiple logical drives For details on installing operating systems to a system in which two or more RAID Controller exist, or to an external disk drive that is not subject to setup, see <i>Chapter 1</i> (6.10 Installation When Multiple Logical Drives Exist). * Disk array unit (such as iStorage) or hard disk drive in Disk Expansion Unit.		
EB	08	Reinstalling to hard disk drives that have been upgraded to dynamic disks If the hard disk drive has been upgraded to a dynamic disk, the operating system cannot be reinstalled to it with the existing partitions. Set up the operating system with the Windows standard installer.		
EB	OS	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 Windows 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 the 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.		
		Note If the partition size for installing Windows is smaller than the recommended size,		
		expand the partition size or add another hard disk drive.		
		 Specify a drive other than the system drive for "Dedicated Dump File". 		
		Create the registry shown below by using the Registry Editor and specify the name of		
		Dedicated Dump File.		
		<when "dedicateddumpfile.sys"="" d="" drive="" file="" in="" named="" specifying="" the=""></when>		
		Key: HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl		
		Name: DedicatedDumpFile		
		Type: REG_SZ		
		Data: D:\dedicateddumpfile.sys		
		Note the following when specifying Dedicated Dump File:		
		Pay strict attention to edit the registry.		
		The setting is applied after restarting the system.		
		 Specify a drive that has free space of "installed memory size + 300 MB" or more. 		
		 Dedicated Dump File cannot be placed in dynamic volumes. 		
		To collect memory dump by using Dedicated Dump File, a paging file is required in		
		any drive.		
		Dedicated Dump File is only used for collecting memory dump, and is not used as		
		virtual memory. Specify the paging file size so that sufficient virtual memory can be		
		allocated in the entire system.		

The sys	tem partition size can be calcula	ted by using the following formula.
Size r	equired to install the OS + pagin	g file size + dump file size + application size
Full in	stallations	
Siz	e required to install the OS	= 9,400 MB
		(Windows Server 2008 + Service Pack 2) = 9,300 MB
		(Windows Server 2008 with Service Pack 2) = 6,300 MB
		(Windows Server 2008)
Pa	ging file size (recommended)	= installed memory size × 1.5
Du	mp file size	= installed memory size + 300 MB
Ар	plication size	= as required by the application
Server	Core installations	
Siz	e required to install the OS	= 5,300 MB
		(Windows Server 2008 + Service Pack 2) = 9,300 MB
		(Windows Server 2008 with Service Pack 2) = 2,200 MB
		(Windows Server 2008)
Pa	ging file size (recommended)	= installed memory size × 1.5
Du	<i>.</i>	
	mp file size	= installed memory size + 300 MB
For exar	plication size	= as required by the application is 1 GB (1,024 MB), application size is 100 MB, and f is calculated as follows:
For exar installati 6,300	plication size nple, if the installed memory size ons is selected, the partition size	= as required by the application is 1 GB (1,024 MB), application size is 100 MB, and f is calculated as follows:
For exar installation 6,300 = 9,26 The abo	plication size nple, if the installed memory size ons is selected, the partition size MB + (1,024 MB × 1.5) + 1,024 50 MB ve mentioned partition size is the	 as required by the application is 1 GB (1,024 MB), application size is 100 MB, and R is calculated as follows: MB + 300 MB + 100 MB minimum partition size required for system installation
For exar installation 6,300 = 9,26 The abo Ensure t	plication size nple, if the installed memory size ons is selected, the partition size $MB + (1,024 MB \times 1.5) + 1,024$ 50 MB ve mentioned partition size is the hat the partition size is sufficient	 as required by the application is 1 GB (1,024 MB), application size is 100 MB, and R is calculated as follows: MB + 300 MB + 100 MB minimum partition size required for system installation for system operations.
For exar installati 6,300 = 9,26 The abo	plication size nple, if the installed memory size ons is selected, the partition size MB + (1,024 MB × 1.5) + 1,024 50 MB ve mentioned partition size is the hat the partition size is sufficient The above paging file size (dump file). The initial size of store dump files. Make sure	 as required by the application is 1 GB (1,024 MB), application size is 100 MB, and F is calculated as follows: MB + 300 MB + 100 MB e minimum partition size required for system installation for system operations. s are recommended for collecting debug information of the boot volume paging file must be large enough you set a sufficient paging file size. If the paging file rtual memory shortage that may result in an inability
For exar installation 6,300 = 9,26 The abo Ensure t	plication size nple, if the installed memory size ons is selected, the partition size MB + (1,024 MB × 1.5) + 1,024 S0 MB ve mentioned partition size is the hat the partition size is sufficient The above paging file size (dump file). The initial size of store dump files. Make sure insufficient, there will be a v collect correct debug inform A paging file size of 4096	 as required by the application is 1 GB (1,024 MB), application size is 100 MB, and F is calculated as follows: MB + 300 MB + 100 MB minimum partition size required for system installati for system operations. s are recommended for collecting debug information of the boot volume paging file must be large enough you set a sufficient paging file size. If the paging file rtual memory shortage that may result in an inability ation. MB or greater cannot be specified for one partition
For exar installation 6,300 = 9,26 The abo Ensure t	plication size nple, if the installed memory size ons is selected, the partition size MB + (1,024 MB × 1.5) + 1,024 50 MB ve mentioned partition size is the hat the partition size is sufficient The above paging file size (dump file). The initial size of store dump files. Make sure insufficient, there will be a v collect correct debug inform A paging file size of 4096 some system configurations	 as required by the application is 1 GB (1,024 MB), application size is 100 MB, and F is calculated as follows: MB + 300 MB + 100 MB minimum partition size required for system installati for system operations. s are recommended for collecting debug information of the boot volume paging file must be large enough you set a sufficient paging file size. If the paging file rtual memory shortage that may result in an inability ation. MB or greater cannot be specified for one partition
For exar installation 6,300 = 9,26 The abo Ensure t	plication size nple, if the installed memory size ons is selected, the partition size MB + (1,024 MB × 1.5) + 1,024 30 MB we mentioned partition size is the hat the partition size is sufficient The above paging file size (dump file). The initial size of store dump files. Make sure insufficient, there will be a v collect correct debug inform A paging file size of 4096 some system configurations If the message prompting y specify 4095 MB.	 as required by the application is 1 GB (1,024 MB), application size is 100 MB, and R is calculated as follows: MB + 300 MB + 100 MB a minimum partition size required for system installation for system operations. as are recommended for collecting debug information for the boot volume paging file must be large enough you set a sufficient paging file size. If the paging file rtual memory shortage that may result in an inability ation. MB or greater cannot be specified for one partition on to specify a value smaller than 4096 MB appear is 2 GB or greater, the maximum size of the dump for the dump

Usin	ng BitL	cker	
		 If using BitLocker, note the following. Before installing an OS, be sure to create the following two partitions in the hard disk driv. System partition (to store the loader) Boot partition (to store the OS) Note For details, refer to the following document provided in Microsoft TechNet: BitLocker Drive Encryption Step-by-Step Guide Be sure to keep the recovery password secure. Do not keep it near a server ru BitLocker.	
ЕВ	05	Important If the recovery password is not entered, the OS cannot be started, and t content of the partition encrypted by BitLocker cannot be referenced a more. The recovery password might be required at startup of the OS after t following: Replacement of motherboard Change of BIOS setting Initialization of trusted platform module (TPM) * * Depending on your system, it may not be supported. Refer to the document about hardware.	ny he
		BitLocker-encrypted partition prior to reinstallation.	
Insta	alling S	ervice Pack	
EB	08	 If the OS installation media contains Service Pack 2, you do not need to apply the servack again. You can install the Service Pack on the server. When the Service Pack is not attached to system, prepare it by yourself. 	
Lice	nse au	hentication	
ЕВ	OS	 License authentication is required depending on the installation of Windows. For details, see <i>Chapter 1 (6.7 License Authentication)</i>. Note Activate within 30 days following installation. A virtual product key is used when installing in a virtual environment. It is not used when directly installing an operating system to a physical server 	er.

6.2 Setup with EXPRESSBUILDER

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.

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 EXPRESSBUILDER may delete all data of the hard disk drive depending on the settings. Pay attention to input parameters. You must be especially careful when configuring the following: RAID settings Partition Settings At re-installation, backing up user data is recommended. Before starting setup, be sure to disconnect hard disk drives from the RAID Controller that is not to be setup. Install those hard disk drives after setup has completed. Conducting setup with hard disk drives being connected with RAID Controller may cause existing data to be erased unintentionally. It is recommended to make backup copy of user data before starting setup.
Note	 The Scalable Networking Pack (SNP) function is disabled on systems that have been installed by using EXPRESSBUILDER. The setting of SNP function may affect the system performance. Contact your sales representative for details. When using an onboard RAID controller (LSI Embedded MegaRAID): Do not support the creation of RAID10 by using the onboard RAID controller. See <i>Chapter 2 (5. RAID System Configuration)</i> in <i>Maintenance Guide</i> when creating RAID10.
Tips	 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. For details on creating a parameter file, see <i>Chapter 1 (8. Windows OS Parameter File)</i>.

6.2.1 Setup flow



6.2.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

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

Tips

The OS can be installed in this server by starting EXPRESSBUILDER stored in the Internal Flash Memory without using the EXPRESSBUILDER DVD.

6.2.3 Setup procedure

Setup with EXPRESSBUILDER uses wizard to configure parameters and allows you to save the parameters specified in setup on removable media as a parameter file.

Note

Read through the items in *Chapter 1 (6.1 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).
- Select OS installation *** default ***.
 You will automatically advance to step 4, with no need for further input.

Boot selection	
OS installation and default and Tool newu (Normal mode) Tool nemu (Redirection mode)	
Automatic boot in 10 seconds	

The following window appears.



The server starts from EXPRESSBUILDER.



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



5. Click Setup.

Set up 1	Setup	®
	Versions	
٥	Exit	

6. On the **OS selection** menu, select the OS to install or specify the parameter file.
□ When not using parameter file : Go to Step 7.
□ When using a parameter file : Go to Step 8.

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

7. When not using a parameter file, select an OS by either of the following two ways:

1 s	elect an operating system to install.	
(0	ick Manual Selection to configure a RAID array only)	_
e	Automatic Detection	
	Manual Selection	
	Load Settings	

Click	Automatic	Detection.			
	1 OS selection	2 Settings	3 Confirmation	4 Installation	
			g system to inst		

Select a automa disc.	tically with an installation	
•	Load Settings	

Insert the OS installation media, and then click **OK**.

	ert the OS installation PRESSBUILDER will de	ant to install.	
		[Message ID : B2014]	
?			

(2) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.



То	select an OS from the menu:
(1)	Click Manual Selection.
	1 Selection 2 Installation 4
	Select an operating system to install. (Click Manual Selection to configure a RAID array only)
	Automatic Detection
	Manual Selection
	You can select the larget OS of the installation from the menu
	Setup

(2) From the Windows list, select Windows Server 2008 x86, and then click OK.

O VMware	Windows Server 2008 x86 🗧
0	
O RAID Configuratio	n Only

(3) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.



8. When *using* the parameter file, click Load Settings.

Sel	ect an operating system to install.
(Clic	k Manual Selection to configure a RAID array only)
Ľ	Automatic Detection
	Manual Selection
	Load Settings

Follow the on-screen instruction to load the parameter file (*.tre).

Places	Name	✓ St	ze Modified
Recently Used	edrom1		05/08/2014
Toot Desktop File System			
Documents Music Pictures			
Videos			
Downloads			
Add			
Transie Internet		Cancel	Öper

For the removable media in which the parameter file is saved, see "/mnt/usr_connect/usb*" (* indicates a number).

Click \bigcirc on the right side of the screen.

Tips

1		elect an operating system to install.
1		ck Manual Selection to configure a RAID array only)
	Ľ	Automatic Detection
		Manual Selection
~	₿	Load Settings

When the parameter file is correctly loaded, the setting is determined. Click **Custom** to check and modify the setting in the wizard. Click \bigcirc on the right side of the screen.

	1 OS select	ion 2 Settings	3 Confirmation	4 Installation	
	2 "	ter installation	settings.		
C	0	Default			\bigcirc
	~ Ø	Custom			
				Set	tup

 \rightarrow Go to step 10.

9. Specify the setup parameters by using either of the following methods:

) E	nter installation settings.	
0	Default	\supset
61	Custom	

Use Default:

(1) Click **Default.**

	1 2 3 OS selection Settings Confir	mation Installation
	2 Enter installation settings.	
\bigcirc	Default	₽
	Specify minimum settings for the installation. Default values are used for other settings.	
		Setup

(2) Select the edition of the OS to install from the **Edition** list. Type the password, and then click **Finish**.

Operating system : Windows Server 2008 x86 Edition : [Standard[Full Installation) Language : English Password Settings	on : Standard(Full Installation) 0 uuage : English 0 sword Settings	
Language : English © Password Settings Administrator Password : (Required)	uage : English 🔅	
Language : English (Compared to the second s	uage : English 🗢	
Password Settings Administrator Password : (Required)	sword Settings	
Administrator Password : (Required)		
	dministrator Password (Requi	(Required)
Reciter running debring and an and an		13 25 5
		(required)

 Note
 Computer name and Administrator Password are required parameters.

 Enter 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 (A through Z), lowercase letters (a through z), and symbols.
- (3) Click \bigcirc on the right side of the screen.

-		
2	Enter installation setting	gs.
× 0	Default	
3	Custom	
		Setu

 \rightarrow Go to step 10.

Use Custom:

(1) Click Custom.



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

When using an onboard RAID controller (LSI Embedded MegaRAID):

Do not support the creation of RAID10 by using the onboard RAID controller. See *Chapter 2* (5. *RAID System Configuration*) in *Maintenance Guide* when creating RAID10.

An operating system	will be installed to t	the logical drive	on the following	PAID controller:	
Uninstall all RAID co selected.					roller is
- Device Information					
RAID Controlle					etail
					etall
Number of Phy					
Summary of RAID	Array-				
Array #1					~
RAIDO (1disk) Logical Drive1	(1117GB)				-
RAID Configuration	n				
Skip Confi	guring RAID Array				
				1 / 11	l Page
	Next			Cancel	
	Next			Cancer	

When creating new logical drives

Note

With the **Skip Configuring RAID Array** check box cleared, click **Next**. Set up the logical drives according to the wizard.

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

Select the Skip Configuring RAID Array check box, and then click Next.

(3) Check the settings specified for **Basic Settings**.

Choose Install Windows using EXPRESSBUILDER, modify the settings as needed, and then click Next.

N C	hoose Use Windows sta /indows installation disc. hoose Install Windows pplications at one time.		8	5	
	Basic Settings				
	Operating system	: V	Vindows Server 2008	x86	
	O Use Windows st	tandard installer			
		: English		≎) A Canada) ≎]	
				4 / 1	1 Page
	Back	Next		Cancel	

(4) Check the settings specified for **Partition Settings**. Modify the settings as needed, and then click **Next**.

Window the syst	rs will be installed em partition is 2TE		drive or logical dri	ve. The maximum partition size for will be deleted.
Current	Partitions (the area sh	own with a red frame will	be deleted) :	
	0B(FAT32) D07(
		40.3GB) (0.1GB)	(1076GB)	
Part	ition Settings			
100	Create a new parti	lon		
	O Use all space			
	 Ose an space Type a partit 	on size :	40 (GB)	
		(Minimum: 4	OGB / Recommende	d: 40GB / Maximum: 1116GB)
				5 / 11 Page
-	Back	Next		Cancel

Important • Backing up user data, as needed, is recommended.



- Specify a partition size larger than the minimum required for installing the operating system. (See Chapter 1 (6.1 Before Starting Setup).)
- The maximum partition size is 2,097,152 MB.
- If you select "Create a new partition" under "Partition Settings", the entire contents of the hard disk drive will be deleted.

(5) Enter the user information, and then click Next.

Personalize the computer. Type Computer Name within 15 charact Administrator Password must be at least three of the four categories (numbers/upp	st six c	haracters in length and /lowercase/symbols).	i must contain characters f
User Information			
Computer Name	- e (Automatic Numberir	ng
	6	3D4394570815	(Required)
User Name	: 7	dministrator	
Administrator Password	:[(Required)
Reenter Administrator Password	:[(Required)
			6 / 11 Page
			07.111480



(6) Check the settings specified for **Network Protocols**. Modify the settings as needed, and then click **Next**.

Choose Custom Settle	bool. ngs, click Advanced, if you want to typ	e an IP address.
-Network Protocols		
Standard S	Settings	
Custom Se	ttings	
Standard A	dapter - Internet Protocol (IPv4)	Advanced
		7 / 11 Page
		7 / 11 Page
Back	Next	7 / 11 Page



Note

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

Even when an optional network board is connected, **Custom settings** only shows standard network boards. After finishing setup with EXPRESSBUILDER, specify the optional network settings again.

- (7) Specify the domain or workgroup.
 - Check the settings, modify them as needed, and then click Next.

Choose Join a workgroup or Join	a domain, and then enter param	neters.
 Join a workgroup Workgroup Name 	: WORKGROUP	
Join a domain	i menneneer	
Domain Name	:	
Account Name	:	
Password	:	
Reenter Password	1	
		8 / 11 Page

(8) Check the settings of Windows components. Modify the settings as needed, and then click Next.

Choose Windows components you w	ant to install.		
Server Roles			
Web Server (IIS)	Print and Document Services		
DHCP Server	File Services		
DNS Server	Hyper-V		
Windows Features			
SNMP Service		Advanced	
Simple TCP/IP Services			
WINS Server			
		9 / 11 Page	
Back Nex	t	Cancel	
		ाजित्याण	
			Full installa

Server Roles	
Web Server (IIS)	Print and Document Services
DHCP Server	File Services
DNS Server	□ Hyper-V
Windows Features	
SNMP Service	Advanced
WINS Server	
	9 / 11 Page

Server Core installations

(9) Check the settings of applications. Modify the settings as needed, and then click **Next**.

Available Applications		Selected Applications
		EC ESMPRO ServerAgentService xpress Report Service
	Add >>	xpress Report Service xpress Report Service(HTTPS) Iniversal RAID Utility dicrosoft .NET Framework Version 4.0.0
	<< Delete	xpressUpdate Agent
	~	
Description		

 NEC ESMPRO ServerAgentService 	
 Express Report Service 	
 Express Report Service (HTTPS) 	
 Microsoft .NET Framework Version 4.0.0 	

On the following screen, click Finish.

The settings are now complete. Click Finish to close this window.			
CICK PIIIIai	r to close th	s window.	
			11 / 11 Page
	Back	Finish	Cancel

On the following screen, click \bigcirc on the right side of the screen.

2 Enter installation s	settings.
Default	
Custom	
Custom	

10. Check the parameter settings. To save the settings, click **Save**.

	1 2 3 A Confirmation 4 Installation
	2 Confirm installation settings.
	(Confirm if the installation settings are properly)
)	Skip a RAID configuration.
	Operating system : Windows Server 2008 x86
	(Install Windows using EXPRESSBUILDER)
	Edition : Standard(Full Installation) Language : English
	Save
	Southing

Click \bigcirc on the right side of the screen.

11. The setup process starts. Click **Start** to continue setup.

	ootup.	
1 OS selection	2 Settings Confirmatio	n Installation
Ready to s	set up the computer.	
A partition has a If you proceed,	already been created any data stored on the partition v	will be lost.
 Configuring 	g RAID system	
 Copying file 	es	
 Changing n 	nedia	
	Start	
		Setup

12. If the server has started from the EXPRESSBUILDER DVD, insert the EXPRESSBUILDER disk into the optical disk drive, and then click **OK**.

If EXPRESSBUILDER DVD is already set, this message will not appear.

Selection			
1	nsert the EXPRESSBUI	LDER disc to the drive.	Message ID : J2002]
0			

13. Insert the OS installation media into the optical disk drive, and then click OK.

	Insert an OS installa	tion disc for installing.	[Message ID : J200	01
0				

Windows Server 2008 is installed automatically. Wait for completion (about 40 minutes) without performing any operation.

14. The Starter Pack and the selected applications are automatically installed. Wait for completion without performing any operation.

1 /2 📫 2	2 /2		
Installing St	arter Pack.		
Please wait for	a while.		

Screen displayed when Starter Pack is being installed



Screen displayed when an application is being installed

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

Set Up Windows					
🕞 🍠 Set Up Windows					
Please read the license terms					
MICROSOFT SOFTWARE LICENSE TERMS	<u>•</u>				
MICROSOFT WINDOWS SERVER 2008, STANDARD					
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft					
0 updates,					
D supplements,					
D Internet-based services, and					
D support services	-				
Laccept the license terms					
4	lext				
	i in				

16. When the message "Thank you" appears, click **Start**. Set Up Windows



Tips

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

17. Press <Ctrl> + <Alt> + keys to log on.



Full installations:

Enter your password you have set in step 9-(2) or 9-(5) into the text box, and then click 🥯.



Server Core installations:

Click Other	User.	
	Other User	
	Cancel	
•	Windows Server 2008 Standard	

When the following screen appears, enter administrator into **User** text box and the password you have set in step 9-(2) or 9-(5) into **Password** text box, and then click **S**.



18. Click OK.



- 19. Follow the instructions described in *Chapter 1 (6.5 Setting Up Device Drivers)* to set up the device drivers supplied with this server as standard.
- 20. Confirm if Windows is activated according to Chapter 1 (6.7 License Authentication).
- 21. Apply Service Pack as needed according to Chapter 1 (6.8 Applying Service Pack).
- 22. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).
- 23. See *Chapter 2 Installing Bundled Software* to install the bundled software or confirm that the software is appropriate to your operating environment.

Setup with EXPRESSBUILDER is now complete.

6.3 Setup with Windows Standard Installer

This section describes how to install Windows with Windows 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 Windows 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 			
	At re-installation, 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. Se <i>Chapter 2</i> (5. <i>RAID System Configuration</i>) in <i>Maintenance Guide</i> when creatin RAID10.			
Tips	• Setup with Windows 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.			
	 For details on creating a parameter file, see Chapter 1 (8. Windows OS Parameter File). 			

6.3.1 Setup flow



6.3.2 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
- Prepare if needed:
 - Removable media for Windows OS parameter file
 - Removable media for creating OEM drivers (Windows Server 2008 x86)
 - Service Pack

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



2. 3.

Setup procedure 6.3.3



OS installation and default and
Tool mena (Normal mode)
Tool menu (Redirection mode)
Automatic boot in 10 seconds
Hacomacia 2000 1= 10 3000 111

The following window appears.

Starting	EXPRESSBUILDER

The server starts from EXPRESSBUILDER.



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



5. Click Setup.

Set up	Setup	B
Ō	Versions	
Ċ	Exit	

6. On the **OS selection** menu, select the OS to install or specify the parameter file.
□ When not using parameter file : Go to Step 7.
□ When using a parameter file : Go to Step 8.

When setting up again, an already saved parameter file can be read, so that you can skip inputting parameters in the wizard.

7. When not using a parameter file, select an OS by either of the following two ways:

	elect an operating system to install.
E	Automatic Detection
	Manual Selection
P	Load Settings

Note

Click A	utomatic De	tection.			
	1 OS selection	2 Settings	3 Confirmation	4 Installation	
			g system to inst		

Select ar automati disc.	operating system cally with an installation	
₽	Load Settings	

Insert the OS installation media, and then click OK.

	Insert the OS installation d EXPRESSBUILDER will det		to install.
		[M	essage ID : B2014]
?			

(2) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.



To sele	ect an OS from the menu:
(1)	Click Manual Selection.
	1 OS selection 2 Settings 3 Confirmation 4 Installation
	Select an operating system to install. (Click Manual Selection to configure a RAID array only)
	Automatic Detection
	Manual Selection
	You can select the target OS of the installation from the menu.
	Setur

(2) From the Windows list, select Windows Server 2008 x86, and then click OK.

Select an operating system to install.
Windows Windows Server 2008 x86
○ VMware
C RAID Configuration Only

(3) Click \bigcirc on the right side of the screen. \rightarrow Go to step 9.



8. When *using* the parameter file, click Load Settings.

Sel	lect an operating system to install.
(Clic	k Manual Selection to configure a RAID array only)
e	Automatic Detection
	Manual Selection
B	Load Settings

Follow the on-screen instruction to load the parameter file (*.tre).

✓ Size Modified
05/08/2014

Tips

For the removable media in which the parameter file is saved, see "/mnt/usr_connect/usb*" (* indicates a number).

Click \bigcirc on the right side of the screen.

1 Se	elect an operating system to install.
(Cl	ick Manual Selection to configure a RAID array only)
6	Automatic Detection
	Manual Selection
¥ 🕒	Load Settings

When the parameter file is correctly loaded, the setting is determined. Click **Custom** to check and modify the setting in the wizard. Click \bigcirc on the right side of the screen.

	1 OS selecti	ton Settings 3 Confirmation	A Installation
	2 "	ter installation settings.	
)	•	Default	
	~ 01	Custom	
			Setup

- \rightarrow Go to step 10.
- 9. Click Custom.

1 2 Selection	3 [4 Confirmation
2 Enter installation settin	igs.
Default	
Custom	ø
	Setup

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

Note

When using an onboard RAID controller (LSI Embedded MegaRAID):

Do not support the creation of RAID10 by using the onboard RAID controller. See *Chapter 2* (5. *RAID System Configuration*) in *Maintenance Guide* when creating RAID10.

1	An operating system will be installed to the logical drive on the following RAID controller: Junistall all RAID controllers not to be used for the OS installation if the incorrect RAID controller is selected.
	C Device Information
	RAID Controller : Detail
	Number of Physical Drives : 2
	Summary of RAID Array
	Array #1 RAID0 (1disk) Logical Drive1 (1117GB)
	⊢ RAID Configuration
	Skip Configuring RAID Array
	1 / 11 Page
	Next Cancel

When creating new logical drives

With the **Skip Configuring RAID Array** check box cleared, click **Next**. Set up the logical drives according to the wizard.

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

Select the Skip Configuring RAID Array check box, and then click Next.

(2) Check the settings specified for Basic Settings.

Choose Use Windows standard installer, and then click Next.

If you need to copy the OEM driver, select the Copy OEM drivers to removable media check box.

Γ	Basic Settings	. 14/	ndows Server 2008	-0.0	
-	Operating system		nuows server 2008	100	
	Use Windows s Copy OEM	tandard installer drivers to removable m	iedia		
+	□ □ Install Windows	using EXPRESSBUILD	ER		
	Edition	Standard(Full Installation)		
	Language	English	0		
	Time Zone		00) Pacific Time (US	& Canada)	0
					4 / 11 Page

On the following screen, click Finish.

The settings are now co	mplete.	
Click Finish to close th	is window.	
		11 / 11 Page
Back	Finish	Cancel

On the following screen, click \bigcirc on the right side of the screen.

/	
Default	
Custom	

10. Check the parameter settings.

	1 OS selection	2 Settings	3 Confirmation	4 Installation	
-	Confirm	installatior	n settings.		
•	(Check if vali	d installation se	ttings are specified)]	C
	Skip configuring RAID	array.			C
			: Windows Server 20	008 x86	
	Operating system				
	Use Windows standa	rd installer)			
		rd installer)	: No		
	(Use Windows standa	rd installer)	: No	Save	ן

Click \bigcirc on the right side of the screen.

11. The setup process starts.

CIICK SL	art to conti	nue setup		
	1 OS selection	2 Settings	3 Confirmation	4 Installation
	A Read	y to set up th	e computer.	
	4 A partitio	on has already been o oceed, any data stor	reated ed on the partition will b	e lost
_	* Co	nfiguring RAID system	n	
$\langle \rangle$		oying OEM drivers		
C		inging a CD/DVD		
	* Inst	alling an OS		
		<u> </u>	Start	
				Setup
				esecule

 Continue setup according to the on-screen messages. When copying the OEM driver, the following message appears. Insert the removable media into the disk drive, and then click Yes.

	Copy OEM drivers (Windows Server 2008).
	Set removable media, and then click Yes.
	[Message ID : G2000]
?	

Insert the OS installation media into the disk drive, and then click OK.

[Message ID : J2000]

13. 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 12, boot the system from the optical disk drive having higher boot priority, not from Internal Flash Memory.

14. Run from the OS installation media.

Note

If OS has already been installed, the message "Press any key to boot from CD or DVD..." is displayed on the top of the screen. Press <Enter> key to boot the system from media.

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



This step is unnecessary if no bootable operating system exists.

15. Click Next at default settings.



- 16. Click Install Now 🗐.
 - Windows Server 2008 installation starts.



- If the following message appears, go to step 17.
- If it does not, go to step 19.

	_
	eds is missing. This could be a DVD, USB or Hard dis ISB flash drive with the driver on it, please insert it
the installation media for ely remove it for this step.	Windows is in the DVD drive or on a USB drive, you
	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 you must use Internal Flash Memory or removable media with the OEM drivers copied onto it.
- 17. Select the destination, and then click OK.

Tips



18. Select LSI Embedded MegaRAID, and then click Next.

19. 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.



20. Select the Windows edition you are going to install.

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.

Windows Version	
Vindows Server 2008 Standard (Full Inst. Windows Server 2008 Enterprise (Full Inst. Windows Server 2008 Datacenter (Full Inst. Windows Server 2008 Standard (Server C Windows Server 2008 Enterprise (Server C Windows Server 2008 Datacenter (Server	tallation) stallation) iore installation) Core installation)
To enter your product key, click the Back if you choose not to enter your product k that you purchased. If you select the wron	tey now, make sure that you select the edition of Windows ng edition, you will need to purchase that edition, or you Windows later and potentially lose files and information.
	Net

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

21. Read the content of the license agreement.

If you agree, select I accept the license terms and then click Next.

MICR	MICROSOFT SOFTWARE LICENSE TERMS	
MICR	OSOFT WINDOWS SERVER 2008, STANDARD	
where	license terms are an agreement between Microsoft Corporation (or based on you lwe, one of its affiliates) and you. Flease 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	
0	updates,	
0	supplements,	
0	Internet-based services, and	
0	support services	-
[] lace	ept the license terms	
		Next
Select the installation type.
 Select Custom (advanced) in this case.

Which ty	pe of installation do you want?
1	Upgrade Keep your files, settings, and programs and upgrade Windows. Be sure to back up your files before upgrading.
V	<u>Custom (advanced)</u> Install a clean copy of Windows, select where you want to install it, or make changes to disks and garatitions. This option does not keep your files, settings, and programs.
Help me d	cide
Upgrade	nas been disabled
- To upgra	le, start the installation from Windows.

23. "Where do you want to install Windows?" window appears. If the driver was loaded in steps 17 and 18, or if a RAID Controller is not used, go to step 27.

If you clock Load Driver, the following message appears.

If the following message appears, replace the OS installation media and EXPRESSBUILDER DVD in the optical disk drive, and then click **Browse**.

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				

If you did not press <F3> key in Step 13, replace the OS installation media with EXPRESSBUILDER DVD.

- Click Browse, specify the following location, 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 N8103-176/177/178 RAID Controller: $010\win\winnt\oemfd\ws2008\megasas2$
 - When using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive: $\010\win\winnt\embedded\megasrl$
- 25. Select the necessary driver from the driver list shown, and then click Next.

N8103-176/177/178 RAID Controller: [LSI MegaRAID SAS 9362-8i]

- If using the onboard RAID Controller (LSI Embedded MegaRAID) and a USB-DVD drive [LSI Embedded MegaRAID]
- 26. If you insert EXPRESSBUILDER DVD in Step 23, remove it and then insert the OS installation media.
- 27. 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 30.

28. Click New, enter the partition size into the size input box, and then click Apply.

Note

The partition size can only be set to 2TB (2,097,152 MB) or less.

- 29. Select the partition created in step 28, and then click Format.
- 30. In the window below, select the created partition, and then click Next.

	lame	202	Total Size 74.5 GB	Free Space Ty 74.5 GB	pe
	isk 0 Unalloci	and shore			
fy Betres @ Load (XRelete 2 Istend	Tomat	🌞 Ne <u>m</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

If the following message appears, remove EXPRESSBUILDER DVD and then insert the OS installation media.

Install Windows - Insert Disc	
Please insert Windows installation disc 1.	
	OK Cancel

31. Confirm the following according to the settings selected (displayed) in Step 20.

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.





(3) When the following message appears, click OK.

Your password has been changed.	
ОК	
Hindows Server 2008 Standard	

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



Server Core installations:

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



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

	Other User	
G	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.

	Lifeninistrator Personai
C	Cancel Windows Server 2008 Standard

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



(5) Change your password, and then click ジ.



- 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 (A through Z), lowercase letters (a through z), and symbols.
- (6) When the following message appears, click OK.

Your password has been changed.	
ОК	
Standard Server 2008	

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

C:\Users\administrator}_	
o Nosers Administratory	

Tips

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

- 32. Install Starter Pack by referring to Chapter 1 (6.4 Installing Starter Pack).
- 33. Install drivers and specify detailed settings by referring to Chapter 1 (6.5 Setting Up Device Drivers).
- 34. Confirm if Windows is activated according to Chapter 1 (6.7 License Authentication).
- 35. Apply Service Pack as needed according to Chapter 1 (6.8 Applying Service Pack).
- 36. Install the applications as needed by referring to Chapter 1 (6.9 Installing the Applications).
- 37. Execute setup by following the instructions described in Chapter 1 (7. Setup for Solving Problems).

Setup with Windows standard installer is now complete.

6.4 Installing Starter Pack

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

Important	Also install Starter Pack in the following cases.				
 The hardware configurations have changed (If an internal optional device is installed or removed, apply th Starter Pack. If a dialog box prompting system reboot is displ reboot the system according to on-screen instructions, and th apply the Starter Pack.) 					
	 If the system was restored using a restore process 				
	 If a system has been restored using the backup tool 				
Note	The Scalable Networking Pack (SNP) function is disabled upon Starter Pack installation is complete.				
	The setting of SNP function may affect the system performance.				
	Contact your sales representative for details.				
Tips	If the OS is installed by using EXPRESSBUILDER, Starter Pack is already applied. If the configuration is not changed, you do not need to apply Starter Pack again.				

6.4.1 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

Click Integ	rated	Installation on the menu	J.
EXPRE	SSBL	JILDER	NEC
		Instruction Manuals	\supset
	0	Versions	
	7	Integrated Installation	\supset
		Applications	
		Files For Setup	
	۲	Maintenance	
	₿4	Exit	Version 7.10-000.01(001)

Make sure that the Starter Pack option is selected, and then click Install.

	Integrated Installation			
	Install the following software. - Unable to select [Applications] when Si - Uninstall the application prior to reinst			
	© Starter Pack			
2	Applications INEC ESMPRO ServerAgentService	Rev1.0	Not installed	
	Express Report Service	Rev3.5E	Not installed	
	Express Report Service (HTTPS)	Rev3.4	Not installed	
	Microsoft .NET Framework Version 4.0.	0	Not installed	
	Universal RAID Utility	Rev4.00	Not installed	
-	Product Info Collection Utility	Rev2.7.3	Not installed	
	NEC ExpressUpdate Agent	Rev3.14	Not installed	
٢				

Tips

If Starter Pack is already installed, the **Applications** option is selected by default. To install Starter Pack again, select the **Starter Pack** option.

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:\010\win\winnt\bin

C:\Users\administrator>cd /d D:\010\win\winnt\bin

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

pkgsetup.vbs

```
D:\010\win\winnt\bin>pkgsetup.vbs
```

Wait for several minutes (about 1 to 3 minutes) without attempting any further operation until files are copied.

On Full Installation, the following progress message appears while the Starter Pack is installed.



4. Read the message, and then click **OK**.

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

Wait until installation completes (about 3 or 4 minutes).

On Full Installation, the following progress message appears while the Starter Pack is installed.

Starter Pa	ck
Installing	Starter Pack.
Please was	it for a while
>> Che Upo	oying Files. .cking the system information. fating drivers. forming the last process.

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

Starter Pa	ack	×
1	Installing Starter Pack was completed. The setup reboots for installing drivers. After taking out it from Optical Disc Drive, if the media is set in Optical Disc Drive, dick [OK].	
	ОК	

6. Click **OK** to restart the system.

Installation of Starter Pack is now complete.

6.4.2 When using Internal Flash Memory

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

Note

2. When "Press <F2> Setup, <F3> Internal Flash Memory, <F4> ROM Utility, <F12> Network" appears during POST, press <F3> key.

Before pressing <F3> key, 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.



The following window appears.

Starting EXPRESSBUILDER	
L	

The server starts from EXPRESSBUILDER.



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



5. Click Utilities.

Setu;		2
Y Utiliti	es)®
Move to Utilities Mer	u.	
Č Exit		

6. Click Starter Pack Installation.



7. Read the contents, and then click Yes.

Selection	n
	Starter Pack will be installed on your Windows system. Proceed? [Message ID : P2000]
3	
	Yes No

8. When files are copied, click **Close** on the following screen.

1 Informat	ion
	Copying Starter Pack is complete.
	Click Close to restart the computer.
	To install Starter Pack, follow the message after logging on to
	Windows.
•	Run the following file on the system drive when installing with
	Server Core mode.
	[System Drive]:\StartPKG\app_pkg.bat
	[Message ID : P1003]
	Close

The server then restarts. Do not press <F3> key and allow OS to start.

9. Proceed to apply Starter Pack according to the installation type.

Full installations

Go to the next step.

Server Core installations

- (1) Enter the following command at the command prompt, and then open the folder under the system drive (drive C).
 - Cd /d C:\StartPKG

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

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

app_pkg.bat

C:\StartPKG>**app_pkg.bat**

10. The following screen appears.

Starter Pack is in preparation for application. Wait for a while (about 1 to 3 minutes.)

Applying Starter Pack is in preparation. Please wait for a while.

Note

On Full Installation, this message below may appear at lower right of the screen. There is no problem in system operation. This message will disappear automatically. "Device driver software was not successfully installed" 11. Read the message, and then click **OK**.



Wait until the installation of the Starter Pack is complete. (About 3 to 5 minutes)

On Full Installation, the following progress message appears while the Starter Pack is installed.

Starter Pack	
Installing Starter Pack.	
instanning Starter I ack.	
Please wait for a while	
>> Copying Files.	
>>> Checking the system information.	
Updating drivers.	
Performing the last process.	

12. Click **OK** to restart the system.

Starter Pa	ack	X
1	Installing Starter Pack was completed. The setup reboots for installing drivers. After taking out it from Optical Disc Drive, if the media is set in Optical Disc Drive, dick [OK].	
	OK	

Installation of Starter Pack is now complete.

6.4.3 Using EXPRESSBUILDER installed in Windows

If EXPRESSBUILDER has been installed in Windows, you can use it as a Windows application. For details of EXPRESSBUILDER, see Chapter 2 (6. Details of EXPRESSBUILDER) in Maintenance Guide.

- 1. Select NEC from Windows Start menu to launch NEC EXPRESSBUILDER.
- 2. See Step 3 and the subsequent steps in Chapter 1 (6.2 Setup with EXPRESSBUILDER 6.2.3 Setup procedure) for further procedure.

6.5 Setting Up Device Drivers

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

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

6.5.1 Installing the LAN drivers and BACS (teaming utility)

(1) LAN drivers and BACS

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

Important Wake On LAN (WOL) is supported by the standard network adapters only.

Note

 To change the LAN driver and BACS 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.

Optional LAN boards: N8104-149/150/151/152

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

Note

If an optional LAN board has been added, perform the procedure in *Chapter 1* (6.5.2 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 (*1)

If connecting with an optional LAN board:

N8104-149:

Broadcom BCM57810 NetXtreme II 10 GigE (NDIS VBD Client) #xx (*1)

N8104-150/151/152 :

Broadcom NetXtreme Gigabit Ethernet #xx (*1)

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

Tips

N8104-149 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.

6.5.2 Setting up LAN drivers

(1) Setting link speed

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

Tips

When using N8104-149, you can specify "10 Gb Full" for network adapter and "Auto Negotiation" to switching hub.

- 1. Open the Device Manager.
- 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. On the Advanced tab, 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) When using N8104-150/151/152

When using N8104-150/151/152 with the server, follow the procedure below to set it.

 Insert EXPRESSBUILDER DVD into the optical disk drive. If the 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 pgdyavd_disable.vbs in the following folder.

When using EXPRESSBUILDER DVD:

EXPRESSBUILDER DVD:\010\win\winnt\ws2008\lan\bcom\ws2008x86\lan

If Starter Pack was installed from Internal Flash Memory:

```
System drive:\StartPKG\ws2008\lan\bcom\ws2008x86\lan
```

3. When the following message appears, click OK.

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

Tips

The message "Action: Non" indicates that the LAN driver is already set.

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

Setup is now completed.

6.5.3 Setting up team/LiveLink (BACS)

This section describes procedures for creating and deleting team, and for configuring LiveLink. The supported network adapters are as follows:

- Network adapters for the standard configuration
- Optional LAN boards: (N8104-149/150/151/152)

Note

- For how to delete an adapter team, see Chapter 1 (6.5.3 Setting up team/LiveLink (BACS) (4) Procedure for deleting team).
 Check the following points when deleting an adapter team.
 - If a team exists, delete the team first. If the team is bound to a Hyper-V virtual adapter, unbind the Hyper-V adapter before deleting the team.
- When replacing the motherboard or optional LAN boards after an adapter team is configured, delete the adapter team first.
- Be sure to specify the same Jumbo Mtu (Jumbo Packet) setting to all the adapters that compose a team.
- Do not configure the teams with adapters that use the iSCSI function.

(1) Team type and LiveLink

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-Fallback 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.

FEC/GEC Generic Trunking

The combination of multiple adapters into a single channel to provide greater bandwidth.

Note

FEC and GEC modes require switch support.

(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.

Important When using Smart Load Balancing and Failover (without Standby Member), be sure to set up LiveLink at creation of a team.

• When using Smart Load Balancing (Auto-Fallback Disable) (with Standby Member), setup for LiveLink is not essential.
• LiveLink is not supported with FEC/GEC mode.

(3) Setting up team/LiveLink

Note	Possible combinations of network adapters that compose a team are as follows.
	When the number of adapters that composes the team is up to four:
	Between standard network adapters
	Between optional LAN boards excluding N8104-149
	Standard network adapters and optional LAN board excluding N8104-149
	Between N8104-149 adapters
Tips	To edit a team, right-click on the BACS team, and then select Edit Team.
	Then see 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.

Tips

Use icon view on Control Panel.

2. Set **Filter** to **TEAM VIEW**, right-click the adapter to be used for the team, and then select **Create a Team** from the short-cut menu.

Broadcom Advanced Control Suite 4 File View Action Filter Context Tools Teams (2051 Help		<u>_0×</u>
Filter: TEAM VIEW 🔽 Information 💌 🔽 Vital Signs	s 🔽 Driver Information	
Explorer View 8	Information Configurations Diagnostics	Statistics
⊟- add Hosts	Property	Value
Teams Unassigned Adapters (0007) Broadcom NetXtreme Girabit Ethernet (0008) Broadcom Net Zenan Marnate Teams Add to a Team Oreate a <u>ULAN</u>	Vital Signs Permanent NAC Address Permanent NAC Address Permanent NAC Address Priver Official Capabilities Official Capabilities Driver Information Driver Version Driver Date Driver Status Vital Signs The Vital Signs section of the Information tab h retwork adapters that are installed in your syst adapter and general network connectivity.	
BROADCOM	<u>//</u>	HALLSH

The Broadcom Teaming wizard appears.

3. Click Next.

continue,
continue,
eview 📊



Do not use Expert Mode. It is not supported.

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

III 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 symbolic &&¥/*?	character except
Cancel < Back Next >	Preview 🔟

5. Under **Team Type**, select the type of team you want to create, and then click **Next**.

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

ii Broadcom Teaming Wizard								? ×
Creating/Modifying a Team: Assigning Team M Specify which adapters to include in the team. Include adapters that you wish to set for the st								BROADCOM.
Available Adapters	TOE	LSO	CO	RSS	samab	NDIS	MTU	
[0008] Broadcom NetXtreme Gigabit Ethernet #2	No	Yes	Yes	No	Yes	5.1	1500	
Add								Remove
N		1	1	1	1		1	
Team Members [0007] Broadcom NetXtreme Gigabit Ethernet	TOE	LSO Yes	CO Yes	RSS	samab Yes	NDIS 5.1	MTU 1500	
Feam Offload Capabilities: LSO, CO			Team	мти: [1	500			
	08.00 (Geo.Geo.		2) 	_				
Cancel	< <u>B</u> ack		<u>N</u> ext >					Preview 🔟
Note	lf I	FEC	/GE(C Ge	eneri	c Tr	unki	ng is select

- 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. (1)	
C Use the following member as a standby member:	
[D007] Broadcom NetXtreme Gigabit Ethernet	<u>*</u>

- Smart Load Balancing (Auto-Fallback 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-Fallback Disable mode.

Important The operation when Auto-Fallback Disable mode is unchecked is not supported.

(4) Click Next.



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

8. When configuring LiveLink, select **Yes**, click **Next**, and then go to step 9. When configuring LiveLink is unnecessary, select **No**, click **Next**, and then go to step 15.

Broadcom Teaming Wizard	<u>? ×</u>
Creating/Modifying a Team: Configuring LiveLink Do you want to configure LiveLink?	BROADCOM.
Configure LiveLink?	
C Yes	
@ 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.

Creating/Modifying a Team: Co Configure LiveLink(TM) attribut			BROADCOM
Probe Interval (seconds)	2		
Probe Maximum Retries	5	-	
Probe VLAN ID (Optional: 0-4094)	0		
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 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.
- When using Tagged VLAN, input the VLAN ID for **Probe VLAN ID**.

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:	Г.		
	Target 2: Target 3:	l I		
	Target 4:	ſ		
	Please enter either	er an IPv4 or IPv6 address for the p	probe targets IP address field.	
	ОК		Cancel	
1				
		Note	Target xx communi Specify a	ca

communication is possible. If communication with the all 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>
 At least one LiveLink pro 		Target IP Address	

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

Target Members	IPv4 Address	IPv6 Address	
007] Broadcom NetXtreme Gigabit Ethernet			
008] Broadcom NetXtreme Gigabit Ethernet #2			
54	it Mambar IP Address		
Ed	it Member IP Address		
Ed	it Member IP Address_		
Every member must have a static IP ad	it Member IP Address		

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

	🚻 Live Link Config	urations	×
Note Note Note Note For Target xx, specify			
IPv6 Address: Cancel OK Cancel Note • Be sure to specify an adapters that compose for LiveLink communication. • For Target xx, specify		NetXtreme II 10 GigE (NDIS VE	BD
OK Cancel Note • Be sure to specify an adapters that compose for LiveLink communication. • For Target xx, specify	IPv4 Address:		
Note • Be sure to specify an I adapters that compose for LiveLink communic communication. • For Target xx, specify	IPv6 Address:		
 adapters that compose for LiveLink communic communication. For <i>Target xx</i>, specify a 	ОК	Cancel	
for LiveLink communication.For <i>Target xx</i>, specify a		Note	• B
• For <i>Target xx</i> , specify a			
• For <i>Target xx</i> , specify an which communication is			

14. Click Next.



15. Make sure that **Skip manage VLAN** is selected under **Manage VLAN**, and then click **Next**. It is an example when you do not want to use the VLAN.

Broadcom leaming Wizard	<u> </u>
Creating/Modifying a VLAN: Configure VLAN Support Specify whether you want to create or delete a VLAN.	BROADCOM
Manage VLAN	
C Add VLAN	
C Edit VLAN	
💽 Skip Manage VLAN	
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**.



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 to 14 again and correct the LiveLink settings.

When all network adapters that configure the team are in the link down status, this is indicated as shown in the window below. Check the LiveLink settings while all adapters are linked up.



17. Restart the system.

- 18. 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)

	9 Information Statistics	
Bool France Torms Torms	Property Without A states Team Type Team Type Team Nye Team WTU Driver Version Oriver Version Probe More Refres Probe More Refres Probe Vers ID Team Probe Tareet 1	Value Faunt 1 Trans 1 Save 1 (and Balancing(TM) and Failure 500 500 800 500 800 6.337 6.15/2011 2000 5 0
	Team Properties Displays information about the team.	

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

ploner View 2	9 Information Statistics	Value
	- Tran Inventes	value
 ■ Tenna ■ Tenna ■ BASP Virtual Adgeters ■ Pinary Adgeters ■ Pinary Adgeters ■ Pinary Adgeters ■ Sturdby Adgeters 	Team Name Team Note Team Note Team Note Team Vited Capabilities Team Vited Capabilities Driver Version Driver Version Driver Date Probe Not. Petries Probe Not. Petries Probe Not. Petries Probe Note Tame Tame Note Team Note Tea	Tean 1 St.R. Gutto-Fallback. Disable) St.R. Gutto-Fallback. Disable) 160, 00 1900 Bargog22.2yz 6.337 6.75.2011 2000 5 0
	Team Properties Displays information about the team.	

- FEC/GEC Generic Trunking

Explorer View	Information Statistics	Information Statistics		
Comparison of the second	apter) bit Ethernet #10 bit Etheret #10 bit Ethernet #10 bit Ethernet #10 bit Ethernet #10	Value Team 1 FEC//GEC LS0, CO, PGS 1500 Basp.pr/s 15,8 12/19/2011		

Team setup is now complete.

(4) Procedure for deleting team

NoteYou 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.

Tips

Use icon view on Control Panel.

2. Set **Filter** to **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		
Eile View Action Filter Context Tools Teams (SOSI Help		
Filter: TEAM VIEW 🔹 Information 👻 🔽 Team Properties		
Explorer View 8	Information Statistics	
😑 aaa Hosts	Property	Value
B- (0000000000	- Team Properties	
E Teams	- Team Name	Team 1
	- Team Type	Smart Load Balancing(TM) and Failover
<u>Edit learn</u>	- Team Offload Capabilities	LSO, CO
🖶 🌌 🛛 Delete Team 🔤	- Team MTU	1500
Fellback BASP Virtual Adapter)	- Driver Name	Baspxp32.sys
- F I Add VLAN	- Driver Version	6.3.31
	- Driver Date	6/15/2011
10007] Broadcom NetXtreme Gigabit Ethernet	- Probe Interval	2000
- 🏭 [D008] Broadcom NetXtreme Gigabit Ethernet #2	- Probe Max Retries	5
	Probe Vlan ID	0
	- Team Probe Target 1	
	Team Properties Displays information about the team.	
веодосом		I I I I I I I I I I I I I I I I I I I

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 the Autorun Menu appears, close the menu.

Tips

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

4. Double-click addlvlanstats.vbs in the following folder.

```
When using EXPRESSBUILDER DVD:

EXPRESSBUILDER DVD:\010\win\winnt\ws2008\lan\bcom\ws2008x86\lan
```

If Starter Pack was installed from Internal Flash Memory: System drive:\StartPKG\ws2008\lan\bcom\ws2008x86\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.

6.5.4 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 install drivers separately, complete the following steps.

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

Tips

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

2. Double-click the install.bat icon in the following folder. When using EXPRESSBUILDER DVD: EXPRESSBUILDER DVD:\010\win\winnt\ws2008\video

If Starter Pack was installed from Internal Flash Memory:

System drive:\StartPKG\ws2008\video

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

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

Graphic accelerator driver installation is now complete.

6.5.5 When using a SAS controller (N8103-142)

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

6.5.6 When using a RAID Controller (N8103-179)

The driver for RAID Controller N8103-179 is automatically installed by Windows Plug-and-Play.

6.5.7 When using a Fibre Channel controller (N8190-159/160)

The driver for Fibre Channel controller N8190-159/160 is automatically installed by Windows Plug-and-Play.

6.6 Specifying PAE Option

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

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

6.7 **License Authentication**

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

The following describes the license authentication procedure.

(1) Full installations

1. Select Run from the Start menu. Enter the following, and then press <Enter> key.

slui

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

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

Ҟ Windows Activati × 🔵 💫 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 genuine Close

need to complete this procedure. Click Close to exit.

2. If Windows is installed from Backup DVD-ROM, replace the product key. When the following window appears, click **Type a different product key**.

Windows Activation	×
🔵 🗞 Windows Activation	
The Windows Server® Standard product key you typed is invalid for activation	
Buy a new product key online	
Type a different product key	
Contact Microsoft to help resolve this problem	
	Cancel

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

TV W	indows Activation		×
\bigcirc	Windows Activ	ation	
	Change your produ	ict key for activation	
		ndows Server® Standard product key requires you to activate Windows. You dows to continue using all Windows features.	
	You can find your the Windows pack	product key sticker on your computer or on the installation disc holder inside age.	2
	Example Sticker:		
	Product Key:	<u> </u>	
		Next Cance	1

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

Nindows Activation	×
💮 🕅 Windows Activation	
Activate Windows now	
You must activate Windows within 60 days to continue using all Windows featu	res.
→ 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.



2. If Windows is installed from Backup DVD-ROM, replace the product key.

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



3. Obtain an installation ID for Windows activation.

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



- 4. Open the following file to confirm the telephone number of the license authentication customer service. C:\Windows\system32\sppui\phone.inf (where, C: is system drive)
- 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 command, 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
Microsoft Windows [Version 6.0.6001] Copyright (c) 2006 Microsoft Corporation. All rights reserved.
C:\Users\Administrator>slmgr -atp xxxxx-xxxxx-xxxxx-xxxxx-xxxxx_

Windows activation is now complete.

6.8 Applying Service Pack

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

6.9 Installing the Applications

Some applications stored in EXPRESSBUILDER can be installed collectively by performing the procedures described below. When installing these applications individually, see *Chapter 2* (*Installing Bundled Software*). This feature is only available for Full installations.

- 1. Log on to the system with the built-in administrator, which has administrative privileges.
- 2. Insert the EXPRESSBUILDER DVD into the optical disk drive.

Or, if EXPRESSBUILDER has been installed in Windows, you can use it as a Windows application. Select **NEC** from Windows Start menu to launch **NEC EXPRESSBUILDER**.

3. Click Integrated Installation on the menu.

	NEC EXPRESSBUILDER	
EXPRESSBL	NEC	
	Instruction Manuals	
Û	Versions	
Ŧ	Integrated Installation	
	Applications	\supset
	Files For Setup	\supset
٩	Maintenance	\supset
M	Exit	Version 7.10-000.01(001)

4. On the following screen, select **Applications**.

Select the check boxes corresponding to the applications to install, and then click Install.

	Integrated Installation			
0	Install the following software. - Unable to select (Applications) when S - Uninstall the application prior to reinst C States Bed C & Applications			
(2	Applications INEC ESMPRO ServerAgentService	Rev1.0	Not installed	
_	Express Report Service	Rev3.5E	Not installed	
	Express Report Service (HTTPS)	Rev3.4	Not installed	
	Microsoft .NET Framework Version 4.0.	0	Not installed	
	Universal RAID Utility	Rev4.00	Not installed	
	Product Info Collection Utility	Rev2.7.3	Not installed	
	R NEC ExpressUpdate Agent	Rev3.14	Not installed	
९ हि			Inst	tall

Applic

Applications available for installation are selected by default.

If your system environment does not satisfy the prerequisite for an application, you cannot install it. (For details, refer to the on-screen information and the relevant page of each application.)

The selected applications are automatically installed.

Note

- 5. When a message appears, click **OK**, and then remove the EXPRESSBUILDER disk from the optical disk drive.
- 6. See *Chapter 2 Installing Bundled Software* to install the bundled software or confirm that the software is appropriate to your operating environment.

Now installation of applications is completed.

6.10 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 used for setup, if the server has two or more RAID Controllers installed.
 Disconnect an external disk (*) from the server by turning the power of it off or disconnecting cables. Install those hard disk drives and cables after setup has completed. Conducting setup with those being connected with the server may cause existing data to be erased unintentionally.
 * Disk array unit (such as iStorage) or hard disk drive in Disk Expansion Unit

See Chapter 1 (6.2 Setup with EXPRESSBUILDER), and proceed with setup.

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

- Setup with Windows standard installer
 - 1. See Chapter 1 (6.3 Setup with Windows Standard Installer), and start setup.
 - 2. When the following message appears, select the partition to which you want to set up the operating system.

Select the location to which Windows will be installed

The order and numbers of the disks displayed on the screen *might not match the server's slot* of the hard disk drives. *Distinguish between the hard disk drives by viewing the hard disk drive capacity and partition size* 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. See Chapter 1 (6.3 Setup with Windows Standard Installer), and proceed to setup Windows with Windows 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.

- 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.

7. Setup for Solving Problems

We recommend installing the following features for solving the server failure quickly.

7.1 Specifying Memory Dump Settings (Debug Information)

This section explains the procedures for collecting a memory dump (debug information) in the server.

- Important Memory dumps must be collected by a serviceman. You only specify the settings for the memory dump.
 - Do not reset during dumping memory or restarting the server even if the message of virtual memory shortage appears.

7.1.1 For Windows Server 2012 R2 / Windows Server 2012

1. On Charms Bar, click Settings.



2. Click Server info.


3. Click Advanced system settings.



4. In Startup and Recovery, click Settings.

System Properties
Computer Name Hardware Advanced Remote
You must be logged on as an Administrator to make most of these changes.
Performance
Visual effects, processor scheduling, memory usage, and virtual memory
Settings
User Profiles
Desktop settings related to your sign-in
Settings
Startup and Recovery
System startup, system failure, and debugging information
Settings
Environment Variables
OK Cancel Apply

5. Type the path to a dump file in **Dump file**, and then click **OK**.

<Example for specifying "MEMORY.DMP" on drive D>

System startup Default operating system: Windows Server 2012 R2 Time to display list of operating systems: 30 Seconds Time to display recovery options when needed: 30 System failure Write an event to the system log Automatically restart Write debugging information Automatic memory dump Dump file: D:[MEMORY.DMP] OK Cancel	Startup and Recovery	x
Default operating system: Windows Server 2012 R2 Time to display list of operating systems: Time to display recovery options when needed: System failure Write an event to the system log Automatically restart Write debugging information Automatic memory dump Dump file: D: MEMORY.DMP Overwrite any existing file		
Windows Server 2012 R2 V Ime to display list of operating systems: 30 × seconds Time to display recovery options when needed: 30 × seconds System failure Write an event to the system log Automatically restart Write debugging information Automatic memory dump V Dump file: D: MEMORY.DMP Overwrite any existing file Image: Second	System startup	
 Time to display list of operating systems: 30 seconds Time to display recovery options when needed: 30 seconds System failure Write an event to the system log Automatically restart Write debugging information Automatic memory dump Dump file: D: MEMORY.DMP Overwrite any existing file 	Default operating system:	
□ Time to display recovery options when needed: 30 > seconds System failure <td>Windows Server 2012 R2 V</td> <td></td>	Windows Server 2012 R2 V	
Imme to display recovery options when needed: 30 ▼ seconds System failure ✓ ✓ Write an event to the system log ✓ ✓ Automatically restart ✓ Write debugging information ✓ Automatic memory dump ✓ Dump file: D: MEMORY.DMP ✓ Overwrite any existing file	✓ Time to display list of operating systems: 30 × seconds	
Write an event to the system log Automatically restart Write debugging information Automatic memory dump Dump file: D: [MEMORY.DMP] Overwrite any existing file	Time to display recovery options when needed: 30 🔷 seconds	
Write an event to the system log Automatically restart Write debugging information Automatic memory dump Dump file: D: [MEMORY.DMP] Overwrite any existing file		
Automatically restart Write debugging information Automatic memory dump Dump file: D:\MEMORY.DMP Overwrite any existing file	System failure	
Write debugging information Automatic memory dump Dump file: D:\MEMORY.DMP I Overwrite any existing file	✓ Write an event to the system log	
Automatic memory dump Dump file: D:[MEMORY.DMP] Overwrite any existing file	✓ Automatically restart	
Dump file: D: MEMORY.DMP	Write debugging information	
Dump file: D: MEMORY.DMP	Automatic memory dump	
D: MEMORY.DMP		
✓ Overwrite any existing file		
OK Cancel	✓ Overwrite any existing file	
OK Cancel		
OK Cancel	OK Careal	1
	OK Cancel	

Note the following when specifying a dump file:

- We recommend specifying Kernel memory dump for Write debugging information.
- Specify a drive that has a free space of at least "(total size of physical memory) + 400 MB".
- The size of the debug information (memory dump) changes if DIMM is added. Make sure that the free space of the drive to save the debug information is sufficient.
- 6. In Performance, click Settings.

The Performance Options window appears.

System Properties
Computer Name Hardware Advanced Remote
You must be logged on as an Administrator to make most of these changes.
Performance
Visual effects, processor scheduling, memory usage, and virtual memory
Settings
User Profiles
Desktop settings related to your sign-in
S <u>e</u> ttings
Startup and Recovery
System startup, system failure, and debugging information
Seţtings
Enviro <u>n</u> ment Variables
OK Cancel Apply

7. Click the Advanced tab on the Performance Options window. In Virtual memory, click Change.

Performance Options X
Visual Effects Advanced I ata Execution Prevention
Processor scheduling
Choose how to allocate processor resources.
Adjust for best performance of:
<u>P</u> rograms
/ Virtual memory
A paging file is an area on the hard disk that Windows uses as if it were RAM.
Total paging file size for all drives: 4096 MB
OK Cancel Apply

8. Clear the Automatically manage paging file size for all drives check box, and then click Custom size.

V	/irtual Memory
Automatically mana	ge paging file size for all drives
Paging file size for eac	
Drive [Volume Label]	Paging File Size (MB) System managed
	System managed
Selected drive:	C:
Space available:	38852 MB
Oustom size:	
Initial size (MB):	3559
Ma <u>x</u> imum size (MB):	7118
○ S <u>v</u> stem managed s	size
○ <u>N</u> o paging file	Set
Total paging file size f	or all drives
Minimum allowed:	16 MB
Recommended:	3559 MB
Currently allocated:	4096 MB
	OK Cancel

9. In **Paging file size for each drive**, enter the size equal or larger than the recommended size for **Initial size**, and the value larger than **Initial size** for **Maximum size**, and then click **Set**.

Virtual Memory X
Automatically manage paging file size for all drives Paging file size for each drive Drive [Volume Label] Paging File Size (MB) C: System managed
Selected drive: C: Space available: 38852 MB © Custom size: Initial size (MB): 3559 Maximum size (MB): 7118
○ System managed size ○ No paging file
Total paging file size for all drives Minimum allowed: 16 MB Recommended: 3559 MB Currently allocated: 4096 MB
OK Cancel

Note the following when specifying a paging file size:

- The paging file is used to collect debug information (dump file). The boot volume must have a paging file of its initial size "(total size of physical memory) + 400 MB or more" is enough to save the dump file.
- Make sure to specify a sufficient paging file size "recommended size: (total size of physical memory) x 1.5 or more".
- See System partition size in Chapter 1 (3.1/4.1 Precautions for Setting Up or 5.1/6.1 Before Starting Setup) for recommended size.
- When DIMM is added, re-specify the paging file according to the increased memory size.

10. Click OK.

If a message to restart Windows appears, restart the server according to on-screen message.

Specification of the memory dump settings is now complete.

7.1.2 For Windows Server 2008 R2

- 1. On the **Start** menu, click **Control Panel**. The Control Panel window appears.
- 2. On the Control Panel window, click System and Security.
 - 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. Click the Advanced tab, and then click Settings in Startup and Recovery.
- 6. Type the path to a dump file in Dump file.

Note the following when specifying a dump file.

- For the Write debugging information, we recommend specifying Complete memory dump. If the mounted memory size is greater than 2 GB, 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 "(total size of physical memory) + 300 MB".
- The size of the debug information (memory dump) changes when DIMM is added. Make sure that the free space of the drive to save the debug information is sufficient. If the mounted memory exceeds 2 GB, specify **Kernel memory dump**.
- 7. In Performance, click Settings.

The Performance Options dialog box appears.

- 8. Click the Advanced tab in the Performance Options dialog box.
- 9. In Virtual memory, click Change.
- 10. Clear the Automatically manage paging file size for all drives check box, and then click Custom size.
- 11. In Paging file size for each drive, specify as follows:

For the **Initial size** text box, type a size equal to or greater than the **Recommended** size shown in **Total paging file size for all drives**.

For the Maximum size box, type a size equal to or greater than the size specified in Initial size.

After specifying the above sizes, 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 save dump files. Make sure to set a sufficient paging file size. If the paging file size is insufficient, correct debug information cannot be collected due to a shortage of virtual memory.
- For details about the recommended size in the Total paging file size for all drives area, see System partition size in Chapter 1 (3.1/4.1 Before Starting Setup or 5.1/6.1 Before Starting Setup).
- When DIMM is added, re-specify the paging file according to the increased memory size.
- 12. Click OK.

If a message to restart Windows appears, restart the server according to on-screen message.

Specification of the memory dump settings is now complete.

7.1.3 For Windows Server 2008

- 1. On the **Start** menu, click **Control Panel**, and then click **System**. The System dialog box appears.
- 2. Click Advanced system settings. The System Properties dialog box appears.
- 3. On the Advanced tab, click Settings in Startup and Recovery.
- 4. Type the path to a dump file in **Dump file**.

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, 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 "(total size of physical memory) + 300 MB" (or 2048 MB + 300 MB if the memory size exceeds 2 GB).
- The size of the debug information (memory dump) changes when DIMM is added. Make sure that the free space of the drive to save the debug information is sufficient. If the mounted memory exceeds 2 GB, specify **Kernel memory dump**.
- In Performance, click Settings. The Performance Options dialog box appears.
- 6. On the Performance Options dialog box, click the Advanced tab.
- 7. In Virtual memory, click Change.
- 8. Clear the Automatically manage paging file size for all drives check box, and then click Custom size.
- 9. In Paging file size for each drive, specify as follows:

For the **Initial size** text box, type a size equal to or greater than the **Recommended** size shown in **Total** paging file size for all drives.

For the Maximum size box, type a size equal to or greater than the size specified in Initial size.

After specifying the above sizes, 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 save dump files. Make sure to set a sufficient paging file size. If the paging file size is insufficient, correct debug information cannot be collected due to a shortage of virtual memory.
- For details about the recommended size in the Total paging file size for all drives area, see System partition size in Chapter 1 (3.1/4.1 Before Starting Setup or 5.1/6.1 Before Starting Setup).
- When DIMM is added, re-specify the paging file according to the increased memory size.

10. Click OK.

If a message to restart Windows appears, restart the server according to on-screen message.

Specification of the memory dump settings is now complete.

7.2 How to Create a User-mode Process Dump File

The user-mode process dump file records debugging information when an application error occurs.

If an application error occurs, get a user-mode process dump file using the following procedures without closing the pop-up window that reported the error:

7.2.1 For Windows Server 2012 R2 / Windows Server 2012

- 1. Right-click an empty area of the taskbar and then click **Task Manager** or press <Ctrl> + <Shift> + <Esc> keys to start **Task Manager**.
- 2. Click More details.

R	Task Manager	_ □	x
	There are no running apps		
More <u>d</u> etails	s	<u>E</u> nd	task

- 3. Click the **Processes** tab.
- 4. Right-click the name of the process that you want to get debugging information for, and then click **Create Dump File**.
- 5. A dump file for the process is created in the following folder:

```
C:\Users\user name\AppData\Local\Temp
```

] ↓		Lib	raries			_	D X
File	Home Share	View						^ (
Navigation pane •	Preview pane	Medium icons	Small icons	* * *	Sort by •	 ☐ Item check boxes ☐ The name extensions ✓ Hidden items 	de selected items	Sector Se
pane •	Panes		lavout		Current vi		items	

Get the user-mode process dump file from the folder shown in Step 5.

7.2.2 For Windows Server 2008 R2 and Windows Server 2008

- 1. Right-click an empty area of the taskbar and then click **Task Manager** or press <Ctrl> + <Shift> + <Esc> keys to start **Task Manager**.
- 2. Click the **Processes** tab.
- 3. Right-click the name of the process that you want to get debugging information for, and then click **Create Dump File**.
- A dump file for the process is created in the following folder:
 C:\Users\user name\AppData\Local\Temp

Tips

lf	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 Show hidden files, folders, and drives.
•	For Windows Server 2008:
	Open Explorer, click Folder and search options on the Tools menu. Click the
	View tab and then select Show hidden files and folders.

Get the user-mode process dump file from the folder shown in Step 4.

For details about how to create a user-mode process dump file, refer to 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

User-mode process dump file creation is now complete.

7.3 Installing Network Monitor

Utilizing Network Monitor helps you investigate and manage network troubles.

This feature is not supported in Windows Server 2012 or later operating systems.

(1) Setting up Network Monitor

- 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. On the Start menu, click Microsoft Network Monitor to start Network Monitor.
- 2. Click **Create a new capture tab** on the **Start Page** tab or click **New** on the **File** menu, and then click **Capture**. A new tab for capturing network traces is created.
- 3. In Select Networks, select the network whose traces are to be captured.
- 4. On the **Capture** menu, click **Start** to start capturing the network traces.
- 5. On the Capture menu, click Stop to stop capturing the network traces.
- On the File menu, click Save As.
 The Save As dialog box appears. In Frame selection, click All captured frames, and then type a 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.

8. Windows OS Parameter File

Create a parameter file by configuring setup information required for OS installation.

If a parameter file is used when performing **Setup with EXPRESSBUILDER**, you can re-install an OS with settings used at the previous installation.

8.1 Creating Windows OS Parameter File

Note Do not remove the EXPRESSBUILDER DVD from the drive while using the DVD.

Tips

Create a parameter file on Internet Explorer 7 or later.

- 1. Start Windows.
- 2. Run EXPRESSBUILDER as follows.

<DVD>

Insert the EXPRESSBUILDER DVD into the server. The autorun menu will appear automatically by using Windows autorun feature.

<Windows Application>

Run the shortcut or NEC EXPRESSBUILDER of Windows application.

3. Click Files for Setup.

EXPRESSB	UILDER		NEC
		Instruction Manuals	
	0	Versions	
		Integrated Installation	
		Applications	
		Files for Setup	
	٩	Maintenance	
	Ы	Exit	
			Version x.xx-xxx.xx (xxx)

4. Click Parameter file for Windows OS.

EXPRE	ESSBUILDER NEC
	Files For Setup
0	
	Parameter file for Windows OS
9	

The following window appears.



- 5. On the **OS selection** menu, select the OS to install or specify the parameter file.
 □ When not using parameter file : Go to Step 6.
 □ When using a parameter file : Go to Step 7.
- 6. Click Manual Selection.

Create a parameter file for Windows	×
1 Selection Settings 3 Confirmation	
Select an operating system to install. (Choose Manual Selection when configuring a RAID array o	nly)
Manual Selection	
Choose the operating system anually.	
8	setup

From the Windows list, select an OS, and then click OK.

	05 selection			
Selection		1 service	Committee	
	Select an operat	ing system to in:	stall.	
	 Windows 	Windows S	erver 2012 R2 🗸	
	O RAID Config	guration Only		
			Cancel	
		ок (Cancel	

Click \bigcirc on the right side of the screen.

	Create a p	arameter file for	Windows		
	1 OS selection	2 Settings	3 Confirmation		
1	Select an ope (Choose Manual Se	200	em to install.	ay only)	
~(Manual	Selection			C
	🕒 Load Set	ttings			
				Sett	

7. Click Load Settings.

Create a parameter file for Windows
1 Settings 3 Confirmation
Select an operating system to install. (Choose Manual Selection when configuring a RAID array only)
Manual Selection
Load Settings
Load installation settings.
Setup

	reen instructior Open			×
ook <u>i</u> n: 📗 Document	s	▼ ← € (⇒ 📰 👻	
Name	•	Date mo		Ту
sa.tre		6/11/201	4 1:34 PM	TF
<	Ш			>
ile <u>n</u> ame: * .tre			<u>O</u> pen	
les of type: paramete	r file(*.tre)	-	Cancel	
ck 🛇 on the	right side of th			X
		or Windows		
 • •	Create a parameter file f	ar Windows		X
 1 ^{se}	Create a parameter file f	ar Windows		
 1 ^{se}	Create a parameter file f	Stem to install		

 \rightarrow Go to step 9.

8. Specify the setup parameters by using either of the following ways:

	2 Er	ter installation settings.	
С	2	Default	
	Ø	Custom	



(2) Select the edition of OS in the Edition list.

Type a	password,	and then	click Finish.
			ter file for Windows

Create a parameter file for Windows
😮 Wizard
Enter the minimum settings to set up the computer. Click Custom if you want to use the Windows standard installer.
Basic Settings Operating system : Windows Server 2012 R2
Edition : Standard(Server with a GUI)
Language : English 🗸
Password Settings
Administrator Password : (Required)
Reenter Administrator Password : (Required)
Finish Cancel
JELUI

Note Administrator Password needs to meet the following conditions:

 Contains six or more characters
 Contains characters from at least three of the following categories: numbers, uppercase letters (A through Z), lowercase letters (a through z), and symbols.

(3) Click \bigcirc on the right side of the screen.

		Create a	parameter file for	Windows	×
];) D5 selection	2 Settings	3 Confirmation	
	2 "	iter installi	ation setting	js.	
\bigcirc	v Ø	Default			\odot
	CX.	Custom			_

(4) Check the settings, and then click **Save**.

	Create a pi	arameter file for Windows	
	1 CS selection	2 3 Settings Confirmation	
_	Confirm instal	llation settings.	
	Check if valid instal	llation settings are specified)	
	Target RAID Controller		
	rarget fortb controller	2 ***	^
	Array #1 : Initialized(Quick)	1	î
		:	î
	Array #1 : Initialized(Quick)	: RAID1 : Slot #00	
	Array #1 : Initialized(Quick) RAID Level Physical Drive	: RAID1 : Slot #00 Slot #01	_
	Array #1 : Initialized(Quick) RAID Level Physical Drive Logical Drive#1	: RAID1 : Slot #00 Slot #01 : 262143G8	
	Array #1 : Initialized(Quick) RAID Level Physical Drive Logical Drive#1 Logical Drive#2	: RAID1 : Slot #00 Slot #01 : 262143GB :	Î
	Array #1 : Initialized(Quick) RAID Level Physical Drive Logical Drive#1	: RAID1 : Slot #00 Slot #01 : 262143G8	
	Array #1 : Initialized(Quick) RAID Level Physical Drive Logical Drive#1 Logical Drive#2	: RAID1 : Slot #00 Slot #01 : 262143GB :	î
	Array #1: Initialized(Quick) RAID Level Physical Drive Logical Drive#1 Logical Drive#2 Unused Space	: RAID1 : Slot #00 Slot #01 : 262143GB :	
	Array #1: Initialized(Quick) RAID Level Physical Drive Logical Drive#1 Logical Drive#2 Unused Space	: RAID1 : Slot #00 Slot #01 : 262143GB :	Save
	Array #1: Initialized(Quick) RAID Level Physical Drive Logical Drive#1 Logical Drive#2 Unused Space	: RAID1 : Slot #00 Slot #01 : 262143GB :	

 \rightarrow Go to step 10.

Use Custom:

(1)	Click	Custom
• •	1	

		Create	a parameter file	for Windows		×
	ļ	1 OS selection	2 Settings	Confirmati	ion	
2) ^{Er}	nter insta	llation setti	ngs.		
\circ (0	Defaul	t			
	Ø	Custor	n			
					Sefi	qp

(2) Use this menu to configure the RAID array as needed.

Create a parameter file for Windows)
Wizard No operating system will be installed to the logical drive on the following RAID controller: Uninstal all RAID controllers not to be used for the OS installation if the incorrect RAID Controller is selected. Cevice Information RAID Controller : Number of Physical Drives : 16 Cummary of RAID Array Array +1 RAID (2disk)	
RAID Configuration Skip Configuring RAID Array 1 / 11 Page	
Next Cancel	
OGUU]	

Creating new logical drives

Clear the **Skip Configuring RAID Array** check box, and then click **Next**. Specify the parameters for logical drives following the wizard.

Important The existing RAID array is destructed and the contents of hard disk drive will be erased if you use the parameter file that specifies the RAID configuration.

Skipping the creation of new logical drives

Select the Skip Configuring RAID Array check box, and then click Next.

(3) Check the settings specified for **Basic Settings**.

	Create a parameter file for Windows
	in to to
0	Wizard
ti C	thoose Use Windows standard installer to install Windows by using the installer contained he Windows installation disc. hoose Install Windows using EXPRESSBUILDER to install both the operating system and pplications at one time.
	Basic Settings Operating system : Windows Server 2012 R2
	Use Windows standard installer Copy OEM drivers to removable media
	Install Windows using EXPRESSBUILDER
	Edition : Standard(Server with a GUI)
	Language : English
	Time Zone : (UTC-08:00) Pacific Time (US & Canada)
	4 / 11 Page
	Back Next Cancel

(4) Check the settings specified for Partition Settings.

	Create a parameter file for Windows	
2	Wizard	
	specify the settings of the system partition for Windows. Windows will be installed into the first hard disk drive or logical drive	e.
	Partition Settings Create a new partition Use all space Type a partition size (Mnimum:40G8 / Recommended:40G8 /	*1TB=1024GB Maximum:262143GB)
	,	
		5 / 11 Pag
	Back Next	Cancel

Important • Backing up user data, as needed, is recommended.

- Partition size
 - Specify a partition size larger than the minimum required for installing the operating system. See Chapter 1 (3.1/4.1 Before Starting Setup or 5.1/6.1 Before Starting Setup).
 - The maximum partition size is 2,097,152 MB for Windows Server 2008 R2 or Windows Server 2008.
- If you select "Create a new partition", the entire contents of the hard disk drive will be deleted.

(5)	Enter the user information, and then click Next .	

0	Wizard	
	Personalize the computer. Type Computer Name within 15 charactr Administrator Password must be at leas from three of the four categories (number	t six characters in length and must contain characters
	User Information	
	Computer Name	: Automatic Numbering BD7944787408 (Required)
	User Name	: Administrator
	Administrator Password	: (Required)
	Reenter Administrator Password	: (Required)
		6 / 11 Page
	Back Next	Cancel

Note

- Administrator Password need to meet the following conditions:
 - Contains six or more characters
 - Contains characters from at least three of the following categories: numbers, uppercase letters (A through Z), lowercase letters (a through z), and symbols.
- Tips
 If you want to type your computer name, clear the Automatic Numbering check box and type the name in text box.
- (6) Check the settings specified for Network Protocols.

	Create a pa	rameter file for Wind	lows
	La.	10	
Wiza	d		
	network protocol. Custom Settings, click Advance	d, if you want to typ	pe an IP address.
hiot	vork Protocols		
Net	 Standard Settings 		
	Custom Settings		
	Standard Adapter - Internet Prot	ocol (IPv4)	Advanced
L			
			7 / 11 Page
	1		
	Back Next		Cancel

Tips

The order of entry in **Custom settings** does not always match the numbering of LAN ports.

(7) Specify the domain or workgroup.

Check the settings, modify them as needed, and then click Next.

	Creat	te a parameter file for Windows	×
	14		
(Wizard		
	Join this computer to a domain or a	a workgroup. a domain, and then enter parameters.	
ľ	choose Join a workgroup of Join	a domain, and then enter parameters.	
	 Join a workgroup 		
	Workgroup Name	: WORKGROUP	
	 Join a domain 		
	Domain Name	:	
\leq	Account Name	:	
	Password	:	
	Reenter Password	:	
		8 / 11 Page	
	Back Next	for all	
	Back Next	Cancel	
) JULI (
		0000	U.

(8) Check the settings of Windows components.Modify the settings as needed, and then click Next.

Wizard				
Choose Windows compone	nts you wa	ant to install.		
Server Roles				
Web Server (IIS	5)	Print and Do	ocument Services	5
DHCP Server		File Services	5	
DNS Server		Hyper-V		
Windows Features				
SNMP Service				Advanced
Simple TCP/IP S	ervices			
U WINS Server				
				9 / 11 Pag
				9711 Pag
Back	Next	1		Cancel

Choose Windows component	s you want to install.	
Server Roles		
	Print Services	
	File Services	
DNS Server		
Windows Features		
SNMP Service		Advanced
Simple TCP/IP Ser	vices	
U WINS Server		
		9 / 11 Page

Windows Server 2012 R2/ Windows Server 2012/ Windows Server 2008 R2

Windows Server 2008

(9) Check the settings of applications.

Modify the settings as needed, and then click Next.

Choose applications you want to instal See Description about each application		
Available Applications		Selected Applications
	Add >>	NEC ESMPRO ServerAgentService Express Report Service
	Aug 22	Express Report Service(HTTPS) Universal RAID Utility
	<< Delete	Microsoft .NET Framework Version 3.5.1
		ExpressUpdate Agent
Description		
		10 / 11 Page
		Cancel

Create a parameter file for Windows

 Wizard

 Create a parameter file for Windows

 Vizard

 Create

 Description

 10 / 11 Page

 Back

 Next

 Create

 Create

Windows Server 2012 R2/ Windows Server 2012

Windows Server 2008 R2/ Windows Server 2008

11	ns
	ρο.

When using Windows Server 2008 R2 / Windows Server 2008, the applications listed below are supported only in full installations.
NEC ESMPRO ServerAgentService

- Express Report Service
- Express Report Service (HTTPS)
- Microsoft .NET Framework Version 4.0.0

On the following screen, click Finish.

	a parameter me for t		
11	10		
3 Wizard			
The settings are now complete. Click Finish to close this window.			
Click Finish to close this window.			
		11 / 11 Page	
		Cancel	
Back Finish		Cancel	
L		ਨਾਵਾਧਾਹ	

On the following screen, click \bigcirc on the right side of the screen.

2 *	nter installation settings.	
<u>د</u>	Default	
~ Ø	Custom	

9. Check the settings, and then click Save.

	Create a parar	neter file for Windows	
	1 OS selection	2 3 Confirmation	
	Confirm installa	tion settings.	
	(Check if valid installat	ion settings are specified)	
	<u> </u>		
2	Target RAID Controller	:	^
\bigcirc	Array #1 : Initialized(Quick)		
~	RAID Level	: RAID1	
	Physical Drive	: Slot #00	
		Slot #01	
	Logical Drive#1	: 262143GB	
	Logical Drive#2	:	
	Unused Space	: 0G8	
	Array #2 : Initialized/Ouick)		~
	Array #2 : Inicialized(QUICK)	- 3	
			Save
			- Contraction
			Seft
			ORICIU

Save the file according to the on-screen instructions.

	Open			x
Look <u>i</u> n: 👔	Documents 🔹] + 🗈 e	*	
Name	^	Date mod	ified	Ту
sa.tre		6/11/2014	1:34 PM	TF
<	10			>
File name:	*tre		Open	
nio <u>n</u> amo.				
Files of type:	parameter file(*.tre)	•	Cancel	

10. Click OK.

•	Create a parameter file for Windows		
	1 2 Settings Confirmation		
	Information		
	Saving the file is complete. [Message ID : D1000]		
\bigcirc	8		
	ОК		
	Setup		

11. When the following message appears, click **Yes** to complete parameter file creation.

Create a parameter file for Windows					
	05 selection	2 Settings	3 Confirmation		
Selection					
	Do you want to OS?	stop creating a pa			
			[Message ID :	D2000]	
?					
		Yes	No		
				Seff	
	Selection	Cost selection Selection Do you want to OS7 Cost Cost Do you want to Cost Cos	1 2 Selection Do you want to stop creating a part of the stop	1 2 3 Selection Do you want to stop creating a parameter file for Wir OS? [Message ID : 3	Item Item Item Selection Item Item Do you want to stop creating a parameter file for Windows 057 Item Stage ID : D2000]

Parameter file creation is now complete.



NEC Express5800 Series Express5800/R120f-2E, T120f

Installing Bundled Software

This chapter explains the bundled software and how to install them.

- 1. Bundled Software for the server Describes the bundled software to be installed in the server.
- Bundled Software for "PC for Management" Describes the bundled software to be installed in "PC for Management" that is used to monitor and manage the server.

I. Bundled Software for the Server

This section explains the software bundled in the server. Refer to the documentation that comes with software for details.

1.1 NEC ESMPRO ServerAgentService (for Windows)

NEC ESMPRO ServerAgentService (for Windows) is an application used to monitor the server.

You can install it automatically when Windows OS is installed with EXPRESSBUILDER.

When installing NEC ESMPRO ServerAgentService (for Windows) individually, see NEC ESMPRO ServerAgentService Installation Guide (Windows) in EXPRESSBUILDER.

310

1.2 NEC ESMPRO Agent Extension

You can manage the server remotely by using NEC ESMPRO Agent Extension with NEC ESMPRO Manager monitoring the server's BMC.

For details about NEC ESMPRO Agent Extension, see "NEC ESMPRO Agent Extension Installation Guide" in EXPRESSBUILDER.

1.3 Server Configuration Utility

You can specify configuration data to the BMC of the server by using this utility.

For details about this utility, see "Server Configuration Utility User's Guide" in EXPRESSBUILDER.

1.4 NEC ExpressUpdate Agent

You can easily download, manage and update the firmware or the software installed in this server by using NEC ExpressUpdate Agent.

For details about NEC ExpressUpdate Agent, see "NEC ExpressUpdate Agent Installation Guide" in EXPRESSBUILDER.

Tips

Updates are available for some firmware and software that do not support NEC ExpressUpdate. Refer to the following website to install these packages. http://www.nec.com/global/prod/express/index.html

1.5 Universal RAID Utility

Universal RAID Utility is an application used to manage and monitor the following RAID controllers:

- Onboard RAID Controller (LSI Embedded MegaRAID)
- N8103-176 RAID Controller (1GB, RAID 0/1)
- N8103-177 RAID Controller (1GB, RAID 0/1/5/6)
- N8103-178 RAID Controller (2GB, RAID 0/1/5/6)
- N8103-179 RAID Controller (2GB, RAID 0/1/5/6)

For details about Universal RAID Utility, see Universal RAID Utility User's Guide in EXPRESSBUILDER.

If the system requirements for Universal RAID Utility described in Universal RAID Utility User's Guide differ from User's Guide of the server, follow User's Guide of the server.

1.5.1 Setup of Universal RAID Utility

Follow the procedure below to install Universal RAID Utility.

(1) Setup with EXPRESSBUILDER

You can easily install Universal RAID Utility by using EXPRESSBUILDER. Universal RAID Utility is installed along with Windows when using EXPRESSBUILDER. Run EXPRESSBUILDER and choose **Setup**.

(2) Setup using Universal RAID Utility installer

The Universal RAID Utility installer can be launched from Autorun Menu of EXPRESSBUILDER. Choose **Integrated Installation** and then follow the dialog box.

Microsoft .NET Framework

To use the RAID Viewer and Log Viewer, "Microsoft .NET Framework Version 2.0 to 3.5" is required. Windows Server 2008 and Windows Server 2008 R2 include "Microsoft .NET Framework 2.0 to 3.5".

Install "Microsoft .NET Framework Versions 2.0 to 3.5" from the following web site when using Universal RAID Utility on Windows 2012 Server.

http://msdn.microsoft.com/en-us/library/vstudio/hh506443.aspx

(The web site explains for Windows 8, but the modules can be used for Windows 2012 Server)

1.5.2 Management by NEC ESMPRO Manager

NEC ESMPRO Manager Ver. 5.5 or later is used to remotely reference and monitor the RAID system that is managed by Universal RAID Utility.

For details about NEC ESMPRO Manager, see NEC ESMPRO Manager Installation Guide.

1.6 Express Report Service / Express Report Service (HTTPS)

To avoid system failures or to maintain the server quickly, Express Report Service / Express Report Service (HTTPS) informs the support center of the failure information, preventive maintenance information by E-Mail, modem, or HTTPS. If you want to use this service, contact your sales representative and install NEC ESMPRO ServerAgentService before using this service.

You can install it automatically when Windows OS is installed with EXPRESSBUILDER.

For details about Express Report Service / Express Report Service (HTTPS), see Express Report Service / Express Report Service (HTTPS) Installation Guide (Windows) stored in EXPRESSBUILDER.

1.7 NEC Product Info Collection Utility

NEC Product Info Collection Utility can collect various data and logs related to the server all at once. You can collect the server information (Product Info) for maintenance by using this utility.

1.7.1 Installation

Follow the steps below to install this utility.

- Log on to Windows, and then insert EXPRESSBUILDER into the optical disk drive. Autorun Menu appears automatically.
- Click Applications from the menu and then click Product Info Collection Utility. The installation starts. Follow the instructions in the dialog boxes until installation is complete. This utility is usually installed to the C:\ezclct folder.

Tips

Log on to Windows with an account that has administrator privilege.The installation drive requires a free space of at least 2.5 GB.

1.7.2 Uninstallation

Uninstall the utility depending on the Windows installation type:

• Full installation :

Choose Add/Remove Programs from Control Panel and then click Product Info Collection Utility (Vx.x.x). Follow the instructions in the dialog boxes.

• Server Core installation:

Run 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 the RAID system of the server. To use these features, install the bundled software for the server such as NEC ESMPRO ServerAgentService.

For details about NEC ESMPRO Manager, see NEC ESMPRO Manager Installation Guide stored in EXPRESSBUILDER.

2.2 Express Report Service (MG)

To avoid system failures or to maintain the server quickly, Express Report Service (MG) informs the support center of the failure information or preventive maintenance information by E-Mail, modem, or HTTPS.

To use this feature, NEC ESMPRO ServerAgentService is required because Express Report Service usually works with it.

If NEC ESMPRO ServerAgentService cannot be installed to the server, you can install Express Report Service (MG) into NEC ESMPRO Manager instead of it.

For details about Express Report Service (MG), see *Express Report Service (MG) Installation Guide (Windows)* in EXPRESSBUILDER.

Glossary

Terms	Description
BIOS Setup Utility (SETUP)	Software for setting BIOS. You can run this software by pressing <f2> key during POST.</f2>
BMC	Baseboard Management Controller (BMC) is a built-in controller that supports the IPMI version 2.0 protocol. BMC can manage the server hardware.
BMC RESET Switch	A switch for resetting the BMC of the server. This resets the BMC without clearing the BMC settings. Use the switch if the problem on the BMC occurs.
DUMP Switch	A switch that is used for collecting the memory dump if an error occurs. You can specify the destination of the dump by using the OS function.
EXPRESSBUILDER	Standard software for setting up the server easily. This also includes several useful applications and instruction manuals.
EXPRESSSCOPE ENGINE 3	A name of BMC for NEC Express5800 series.
EXPRESSSCOPE Profile Key	A removable flash memory that stored the settings of BIOS and BMC. If the motherboard of the server is replaced, you can use former settings when moving this flash memory from the former motherboard.
Express Report Service	Software that can report the server failure to the contact center by E-mail or modem. This software is installed with NEC ESMPRO ServerAgentService to the server.
Express Report Service (HTTPS)	Software that can report the server failure to the contact center by HTTPS. This software is installed with NEC ESMPRO ServerAgentService to the server.
Express Report Service (MG)	Software that can report the server failure to the contact center by E-mail, modem or HTTPS without NEC ESMPRO ServerAgentService. This software is installed with NEC ESMPRO Manager to "PC for Management".
ExpressUpdate	A feature for updating BIOS, firmware, driver, or software of the server. This feature is available when NEC ESMPRO Manager cooperates with EXPRESSSCOPE ENGINE 3 and ExpressUpdate Agent.
ExpressUpdate Agent	Software for performing ExpressUpdate. This is installed to the server.
Flash FDD	An optional USB device that can use as a floppy disk drive.
Internal Flash Memory	A built-in flash memory that stored EXPRESSBUILDER as standard. You can start EXPRESSBUILDER from it without DVD when pressing <f3> key during POST.</f3>
NEC ESMPRO	Standard software for the server management. This consists of several applications for managing or monitoring.
NEC ESMPRO Agent	Software for monitoring the server. This works with NEC ESMPRO Manager and resides as the OS service.
NEC ESMPRO Agent Extension	Software for performing the scheduled operations. This works with NEC ESMPRO Manager.
NEC ESMPRO Manager	Software for managing plural servers on network.
NEC ESMPRO ServerAgentService	Software for monitoring the server. This works with NEC ESMPRO Manager. You can choose Service Mode or Non-Service Mode when installing this software. Service Mode resides as the OS service and Non-Service Mode does not use the OS service to reduce memory, CPU power and other OS resources.
OEM driver	A Windows driver for the mass storage device.
OS standard installer	An installer that stored in Windows installation disc. Use this installer if you want to install the OS manually.
Offline tools	Software that can confirm or change SEL, SDR, FRU, and other IPMI data. You can start Offline tools when pressing <f4> key during POST.</f4>
PC for Management	A computer for managing the server on network. A general Windows/Linux computer can be used as "PC for Management".
Product Info Collection Utility	Software for collecting several hardware/software statuses or event logs. You can easily collect the data for the server maintenance by using this software.
RAID Configuration Utility	Software for configuring RAID arrays. You can run this software during POST.
Server Configuration Utility	Software for setting BIOS or BMC. You can use as Windows application or run this software when pressing <f4> key during POST. This software is the same as BMC Configuration of former models.</f4>
Starter Pack	Software package for the server. This software includes the customized drivers for Windows. This must be installed before using Windows on the server.
TPM Kit	An optional product of Trusted Platform Module for the server.
Universal RAID Utility	Software for setting RAID arrays on Windows/Linux. This software is operated on "PC for Management" with NEC ESMPRO Manager.
Windows OS parameter file	A file that saved settings for installing Windows. You can install with the saved settings in this file when setting Windows with EXPRESSBUILDER.

NEC Express Server

Express5800/R120f-2E, T120f Installation Guide (Windows)

December 2014

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