

PRIMERGY

**ECONEL 100 S2 / TX120 / TX150 S6 / TX300 S4
/ RX100 S5 / RX200 S4 / RX300 S4 / RX600 S4**

Manual OS Installation

Before Reading This Manual

Remarks

■ Symbols

Symbols used in this manual have the following meanings:

	<p>These sections explain prohibited actions and points to note when using this software. Make sure to read these sections.</p>
	<p>These sections explain information needed to operate the hardware and software properly. Make sure to read these sections.</p>

■ Key descriptions / operations

Keys are represented throughout this manual in the following manner:

E.g.: [Ctrl] key, [Enter] key, [→] key, etc.

The following indicate the pressing of several keys at once:

E.g.: [Ctrl] + [F3] key, [Shift] + [↑] key, etc.

■ CD/DVD drive description

In this manual, both CD-ROM and DVD-ROM drives are described as a CD/DVD drive. Select a proper drive depending on your environment.

■ Entering commands (keys)

Command entries are written in the following way:

```
diskcopy a: a:
  ↑ ↑
```

- In the spaces indicated with the " ↑ " marks, press the [Space] key once.
- In the example above, the command entry is written in lower case, but upper case is also allowed.
- CD/DVD drive letters are shown as [CD/DVD drive]. Enter your drive letter depending on your environment.
[CD/DVD drive]:\setup.exe

■ Screen shots and figures

Screen shots and figures are used as visual aids throughout this manual. Windows, screens, and file names may vary depending on the OS, software, or configuration of the server used. Figures in this manual may not show cables that are actually connected for convenience of explanation.

■ Consecutive operations

Consecutive operations are described by connecting them with a dash (-).

Example: For the operation to click the [Start] button, point to [All Programs(or Programs)], and click [Accessories]

↓

Click [Start] - [All Programs] - [Accessories].

■ Abbreviations

The following expressions and abbreviations are used throughout this manual.

table: Abbreviation of product name

Product name	Expression and abbreviation		
Microsoft® Windows Server® 2008 Standard	Windows Server 2008 Standard (32-bit)	Windows Server 2008 Standard	Windows Server 2008
	Windows Server 2008 Standard (64-bit)		
Microsoft® Windows Server® 2008 Standard without Hyper-V™	Windows Server 2008 Standard (32-bit)	Windows Server 2008 Enterprise	
	Windows Server 2008 Standard (64-bit)		
Microsoft® Windows Server® 2008 Enterprise	Windows Server 2008 Enterprise (32-bit)	Windows Server 2008 Enterprise	
	Windows Server 2008 Enterprise (64-bit)		
Microsoft® Windows Server® 2008 Enterprise without Hyper-V™	Windows Server 2008 Enterprise (32-bit)	Windows Server 2008 Enterprise	
	Windows Server 2008 Enterprise (64-bit)		
Microsoft® Windows Server® 2003, Standard Edition	Windows Server 2003		
Microsoft® Windows Server® 2003 R2, Standard Edition	Windows Server 2003 R2		
Microsoft® Windows Server® 2003, Standard x64 Edition	Windows Server 2003 x64 [*1]		
Microsoft® Windows Server® 2003 R2, Standard x64 Edition	Windows Server 2003 R2 x64		
Microsoft® Windows® Small Busi- ness Server 2003	SBS 2003 [*1]		
Microsoft® Windows® Small Busi- ness Server 2003 R2	SBS 2003 R2		
Microsoft® Windows Server® 2003 Service Pack	Service Pack		
Microsoft® Windows Server® 2003 x64 Service Pack			

[*1]: Unless otherwise noted, Windows Server 2003 can also mean Windows Server 2003 x64 / SBS 2003.

For latest Support OS information, please refer to "Support Matrix" at <http://www.fujitsu.com/downloads/PRMRGY/support-matrix.pdf>

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Other product names are copyrights of their respective manufacturers.

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Chapter 1

Installing Windows Server 2003

1

This chapter explains how to install Windows Server 2003 manually.

- 1.1 Preparation
- 1.2 Installation Procedure

1.1 Preparation

This section explains preparation requirements for installation.

1.1.1 Creating Driver Disk

When installing the OS manually, it is necessary to create a driver installation disk beforehand. Create a driver disk by using PRIMERGY Startup Disc supplied with the server. About the procedure for creating a driver disk, refer to "User's Guide".

■ Driver for array controller

Check your array controller type and create one of the following driver disks.

● Windows Server 2003

SAS array controller card (MegaRAID SAS)	MegaRAID SAS Windows Server 2003 Drivers Disk
SAS controller card / onboard IM (Integrated Mirroring SAS) or unconfigured array (SAS hard disk)	Integrated Mirroring SAS Windows Server 2003 Drivers Disk
Onboard Software RAID (Embedded MegaRAID SATA)	Embedded MegaRAID SATA Windows Server 2003 Drivers Disk
Unconfigured array (SATA hard disk)	No driver installation is required.

● Windows Server 2003 x64

SAS array controller card (MegaRAID SAS)	MegaRAID SAS Windows Server 2003 for x64 Edition Drivers Disk
SAS controller card or onboard IM (Integrated Mirroring SAS) / Unconfigured array (SAS hard disk)	Integrated Mirroring SAS Windows Server 2003 for x64 Edition Drivers Disk
Onboard Software RAID (Embedded MegaRAID SATA)	Embedded MegaRAID SATA Windows Server 2003 for x64 Edition Drivers Disk
Unconfigured array (SATA hard disk)	No driver installation is required.

■ Driver for onboard LAN / expansion card

A driver disk you create differs depending on your PRIMERGY type. Check your PRIMERGY type and create an appropriate driver disk.



For the latest driver, download files from the Fujitsu PRIMERGY website (<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>).

● PRIMERGY ECONEL 100 S2

Onboard LAN / Expansion card	Driver
Onboard LAN / LAN card(PG-1853/ PG-285)	Onboard/PG-18xx/28xx LAN Driver V13.1
SAS array controller card(PG-248BC)	MegaRAID SAS Windows Server 2003 Drivers Disk
Display adapter	PRIMERGY ECONEL 100 S2 Onboard VGA Driver (ATI ES1000) for Windows 2003 / R2 V6.14.10.6606
Other expansion card	Driver attached with each expansion card

Note: Driver disk is unable to be created from ServerStart for PRIMERGY ECONEL 100 S2.

● **PRIMERGY RX100 S5**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003 V12.2.0.2/V12.2.9.0
LAN card (PG-2861L / PG-289L / PG-288L/ PG-285L)	Onboard/PG-18xx/PG-28xx LAN Driver V13.4
SCSI card (PG-2281L)	PG-2281L SCSI Driver for Windows 2003 / R2 V7.0.0.6
SAS Ctrl (PG-228BL)	Integrated Mirroring SAS Windows Server 2003 Drivers Disk
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX120**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003 V12.2.0.2/V12.2.9.0
LAN card (PG-1853L / PG-1882L / PG-1892L/PG-2861L / PG-289L / PG-288L)	Onboard/PG-18xx/PG-28xx LAN Driver V13.4
SCSI card (PG-1301L)	Standard driver provided with the OS
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX150 S6**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003 V12.2.0.2/V12.2.9.0
LAN card (PG-1853 / PG-285/PG-2861 / PG-289)	Onboard/PG-18xx/PG-28xx LAN Driver V13.4
SAS array controller card(PG-248B / PG-248C)	MegaRAID SAS Windows Server 2003 Drivers Disk
SCSI card (PG-2281)	PG-2281 SCSI Driver for Windows 2003 / R2 V7.0.0.6
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX200 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-2861L / PG-289L / PG-288L/ PG-285L)	Onboard/PG-18xx/PG-28xx LAN Driver V13.4
SAS array controller card (PG-248B / PG-248C / PG-244C1)	MegaRAID SAS Windows Server 2003 Drivers Disk
SCSI card (PG-2281L)	PG-2281L SCSI Driver for Windows 2003 / R2 V7.0.0.6
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver V2.01a4 for Windows 2003
SAS Ctrl (PG-228BL)	Integrated Mirroring SAS Windows Server 2003 Drivers Disk
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX300 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-1853 / PG-1863 / PG-1882 / PG-1892 / PG-2861 / PG-289 / PG-288/ PG-285)	Onboard/PG-18xx/PG-28xx LAN Driver V13.4
SAS array controller card (PG-244C / PG-248B / PG-248C1)	MegaRAID SAS Windows Server 2003 Drivers Disk
SCSI card (PG-2281)	PG-2281 SCSI Driver for Windows 2003 / R2 V7.0.0.6
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver V2.01a4 for Windows 2003
SAS Ctrl (PG-224B/PG-228B)	Integrated Mirroring SAS Windows Server 2003 Drivers Disk
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX300 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-1853L / PG-1863L / PG-1882L / PG-1892L/PG-2861L / PG-289L / PG-288L/ PG-285L)	Onboard/PG-18xx/PG-28xx LAN Driver V13.4
SAS array controller card (PG-244CL / PG-248CL)	MegaRAID SAS Windows Server 2003 Drivers Disk
SCSI card (PG-2281L)	PG-2281L SCSI Driver for Windows 2003 / R2 V7.0.0.6
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver V2.01a4 for Windows 2003
SAS Ctrl (PG-228BL)	Integrated Mirroring SAS Windows Server 2003 Drivers Disk
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX600 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN / LAN card (PG-2861 / PG-289 / PG-288)	Onboard/PG-18xx/28xx LAN Driver V13.4
SAS array controller card (PG-244C)	MegaRAID SAS Windows Server 2003 Drivers Disk
SCSI card (PG-2281)	PG-2281 SCSI Driver for Windows 2003 / R2 V7.0.0.6
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver V2.01a4 for Windows 2003
SAS Ctrl (PG-224B/PG-228B)	Integrated Mirroring SAS Windows Server 2003 Drivers Disk
Other expansion card	Driver attached with each expansion card

1.1.2 Configuring Array

When you operate with array configurations, configure arrays first before you install OS.

1 Turn on the server.

2 Configure an array.

The method differs depending on your array controller.

For Onboard Software RAID (Embedded MegaRAID SATA)

When the following message appears, press the [Ctrl] + [M] keys or the [Enter] key.

Press Ctrl-M or Enter to run LSI Software RAID Setup Utility.

SATA Setup Utility starts up, and Management Menu appears.

For details, refer to "Embedded MegaRAID SATA User's Guide" in Array Controller Document & Tool CD.

For SAS controller card or onboard IM (Integrated Mirroring SAS)

When the following message appears, press the [Ctrl] + [C] keys.

Press Ctrl C to start LSI Logic Configuration Utility

BIOS Utility starts up.

For details, refer to "Integrated Mirroring SAS User's Guide" in Array Controller Document & Tool CD.

For SAS array controller card (MegaRAID SAS)

When the following message appears, press the [Ctrl] + [H] keys.

Press <Ctrl><H> for WebBIOS

WebBIOS starts up.

For details, refer to "MegaRAID SAS User's Guide" in Array Controller Document & Tool CD.

3 Turn off the server.

1.1.3 Cautions for unconfigured array

When a SAS array controller card has been installed when not building an array using PRIMERGY ECONEL100 S2, change the BIOS setting [SATA RAID Enable] to "Disabled".

The installation is not normally completed if it doesn't change to "Disabled".

1.1.4 Installing Internal Options

Before starting installation of the OS, install internal options in the server. For the procedures, refer to "Chapter 6 Installing Internal Options" in the "User's Guide".



When the following optional devices are connected to the server, be sure to read "Precautions on OS Installation" described below. Failure to observe the cautions may cause the OS to be installed in unexpected media.

- Internal data cartridge drive unit
 - Internal hard disk unit bay conversion kit
 - PRIMERGY SX35
- External storage devices, e.g. ETERNUS

■ Precautions on OS Installation

● When using an internal data cartridge drive unit

Before installing, be sure to remove a cable of a Internal Data Cartridge Drive from a server. After installation has been completed, connect a cable once again.

● When using an internal hard disk unit bay conversion kit or a PRIMERGY SX35

Delete all of the current disk array configurations on the array controller which is connected to the internal hard disk unit bay conversion kit or the PRIMERGY SX35.

Before deleting the disk array configurations, be sure to make backup copies of all the necessary data, as the internal data will be lost by the deletion. After the OS installation, re-create disk array configurations and restore from the backup data.

● When using an external storage devices, e.g. ETERNUS

Turn off the external storage device during the OS installation.

1.2 Installation Procedure

This section explains how to install Windows Server 2003/Windows Server 2003 x64/Windows Server SBS 2003 manually.



- ◆ For details on the OS settings, refer to the following website.
[http://technet.microsoft.com/en-us/library/bb123872\(EXCHG.65\).aspx](http://technet.microsoft.com/en-us/library/bb123872(EXCHG.65).aspx)
- ◆ For using the external Floppy Disk, connect the USB connector to the server before turning on the power.

■ Requirements

- Windows Server 2003 or Windows Server 2003 x64 CD/DVD (installation disc)
- PRIMERGY Startup Disc (supplied with the server)
- A driver disk created in advance

1 Turn on the server.

2 Insert the Windows Server 2003 or Windows Server 2003 x64 CD/DVD and the array controller driver disk.

Turn on the server, and immediately insert the Windows Server 2003 or Windows Server 2003 x64 CD/DVD into the CD/DVD drive, and the array controller driver disk into the floppy disk drive. When the active area is specified on the hard disk, the following message appears.

Press any key to boot from CD...

Press any key while this message is displayed to boot from the CD/DVD drive.

3 The [Windows Server 2003 or Windows Server 2003 x64 Setup] window appears.

Immediately after the setup window appears, the following message is displayed at the bottom of the window. Press the [F6] key.

Press F6 if you need to install a third party SCSI or RAID driver ...



This message is displayed for a short time after the setup window (blue screen) appears.
Press the [F6] key immediately after the window turns blue.

4 Install an array controller driver manually.

1 When the following message appears, press the [S] key.

To specify additional SCSI adapters, CD-ROM drives, or special disk controllers for use with Windows, including those for which you have a device support disk from a mass storage device manufacturer, press S.

2 When the message "Please insert the disk labeled Manufacturer-supplied hardware support disk into Drive A:" appears, press the [Enter] key.

The following message appears.

You have chosen to configure a SCSI Adapter for use with Windows, using a device support disk provided by an adapter manufacturer.
Select the SCSI Adapter you want from the following list, or press ESC to return to the previous screen.

On certain occasions, the message may not appear.

3 Select the following depending on your controller type, and press the [Enter] key.

- For Onboard Software RAID (Embedded MegaRAID SATA)

LSI Logic Embedded MegaRAID (Windows XP/2003)

or

LSI Logic Embedded MegaRAID (Windows XP/2003 64-bit)

- For SAS controller card or onboard IM (Integrated Mirroring SAS)

LSI Fusion-MPT SAS Driver (Server 2003 32-bit)

or

LSI Fusion-MPT SAS Driver (Server 2003 x64)

- For SAS array controller card (MegaRAID SAS)

LSI MegaRAID SAS RAID Controller Driver (Server 2003 32-bit)

or

LSI MegaRAID SAS RAID Controller Driver (Server 2003 for x64)

4 When the following message appears, press the [S] key.

The driver you provided seems to be newer than the Windows default driver.

5 Follow the instructions on the window for the installation.

The message which prompts you to set the floppy disk appears during the installation, set the driver disk, and press the [Enter] key.

5 Follow the instructions from the setup program to continue the installation.

If a message indicating that the driver has not passed the Windows logo test for validating the compatibility with Windows appears, select [Yes] to continue installing.

6 Install a ChipSet driver.

1 Insert the PRIMERGY Startup Disc into the CD/DVD drive of the server.

When the ServerStart window appears, exit ServerStart.

2 Execute the following command on the PRIMERGY Startup Disc.

For PRIMERGY ECONEL 100 S2 / PRIMERGY RX100 S5 / PRIMERGY TX150 S6

[CD/DVD drive]: \DRIVERS\ChipSet\Intel\3100\infnst_autol.exe

For PRIMERGY TX120

[CD/DVD drive]: \DRIVERS\ChipSet\Intel\3000\infnst_autol.exe

For PRIMERGY RX200 S4 / PRIMERGY TX300 S4 / PRIMERGY RX300 S4

[CD/DVD drive]: \DRIVERS\ChipSet\Intel\5000P\infnst_autol.exe

For PRIMERGY RX600 S4

[CD/DVD drive]: \DRIVERS\ChipSet\Intel\7300\infnst_autol.exe

The installation wizard starts up.

3 Click [Next]. Follow the instructions on the window to perform the installation.

4 When the installation is completed, eject the PRIMERGY Startup Disc from the CD/DVD drive, and click [Finish] to restart the system.

7 Install a Graphic driver.

1 Insert the PRIMERGY Startup Disc into the CD/DVD drive of the server.

When the ServerStart window appears, exit ServerStart.

2 Execute the following command on the PRIMERGY Startup Disc.

For PRIMERGY ECONEL 100 S2

[CD/DVD drive]:\DRIVERS\VIDEO\ATI\W2K3\Setup.exe

For PRIMERGY RX100 S5/TX150 S6

[CD/DVD drive]:\DRIVERS\VIDEO\MATROX\w2k3\ServerEnginesG200eSETUP.exe
 or
 \DRIVERS\VIDEO\MATROX\w2k3x64\ServerEnginesG200eSETUP.exe

For PRIMERGY RX200 S4/TX300 S4/RX300 S4

[CD/DVD drive]:\DRIVERS\VIDEO\MATROX\w2k3\ServerEnginesG200e_Kronos2_SETUP.exe
 or
 \DRIVERS\VIDEO\MATROX\w2k3x64\ServerEnginesG200e_Kronos2_SETUP.exe

For PRIMERGY TX120

[CD/DVD drive]:\DRIVERS\VIDEO\MATROX\w2k3\ServerEngines G200e_Kronos1_SETUP.exe
 or
 \DRIVERS\VIDEO\MATROX\w2k3x64\ServerEngines

For PRIMERGY RX600 S4

[CD/DVD drive]:\DRIVERS\VIDEO\MATROX\w2k3\ServerEnginesG200e_SETUP.exe
 or
 \DRIVERS\VIDEO\MATROX\w2k3x64\ServerEnginesG200e_SETUP.exe

8 Install a LAN driver.

Install it according to an attached manual after having downloaded the latest LAN driver in the following Web.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

The name of Onboard LAN that displays it with the device manager is the following.

Product name	LAN device name
PRIMERGY ECONEL 100 S2	Intel® 82566DM-2 Gigabit Network Connection
PRIMERGY RX100 S5	LAN1: Broadcom NetXtreme Gigabit Ethernet LAN2: Broadcom NetXtreme Gigabit Ethernet #2
PRIMERGY TX120	Broadcom NetXtreme Gigabit Ethernet
PRIMERGY TX150 S6	Broadcom NetXtreme Gigabit Ethernet
PRIMERGY RX200 S4	Broadcom BCM5708C NetXtreme II GigE (NDIS VBD Client)/Broadcom BCM5708C NetXtreme II GigE
PRIMERGY TX300 S4	Broadcom BCM5708C NetXtreme II GigE (NDIS VBD Client)/Broadcom BCM5708C NetXtreme II GigE
PRIMERGY RX300 S4	Broadcom BCM5708C NetXtreme II GigE (NDIS VBD Client)/Broadcom BCM5708C NetXtreme II GigE
PRIMERGY RX600 S4	Main board LAN Intel® PRO/1000 EB Network Connection with I/O Acceleration IO riser LAN Intel® 82575EB Gigabit Network Connection

9 Installing the SAS Ctrl driver.

Install it according to an attached manual after having downloaded the latest PCI-Express SAS Card Document & Tool CD in the following Web.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

10 Apply Windows Server 2003 (or Windows Server 2003 x64) Service Pack.

For details, refer to the descriptions on the window.
 When applying the Service Pack, a driver may be replaced with the driver in the Service Pack.
 For more information, refer to the manual supplied with hardware.

11 Install ServerView

ServerView download is available at the Fujitsu PRIMERGY Website.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

For instructions for installing ServerView, refer to the following manuals.

ServerView Agent	ServerView User's Guide (For Windows Agent)
ServerView Console	ServerView User's Guide

12 Configure each setting for RAID Management Tool (ServerView RAID).

Required setting differs depending on the type of array controller. Please refer to the manual enclosed Array Controller Document & Tool CD for detail and setting instruction.

- Setting up an array administrator account
- Setting HDD Check Scheduler
- Setting Battery Recalibration Scheduler
- Monitoring terminal or failure event monitoring setting via e-mail

13 For PRIMERGY RX200 S4 / PRIMERGY TX300 S4 / PRIMERGY RX300 S4, make settings of a LAN controller.

1 Click [Start] - [All Programs] - [Accessories] - [Command Prompt].

A command prompt appears.

2 Type the following command, and then press the [Enter] key.

C:\> Netsh int ip set chimney DISABLED

The installation of Windows Server 2003(or Windows Server 2003 x64) has completed.

■ Before starting operation

After installing OS, refer to "Chapter 4 Operations after OS Installation" in "User's Guide", and take necessary procedures.

Chapter 2

Installing Windows Server 2008

2

**This chapter explains how to install Windows Server 2008 manually.
For the Server Core installation, refer to Chapter 3**

- 2.1 Preparation
- 2.2 Installation Procedure

* For the latest information on Windows Server 2008 support, refer to the matrix provided at:
<http://www.fujitsu.com/downloads/PRMRGY/support-matrix.pdf>

* For some models, the software attached with the server does not support Windows Server 2008.

2.1 Preparation

This section explains preparation requirements for installation.

2.1.1 Creating Driver Disk

When installing the OS manually, it is necessary to create a driver installation disk beforehand. There is a 2-type procedure for creating the driver disk by using PRIMERGY Startup Disc supplied with the server and by downloading from webpage.

- About the procedure for creating a driver disk from PRIMERGY Startup Disc, refer to "User's Guide".
- About the procedure for creating a driver from download file on the Fujitsu PRIMERGY website (<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>), refer to the manual published on the website.
- Make a latest version of Array Controller Document & Tool CD by downloading files from the website.
- Make a latest version of **PCI-Express SAS Card Document & Tool CD** by downloading files from the website.

■ Driver for array controller

Check your array controller type and create a required driver disk before installing Windows Server 2008.

Onboard Software RAID (Embedded MegaRAID SATA)	Create following driver disk from Array Controller Document & Tool CD. Windows Server 2008 Drivers Disk or Windows Server 2008 for x64 Edition Drivers Disk
SAS array controller card (MegaRAID SAS)	No driver disk is necessary. Driver is installed from Array Controller Document & Tool CD directly
SAS controller card or onboard IM (Integrated Mirroring SAS)	No driver disk is necessary. Driver is installed from Array Controller Document & Tool CD directly
Unconfigured array	No driver installation is required.

■ Driver for onboard LAN / expansion card

A driver disk you create differs depending on your PRIMERGY type. Check your PRIMERGY type and create an appropriate driver disk.



- ◆ For the latest driver, download files from the Fujitsu PRIMERGY website (<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>).
- ◆ The driver names could be changed.

● PRIMERGY ECONELE 100 S2

Onboard LAN / Expansion card	Driver
Intel Chipset driver	Intel Chipset Driver for Windows Server 2008
Onboard LAN / LAN card(PG-1853/ PG-285)	Onboard / PG-18xx/28xx LAN Driver V13.1
SAS array controller card (PG-248BC)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
Display driver	Onboard VIDEO Driver for Windows 2008/2008 x64
Other expansion card	Driver attached with each expansion card

Note: Driver disk is unable to be created from ServerStart for PRIMERGY ECONELE 100 S2.

● **PRIMERGY RX100 S5**

Onboard LAN / Expansion card	Driver
Intel Chipset driver	Intel Chipset Driver for Windows Server 2008
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2008/2008 R2 V12.2.0.3/V12.2.9.0
LAN card (PG-2861L / PG-289L / PG-288L / PG-285L)	Onboard / PG-18xx/28xx LAN Driver V13.4
SCSI card (PG-2281L)	PG-2281L SCSI Driver for Windows 2008 / R2 x64 Edition V7.2.0.0
Display 32-bit driver	Onboard VIDEO Driver for Windows 2008/2008 x64
SAS Ctrl (PG-228BL)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX120**

Onboard LAN / Expansion card	Driver
Intel Chipset driver	Windows Server 2008 standard driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2008/2008 R2 V12.2.0.2/V12.2.9.0
LAN card (PG-1853L / PG-1882L / PG-1892L / PG-2861L / PG-288L / PG-289L)	Onboard / PG-18xx/28xx LAN Driver V13.4
SCSI card (PG-1301L)	Windows Server 2008 standard driver
Display driver	Onboard VIDEO Driver for Windows 2008/2008 x64
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX150 S6**

Onboard LAN / Expansion card	Driver
Intel Chipset driver	Intel Chipset Driver for Windows Server 2008
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2008/2008 R2 V12.2.0.3/V12.2.9.0
LAN card (PG-1853 / PG-2861 / PG-289 / PG-285)	Onboard / PG-18xx/28xx LAN Driver V13.4
SAS array controller card(PG-248B / PG-248C)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
SCSI card (PG-2281)	PG-2281 SCSI Driver for Windows 2008 / R2 x64 Edition V7.0.0.6
Display driver	Onboard VIDEO Driver for Windows 2008/2008 x64
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX200 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-2861L / PG-289L / PG-288L / PG-285L)	Onboard / PG-18xx/28xx LAN Driver V13.4

Onboard LAN / Expansion card	Driver
SAS array controller card(PG-248B / PG-248C / PG-244C1)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver V2.01a4 for Windows 2008
SAS Ctrl (PG-228BL)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX300 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-1853 / PG-1863 / PG-1882 / PG-1892/ PG-285 / PG-2861 / PG-289 / PG-288)	Onboard / PG-18xx/28xx LAN Driver V13.4
SAS array controller card(PG-244C / PG-248B / PG-248C1)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver V2.01a4 for Windows 2008
SAS Ctrl (PG-224B/PG-228B)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX300 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-1853L / PG-1863L / PG-1882L / PG-1892L / PG-2861L / PG-289L / PG-288L/ PG-285L)	Onboard / PG-18xx/28xx LAN Driver V13.4
SAS array controller card(PG-244CL / PG-248CL)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver V2.01a4 for Windows 2008
SAS Ctrl (PG-228BL)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX600 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN / LAN card(PG-2861 / PG-289 / PG-288)	Onboard/PG-18xx/28xx LAN Driver V13.4
SAS array controller card (PG-244C)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
SCSI card (PG-2281)	PG-2281 SCSI Driver for Windows 2008 / R2 x64 Edition V7.0.0.6
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver V2.01a4 for Windows 2008
Display driver	Onboard VIDEO Driver for Windows 2008/2008 x64

Onboard LAN / Expansion card	Driver
SAS Ctrl (PG-224B/PG-228B)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

2.1.2 Configuring Array

When you operate with array configurations, configure arrays first before you install OS.

- 1 Turn on the server.
- 2 Configure an array.

The method differs depending on your array controller.

For Onboard Software RAID (Embedded MegaRAID SATA)

When the following message appears, press the [Ctrl] + [M] keys or the [Enter] key.

Press Ctrl-M or Enter to run LSI Software RAID Setup Utility.

SATA Setup Utility starts up, and Management Menu appears.

For details, refer to "Embedded MegaRAID SATA User's Guide" in Array Controller Document & Tool CD.

For SAS controller card or onboard IM (Integrated Mirroring SAS)

When the following message appears, press the [Ctrl] + [C] keys.

Press Ctrl C to start LSI Logic Configuration Utility

BIOS Utility starts up.

For details, refer to "Integrated Mirroring SAS User's Guide" in Array Controller Document & Tool CD.

For SAS array controller card (MegaRAID SAS)

When the following message appears, press the [Ctrl] + [H] keys.

Press <Ctrl><H> for WebBIOS

WebBIOS starts up.

For details, refer to "MegaRAID SAS User's Guide" in Array Controller Document & Tool CD.

- 3 Turn off the server.

2.1.3 Cautions for unconfigured array

When a SAS array controller card has been installed when not building an array using PRIMERGY ECONEL100 S2, change the BIOS setting [SATA RAID Enable] to "Disabled". The installation is not normally completed if it doesn't change to "Disabled".

2.1.4 Installing Internal Options

Before starting installation of the OS, install internal options in the server. For the procedures, refer to "Chapter 6 Installing Internal Options" in the "User's Guide".



- ◆ When the following optional devices are connected to the server, be sure to read "■ Precautions on OS Installation" described below. Failure to observe the cautions may cause the OS to be installed in unexpected media.
 - Internal data cartridge drive unit
 - Internal hard disk unit bay conversion kit
 - PRIMERGY SX35
 - External storage devices, e.g. ETERNUS
 - When a SATA hard disk is used.
- ◆ Although the following comment may be made in your "User's Guide", the notes in this section have priority.
 "2.1.1 Installing Internal Options"
 IMPORTANT: If an internal option device that must be installed after the OS installation has been already installed, remove the device, install the OS, and then reinstall the device."
- ◆ **Confirm the following "Precautions on OS Installation" when you use PRIMERGY RX600 S4.**
Failure to observe the cautions may cause the OS to be able to install it normally.

■ Precautions on OS Installation

● When using an internal data cartridge drive unit

Before installing, be sure to remove a cable of a Internal Data Cartridge Drive from a server. After installation has been completed, connect a cable once again.

● When using an internal hard disk unit bay conversion kit or a PRIMERGY SX35

Delete all of the current disk array configurations on the array controller which is connected to the internal hard disk unit bay conversion kit or the PRIMERGY SX35.

Before deleting the disk array configurations, be sure to make backup copies of all the necessary data, as the internal data will be lost by the deletion. After the OS installation, re-create disk array configurations and restore from the backup data.

● When using an external storage devices, e.g. ETERNUS

Turn off the external storage device during the OS installation.

● When using a SATA hard disk.

When not doing array configuration, connecting more than 2 hard disks to a controller and installing OS, remove the hard disk which isn't used from a server.

After completion, install it once again.

● For PRIMERGY RX600 S4

Install OS after it detaches it when the expansion card has already been installed from PCI slot 1 to 4.

And invalidate the LAN port of the I/O riser card according to the following procedure.

When installation of OS has been completed, install extension I/O riser card and make the LAN port on a card effective once again.

- 1 Start up the BIOS Setup Utility.**
- 2 Select a "Peripheral Configuration sub menu" from a "Advanced menu",and press the [Enter] key.**
- 3 Change [IO-Riser LAN Controller] from "Disabled" to "Enabled".**
- 4 Save a setup by [F10] key and then exit BIOS Setup Utility.**

2.2 Installation Procedure

This section explains how to install Windows Server 2008 manually.

■ Requirements

- Windows Server 2003 CD/DVD (installation disc)
- PRIMERGY Startup Disc (supplied with the server)
- A driver disk created in advance

1 Prepare the installation disc for Windows Server 2008.

Turn on the server, and immediately insert the Windows Server 2008 DVD-ROM (*1) into the CD/DVD drive. When the active area is specified on the hard disk, the following message appears.

Press any key to boot from CD or DVD...

Press any key while this message is displayed to boot from the CD/DVD drive.

*1: There is 2-type of DVD-ROM; for 32-bit and 64-bit. Please check them before inserting the disc.

2 Windows Server 2008 installation setup window appears.

Select the each item and click [Next] button. According to the setup wizard, continue the installation procedure.

- * If you use Bit Locker, specified partition format is required for installation. For more details, please refer to "Bit Locker manual".
- * PRIMERGY RX200 S4 don't support this function.



3 Install RAID driver manually.

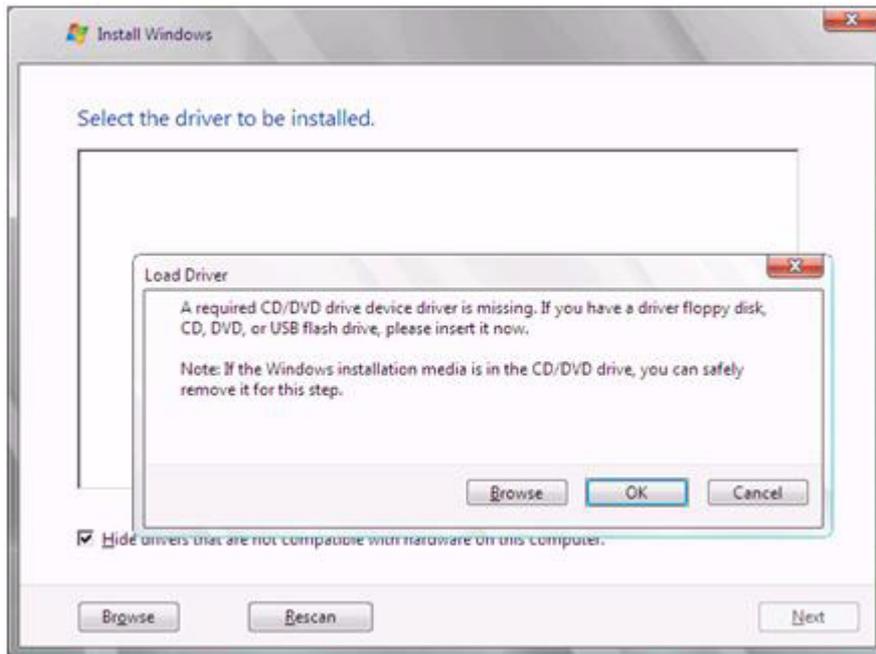
The procedure differs depending on the type of driver.

- [For Onboard Software RAID \(Embedded MegaRAID SATA\) on page 23](#)
- [For SAS array controller card \(MegaRAID SAS\) on page 23](#)
- [For SAS controller card or onboard IM \(Integrated Mirroring SAS\) on page 26](#)
- [For Unconfigured array on page 28](#)

Depending on the system configuration, this step and step 4 and 5 might be reversed.

For Onboard Software RAID (Embedded MegaRAID SATA)

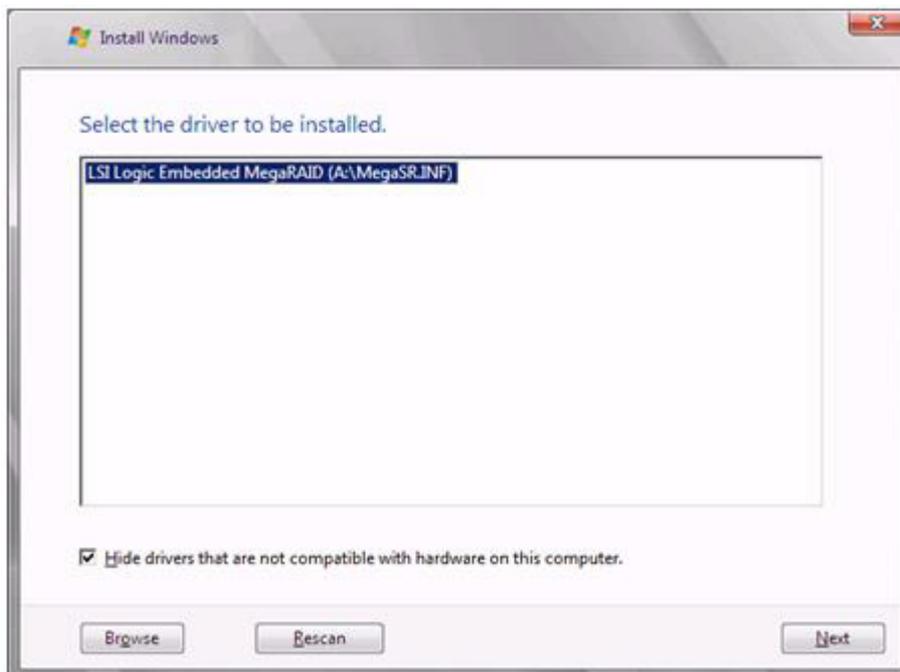
- 1 Set the driver floppy disk when the wizard window below is displayed.
- 2 Click [Browse], and select the folder in which the installed driver is saved



- 3 After selecting the driver, the following message is displayed.

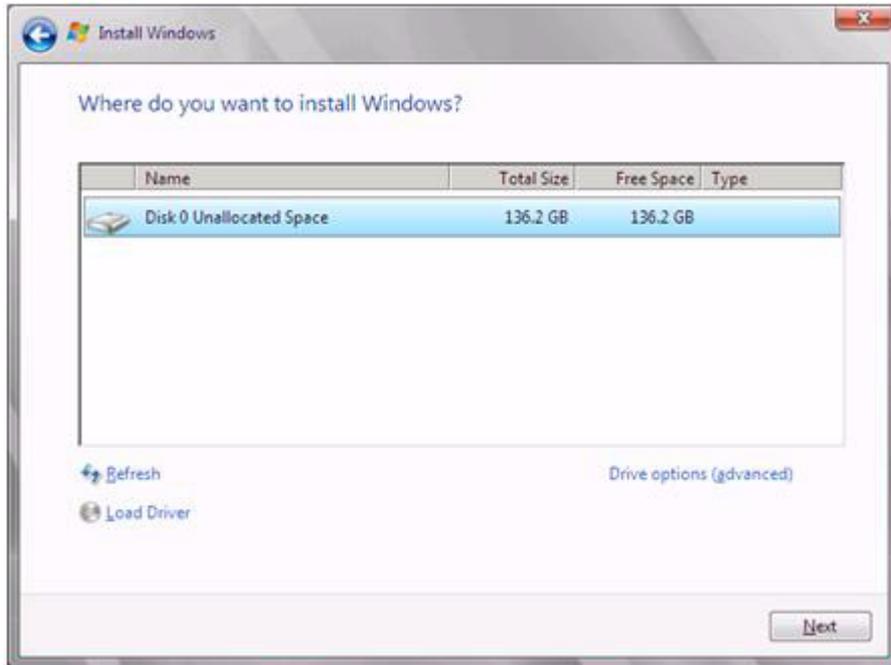
LSI Embedded MegaRAID (A:\MegaSR1.INF)

- 4 Click [Next] and go on to the [step 4 on page 28](#).

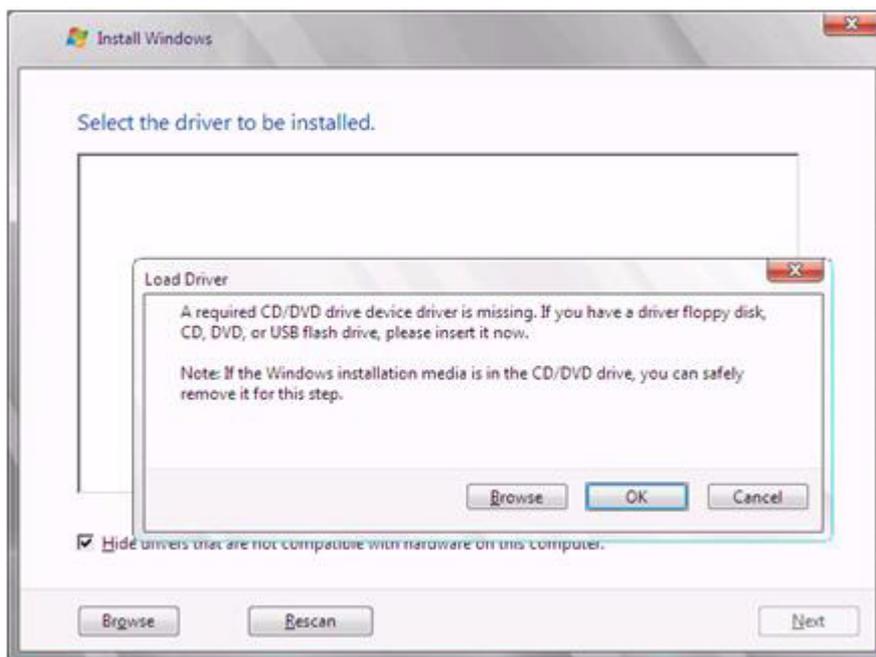


For SAS array controller card (MegaRAID SAS)

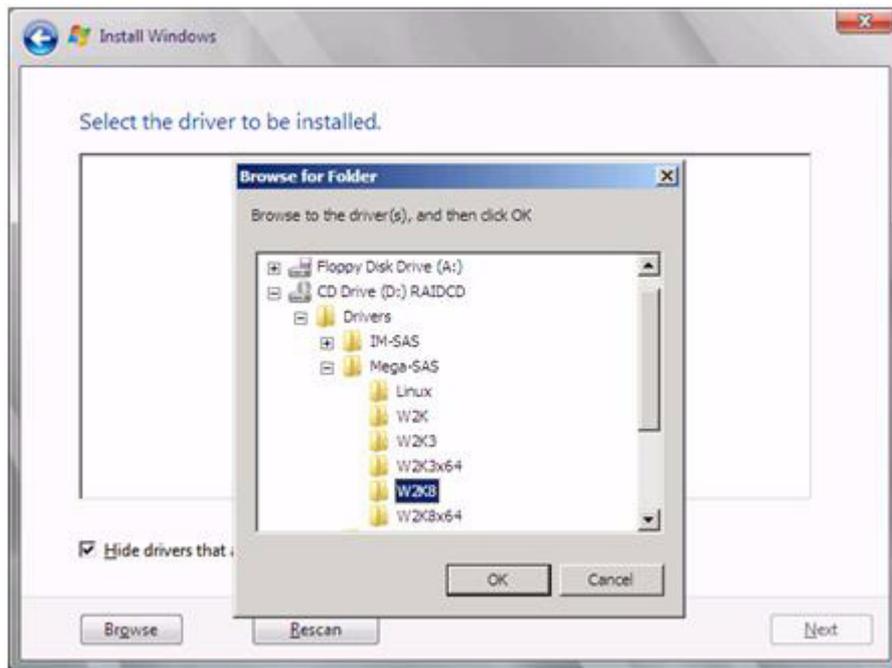
- 1 When the wizard window is displayed as below, click the "Load Driver", go on to the driver installation window.



- 2 At the display below, change the Windows installation DVD to Array Controller Document & Tool CD. Then click the [Browse].



- 3 Select the folder in which the installed driver is saved.
- 4 Select the folder at the following location, and click [OK].
For Windows Server 2008 Standard/Enterprise (32-bit)
[CD/DVD drive]:\Drivers\Mega-SAS\W2K8
For Windows Server 2008 Standard/Enterprise (64-bit)
[CD/DVD drive]:\Drivers\Mega-SAS\W2K8x64



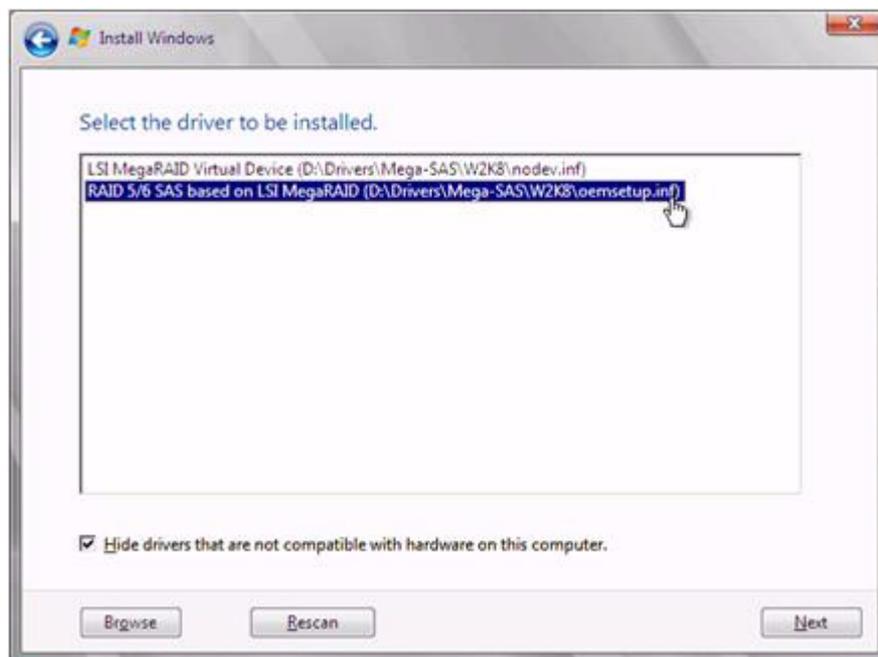
5 Select the following driver, and click [Next].

For Windows Server 2008 Standard/Enterprise (32-bit)

RAID 5/6 SAS based on LSI MegaRAID
([CD/DVD drive]:\Drivers\Mega-SAS\W2K8\oemsetup.inf)

For Windows Server 2008 Standard/Enterprise (64-bit)

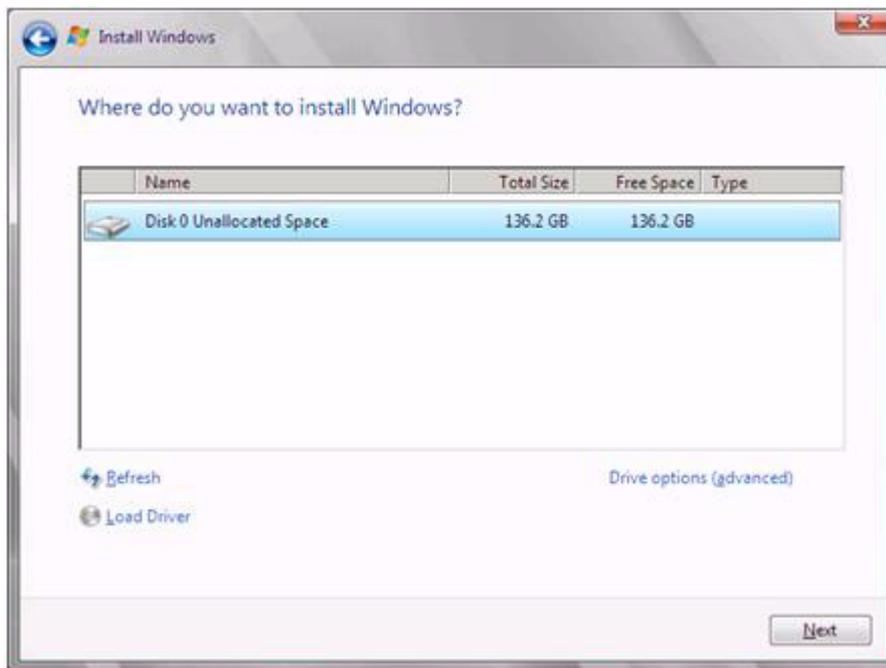
RAID 5/6 SAS based on LSI MegaRAID
([CD/DVD drive]:\Drivers\Mega-SAS\W2K8x64\oemsetup.inf)



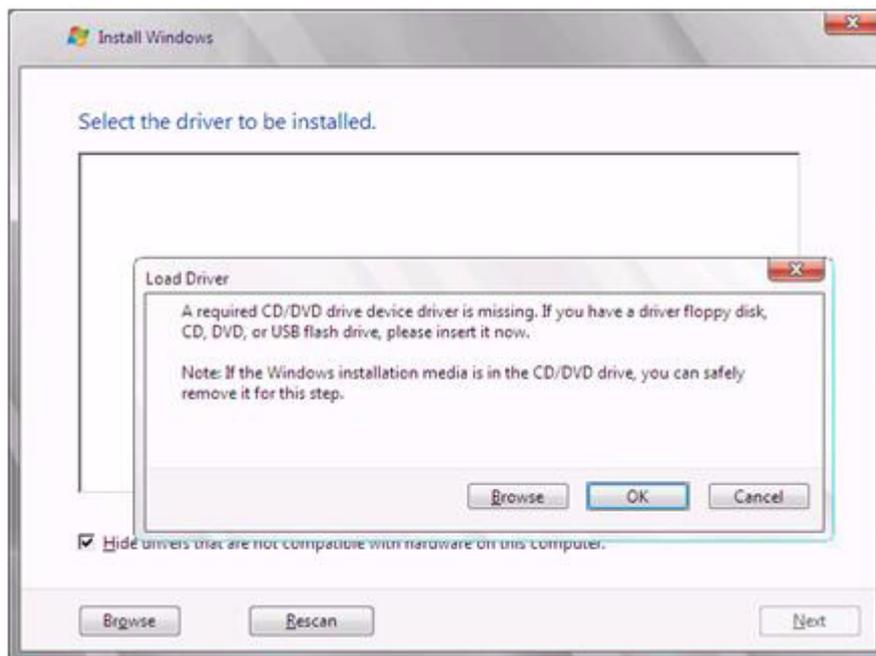
6 Change the disc to Windows installation DVD again, and go on to the [step 4 on page 28](#).

For SAS controller card or onboard IM (Integrated Mirroring SAS)

1 When the wizard window is displayed as below, click the "Load Driver", go on to the driver installation window.

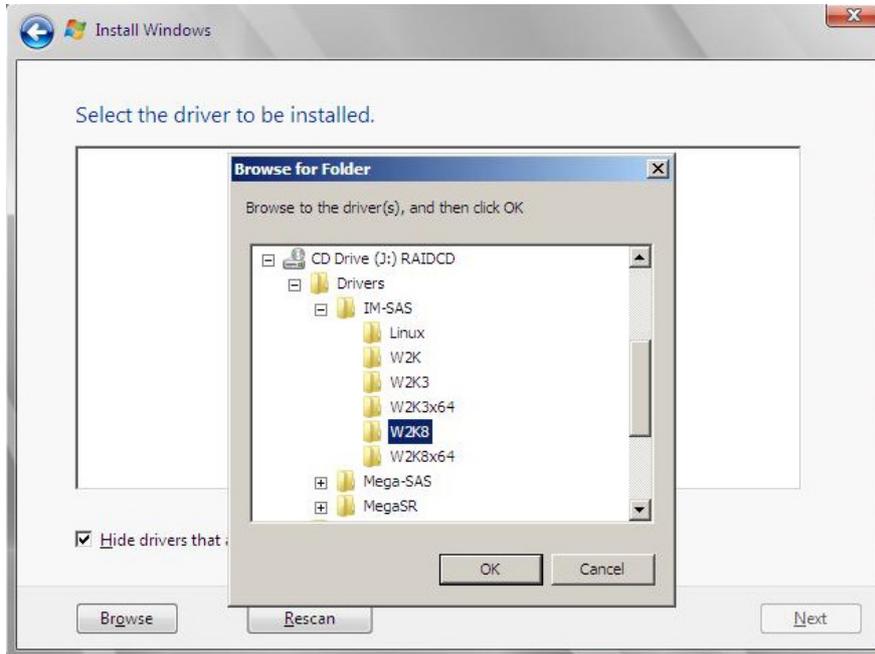


2 At the display below, change the Windows installation DVD to Array Controller Document & Tool CD. Then click the [Browse].



3 Select the folder in which the installed driver is saved. Select the folder at the following location, and click [OK].
For Windows Server 2008 Standard/Enterprise (32-bit)
[CD/DVD drive]:\Drivers\IM-SAS\W2K8
For Windows Server 2008 Standard/Enterprise (64-bit)

[CD/DVD drive]:\Drivers\IM-SAS\W2K8x64



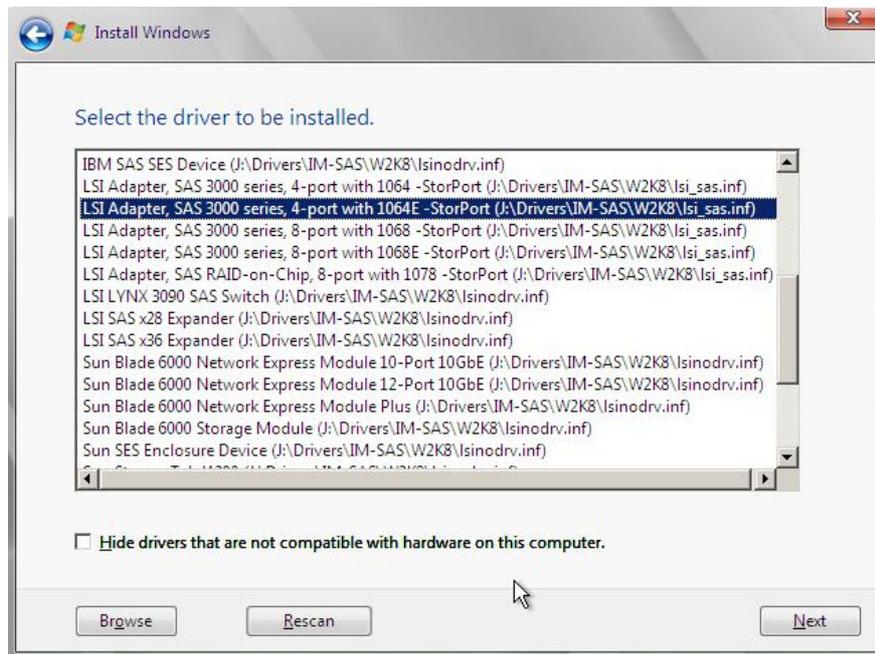
4 Select the following driver, and click [Next].

For Windows Server 2008 Standard/Enterprise (32-bit)

**LSI Adapter, SAS 3000 series, 4-port with 1064E -StorPort
([CD/DVD drive]:\Drivers\IM-SAS\W2K8\lsi_sas.inf)**

For Windows Server 2008 Standard/Enterprise (64-bit)

**LSI Adapter, SAS 3000 series, 4-port with 1064E -StorPort
([CD/DVD drive]:\Drivers\IM-SAS\W2K8x64\lsi_sas.inf)**



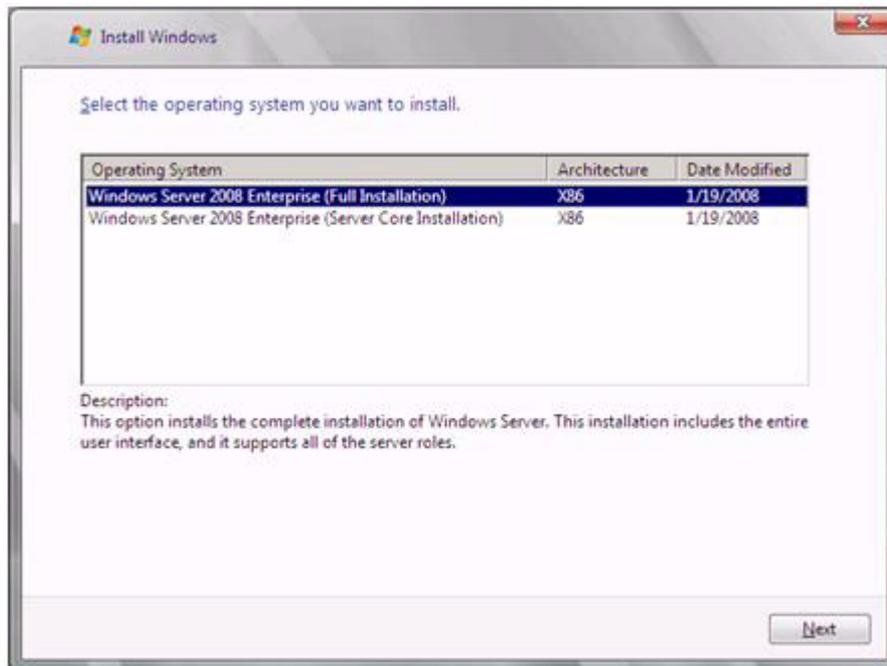
5 Change the disc to Windows installation DVD again, and go on to the [step 4 on page 28](#).

For Unconfigured array

No manual driver installation is required. Go on to the [step 4 on page 28](#).

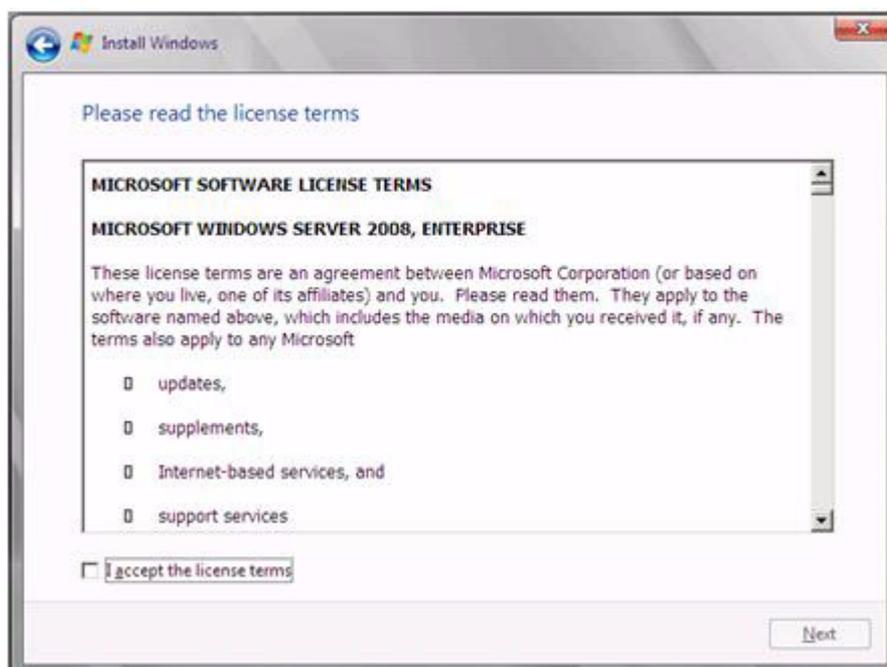
4 Select OS installation type.

Select "Windows Server 2008 Enterprise (Full Installation)" and click [Next].



5 When the following window appears, read the license terms and put a check-mark to agree. Then click [Next].

The program automatically executes the OS installation.(The system is rebooted a couple of times.)



6 Install the LAN driver.

Install it according to an attached manual after having downloaded the latest LAN driver in the following Web.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

The name of Onboard LAN that displays it with the device manager is the following.

Product name	LAN device name
PRIMERGY ECONEL 100 S2	Intel® 82566DM-2 Gigabit Network Connection
PRIMERGY RX100 S5	LAN1: Broadcom NetXtreme Gigabit Ethernet LAN2: Broadcom NetXtreme Gigabit Ethernet #2
PRIMERGY TX120	Broadcom NetXtreme Gigabit Ethernet
PRIMERGY TX150 S6	Broadcom NetXtreme Gigabit Ethernet
PRIMERGY RX200 S4	Broadcom BCM5708C NetXtreme II GigE (NDIS VBD Client)/Broadcom BCM5708C NetXtreme II GigE
PRIMERGY TX300 S4	Broadcom BCM5708C NetXtreme II GigE (NDIS VBD Client)/Broadcom BCM5708C NetXtreme II GigE
PRIMERGY RX300 S4	Broadcom BCM5708C NetXtreme II GigE (NDIS VBD Client)/Broadcom BCM5708C NetXtreme II GigE
PRIMERGY RX600 S4	Main board LAN Intel® PRO/1000 EB Network Connection with I/O Acceleration IO riser LAN Intel® 82575EB Gigabit Network Connection

7 Install the Intel Chipset driver.**For PRIMERGY ECONEL 100 S2 / PRIMERGY RX100 S5 / PRIMERGY TX150 S6**

Double click "infinst_autol.exe" and run the setting wizard. When the installation is completed, restart the system.

For PRIMERGY TX120 / PRIMERGY RX200 S4 / PRIMERGY TX300 S4 / PRIMERGY RX300 S4 / PRIMERGY RX600 S4

This step is not required. Go on to the step 8.

8 Install the Display driver.**For PRIMERGY ECONEL 100 S2**

- 1 Click [Start] button - [Administrative Tools] - [Computer Management]
- 2 From the displayed list, click [Device Manager]
- 3 Double click "Standard VGA Graphic Adapter" under the "Display adapter". Properties window will appear.
- 4 Click [Driver] tab, and click the "Update Driver".
"Updates for Driver software" window appears.
- 5 Click "Refer to the computer, search the driver software "
- 6 Click [Browse] and select the folder at the following location.
For Windows Server 2008 Standard (32-bit)
[CD/DVD drive]:\ATI\32_ATI\Driver\XP_INF
For Windows Server 2008 Standard (64-bit)
[CD/DVD driver]:\ATI\64_ATI\Driver\XP6A_INF
- 7 When driver installation is finished, the following message is displayed.

Installation is finished for the driver software of this device - ATI ES1000
--

8 Restart the server.



VGA chip installation for PRIMERGY ECONEL 100 S2 cannot be executed via installer.

VGA chip from ATI needs a driver different from other servers. Thus, the driver is not supplied with the Startup Disc. Please download the required driver from the Web page.

For PRIMERGY RX100 S5 / PRIMERGY TX150 S6 / PRIMERGY RX200 S4 / PRIMERGY TX300 S4 / PRIMERGY RX300 S4

Double click "install_kronos2_vga.bat" and run the setting wizard. When the installation completed, restart the system.

For PRIMERGY TX120

Double click "install_kronos1_vga.bat" and run the setting wizard. When the installation completed, restart the system.

For PRIMERGY RX600 S4

Double click "ServerEnginesG200e_Kronos2_SETUP.exe" and run the setting wizard. When the installation completed, restart the system.

9 Installation SAS Ctrl driver.

Install it according to an attached manual after having downloaded the latest PCI-Express SAS Card Document & Tool CD in the following Web.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

10 Install ServerView

ServerView download is available at the Fujitsu PRIMERGY Website.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

For instructions for installing ServerView, refer to the following manuals.

ServerView Agent	"ServerView User's Guide (For Windows Agent)"
ServerView Console	"ServerView User's Guide"

11 Configure each setting for RAID Management Tool (ServerView RAID)

Required setting differs depending on the type of array controller. Please refer to the manual enclosed Array Controller Document & Tool CD for detail and setting instruction.

- Setting up an array administrator account
- Setting HDD Check Scheduler
- Setting Battery Recalibration Scheduler
- Monitoring terminal or failure event monitoring setting via e-mail

For PRIMERGY RX600 S4

12 Make the registry editable, and adding the following registry key:

Key:HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\PCI\Parameters
 value name:111d8018
 value kind :REG_BINARY
 value data :00 00 10 00 00 00 00 00



For PRIMERGY RX600 S4

Execute the following file stored on the PRIMERGY Startup Disc, and apply the hot fix module.

For Windows Server 2008(32-bit)

[CD/DVD drive]: \Hotfix\Essential\W2K8\Windows6.0-KB956115-x86.msu
\Hotfix\Essential\W2K8\Windows6.0-KB955252-x86.msu
\Hotfix\Essential\W2K8\Windows6.0-KB954429-x86.msu

For Windows Server 2008(64-bit)

[CD/DVD drive]: \Hotfix\Essential\W2K8x64\Windows6.0-KB956115-x64.msu
\Hotfix\Essential\W2K8x64\Windows6.0-KB955252-x64.msu
\Hotfix\Essential\W2K8x64\Windows6.0-KB954429-x64.msu

The installation of Windows Server 2008 has completed.

■ **Before starting operation**

After installing OS, refer to "Chapter 4 Operations after OS Installation" in "User's Guide", and take necessary procedures.

Chapter 3

Installing Windows Server 2008 Server Core

3

This chapter explains how to install Server Core manually.

- 3.1 Preparation
- 3.2 Installation Procedure

* For the latest information on Windows Server 2008 support, refer to the matrix provided at:
<http://www.fujitsu.com/downloads/PRMRGY/support-matrix.pdf>

* For some models, the software attached with the server does not support Windows Server 2008.

3.1 Preparation

This section explains required preparation for installation.

3.1.1 Creating Driver Disk

When installing the OS manually, it is necessary to create a driver installation disk beforehand. There is a 2-type procedure for creating the driver disk by using PRIMERGY Startup Disc supplied with the server and by downloading from webpage.

- About the procedure for creating a driver disk from PRIMERGY Startup Disc, refer to "User's Guide".
- About the procedure for creating a driver from download file on the Fujitsu PRIMERGY website (<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>), refer to the manual published on the website.
- Create a latest version of Array Controller Document & Tool CD by downloading files from Web site.
- Make a latest version of **PCI-Express SAS Card Document & Tool CD** by downloading files from the website.

■ Driver for array controller

Check your array controller type and create a required driver disk before installing Windows Server 2008 Server Core.

Onboard Software RAID (Embedded MegaRAID SATA)	Create following driver disk from Array Controller Document & Tool CD. Windows Server 2008 Drivers Disk or Windows Server 2008 for x64 Edition Drivers Disk
SAS array controller card (MegaRAID SAS)	No driver disk is necessary. Driver is installed from Array Controller Document & Tool CD directly
SAS controller card or onboard IM (Integrated Mirroring SAS)	No driver disk is necessary. Driver is installed from Array Controller Document & Tool CD directly
Unconfigured array	No driver installation is required.

■ Driver for onboard LAN / expansion card

A driver disk you create differs depending on your PRIMERGY type. Check your PRIMERGY type and create an appropriate driver disk.



- ◆ For the latest driver, download files from the Fujitsu PRIMERGY website (<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>).
- ◆ The driver names could be changed.

● PRIMERGY ECONEL 100 S2

Onboard LAN / Expansion card	Driver
Intel Chipset driver	Intel Chipset Driver for Windows Server 2008
Onboard LAN / LAN card(PG-1853/ PG-285)	Onboard / PG-18xx/28xx LAN Driver V13.1
SAS array controller card (PG-248BC)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
Display driver	Onboard VIDEO Driver for Windows 2008/2008 x64
Other expansion card	Driver attached with each expansion card

Note: Driver disk is unable to be created from ServerStart for PRIMERGY ECONEL 100 S2.

● **PRIMERGY RX100 S5**

Onboard LAN / Expansion card	Driver
Intel Chipset driver	Intel Chipset Driver for Windows Server 2008
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2008/2008 R2 V12.2.0.3/V12.2.9.0
LAN card (PG-2861L / PG-289L / PG-288L / PG-285L)	Onboard / PG-18xx/28xx LAN Driver V13.4
SCSI card (PG-2281L)	PG-2281L SCSI Driver for Windows 2008 / R2 x64 Edition V7.2.0.0
Display 32-bit driver	Onboard VIDEO Driver for Windows 2008/2008 x64
SAS Ctrl (PG-228BL)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX120**

Onboard LAN / Expansion card	Driver
Intel Chipset driver	Windows Server 2008 standard driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2008/2008 R2 V12.2.0.2/V12.2.9.0
LAN card (PG-1853L / PG-1882L / PG-1892L / PG-2861L / PG-288L / PG-289L)	Onboard / PG-18xx/28xx LAN Driver V13.4
SCSI card (PG-1301L)	Windows Server 2008 standard driver
Display driver	Onboard VIDEO Driver for Windows 2008/2008 x64
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX150 S6**

Onboard LAN / Expansion card	Driver
Intel Chipset driver	Intel Chipset Driver for Windows Server 2008
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2008/2008 R2 V12.2.0.3/V12.2.9.0
LAN card (PG-1853 / PG-2861 / PG-289 / PG-285)	Onboard / PG-18xx/28xx LAN Driver V13.4
SAS array controller card(PG-248B / PG-248C)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
SCSI card (PG-2281)	PG-2281 SCSI Driver for Windows 2008 / R2 x64 Edition V7.0.0.6
Display driver	Onboard VIDEO Driver for Windows 2008/2008 x64
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX200 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-2861L / PG-289L / PG-288L / PG-285L)	Onboard / PG-18xx/28xx LAN Driver V13.4

Onboard LAN / Expansion card	Driver
SAS array controller card(PG-248B / PG-248C / PG-244C1)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
SCSI card (PG-2281L)	PG-2281L SCSI Driver for Windows 2008 / R2 x64 Edition V7.0.0.6
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver Core Kit V2.01a4 for Windows 2008
SAS Ctrl (PG-228BL)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

● **PRIMERGY TX300 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-1853 / PG-1863 / PG-1882 / PG-1892 / PG-2861 / PG-289 / PG-288/ PG-285)	Onboard / PG-18xx/28xx LAN Driver V13.4
SAS array controller card(PG-244C / PG-248B / PG-248C1)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver Core Kit V2.01a4 for Windows 2008
SAS Ctrl (PG-224B/PG-228B)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX300 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN	Onboard LAN Driver & Broadcom Advanced Control Suite for Windows 2003/2008 V4.8.5/V11.7.5
LAN card (PG-1853L / PG-1863L / PG-1882L / PG-1892L / PG-2861L / PG-289L / PG-288L/ PG-285L)	Onboard / PG-18xx/28xx LAN Driver V13.4
SAS array controller card(PG-244CL / PG-248CL)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver Core Kit V2.01a4 for Windows 2008
SAS Ctrl (PG-228BL)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

● **PRIMERGY RX600 S4**

Onboard LAN / Expansion card	Driver
Onboard LAN / LAN card(PG-2861 / PG-289 / PG-288)	Onboard/PG-18xx/28xx LAN Driver V13.4
SAS array controller card (PG-244C)	MegaRAID SAS Windows Server 2008 Drivers Disk or MegaRAID SAS Windows Server 2008 for x64 Edition Drivers Disk

Onboard LAN / Expansion card	Driver
SCSI card (PG-2281)	PG-2281 SCSI Driver for Windows 2008 / R2 x64 Edition V7.0.0.6
Fibre Channel card (PG-FC202)	PG-FC202 Storport Miniport Driver Core Kit V2.01a4 for Windows 2008
Display driver	Onboard VIDEO Driver for Windows 2008/2008 x64
SAS Ctrl (PG-224B/PG-228B)	Install it from PCI-Express SAS Card Document & Tool CD.
Other expansion card	Driver attached with each expansion card

3.1.2 Configuring Array

When you operate with array configurations, configure arrays first before you install OS.

- 1 Turn on the server.
- 2 Configure an array.

The method differs depending on your array controller.

For Onboard Software RAID (Embedded MegaRAID SATA)

When the following message appears, press the [Ctrl] + [M] keys or the [Enter] key.

Press Ctrl-M or Enter to run LSI Software RAID Setup Utility.

SATA Setup Utility starts up, and Management Menu appears.

For details, refer to "Embedded MegaRAID SATA User's Guide" in Array Controller Document & Tool CD.

For SAS controller card or onboard IM (Integrated Mirroring SAS)

When the following message appears, press the [Ctrl] + [C] keys.

Press Ctrl C to start LSI Logic Configuration Utility

BIOS Utility starts up.

For details, refer to "Integrated Mirroring SAS User's Guide" in Array Controller Document & Tool CD.

For SAS array controller card (MegaRAID SAS)

When the following message appears, press the [Ctrl] + [H] keys.

Press <Ctrl><H> for WebBIOS

WebBIOS starts up.

For details, refer to "MegaRAID SAS User's Guide" in Array Controller Document & Tool CD.

- 3 Turn off the server.

3.1.3 Cautions for unconfigured array

When a SAS array controller card has been installed when not building an array using PRIMERGY ECONE100 S2, change the BIOS setting [SATA RAID Enable] to "Disabled".

The installation is not normally completed if it doesn't change to "Disabled".

3.1.4 Installing Internal Options

Before starting installation of the OS, install internal options in the server. For the procedures, refer to "Chapter 6 Installing Internal Options" in the "User's Guide".



- ◆ When the following optional devices are connected to the server, be sure to read "■ Precautions on OS Installation" described below. Failure to observe the cautions may cause the OS to be installed in unexpected media.
 - Internal data cartridge drive unit
 - Internal hard disk unit bay conversion kit
 - PRIMERGY SX35
 - External storage devices, e.g. ETERNUS
 - When a SATA hard disk is used.
- ◆ Although the following comment may be made in your "User's Guide", the notes in this section have priority.

"2.1.1 Installing Internal Options"

IMPORTANT: If an internal option device that must be installed after the OS installation has been already installed, remove the device, install the OS, and then reinstall the device."
- ◆ **Confirm the following "Precautions on OS Installation" when you use PRIMERGY RX600 S4.**
Failure to observe the cautions may cause the OS to be able to install it normally.

■ Precautions on OS Installation

● When using an internal data cartridge drive unit

Before installing, be sure to remove a cable of a Internal Data Cartridge Drive from a server. After installation has been completed, connect a cable once again.

● When using an internal hard disk unit bay conversion kit or a PRIMERGY SX35

Delete all of the current disk array configurations on the array controller which is connected to the internal hard disk unit bay conversion kit or the PRIMERGY SX35.

Before deleting the disk array configurations, be sure to make backup copies of all the necessary data, as the internal data will be lost by the deletion. After the OS installation, re-create disk array configurations and restore from the backup data.

● When using an external storage devices, e.g. ETERNUS

Turn off the external storage device during the OS installation.

● When using a SATA hard disk.

When not doing array configuration, connecting more than 2 hard disks to a controller and installing OS, remove the hard disk which isn't used from a server.

After completion, install it once again.

● For PRIMERGY RX600 S4

Install OS after it detaches it when the expansion card has already been installed from PCI slot 1 to 4.

And invalidate the LAN port of the I/O riser card according to the following procedure.

When installation of OS has been completed, install extension I/O riser card and make the LAN port on a card effective once again.

- 1 Start up the BIOS Setup Utility.**
- 2 Select a "Peripheral Configuration sub menu" from a "Advanced menu",and press the [Enter] key.**
- 3 Change [IO-Riser LAN Controller] from "Disabled" to "Enabled".**
- 4 Save a setup by [F10] key and then exit BIOS Setup Utility.**

3.2 Installation Procedure

This section explains how to install Windows Server 2008 Server Core manually.

■ Requirements

- Windows Server 2003 CD/DVD (installation disc)
- PRIMERGY Startup Disc (supplied with the server)
- A driver disk created in advance

1 Prepare the installation disc for Windows Server 2008.

Turn on the server, and immediately insert the Windows Server 2008 DVD-ROM (*1) into the CD/DVD drive. When the active area is specified on the hard disk, the following message appears.

Press any key to boot from CD or DVD...

Press any key while this message is displayed to boot from the CD/DVD drive.

*1: There is 2-type of DVD-ROM; for 32-bit and 64-bit. Please check them before inserting the disc.

2 Windows Server 2008 installation setup window appears.

Select the each item and click [Next] button. According to the setup wizard, continue the installation procedure.

- * If you use Bit Locker, specified partition format is required for installation. For more details, please refer to "Bit Locker manual".
- * PRIMERGY RX200 S4 don't support this function.



3 Install RAID driver manually.

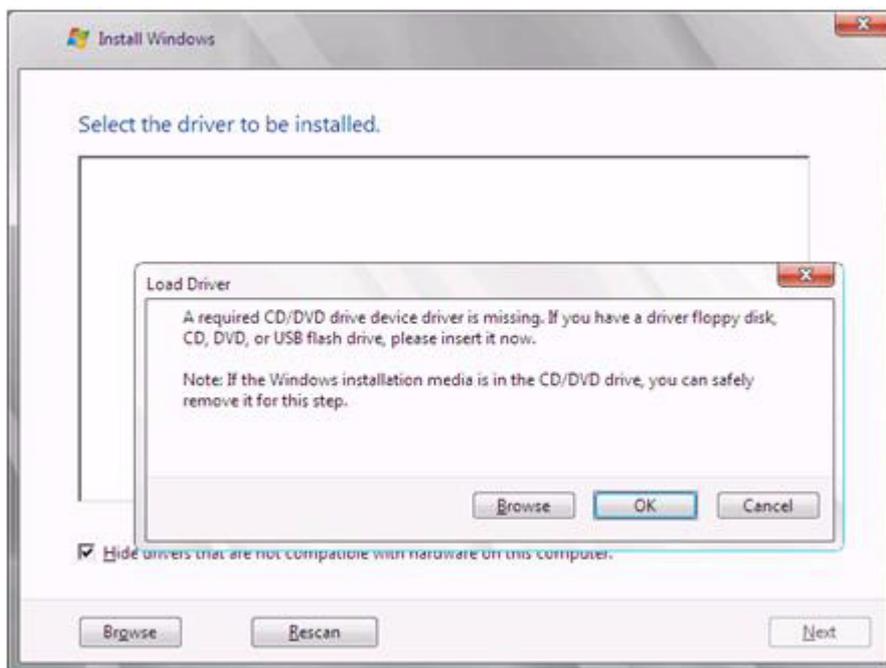
The procedure differs depending on the type of driver.

- [For Onboard Software RAID \(Embedded MegaRAID SATA\) on page 40](#)
- [For SAS array controller card \(MegaRAID SAS\) on page 41](#)
- [For SAS controller card or onboard IM \(Integrated Mirroring SAS\) on page 43](#)
- [For Unconfigured array on page 45](#)

Depending on the system configuration, this step and step 4 and 5 might be reversed.

For Onboard Software RAID (Embedded MegaRAID SATA)

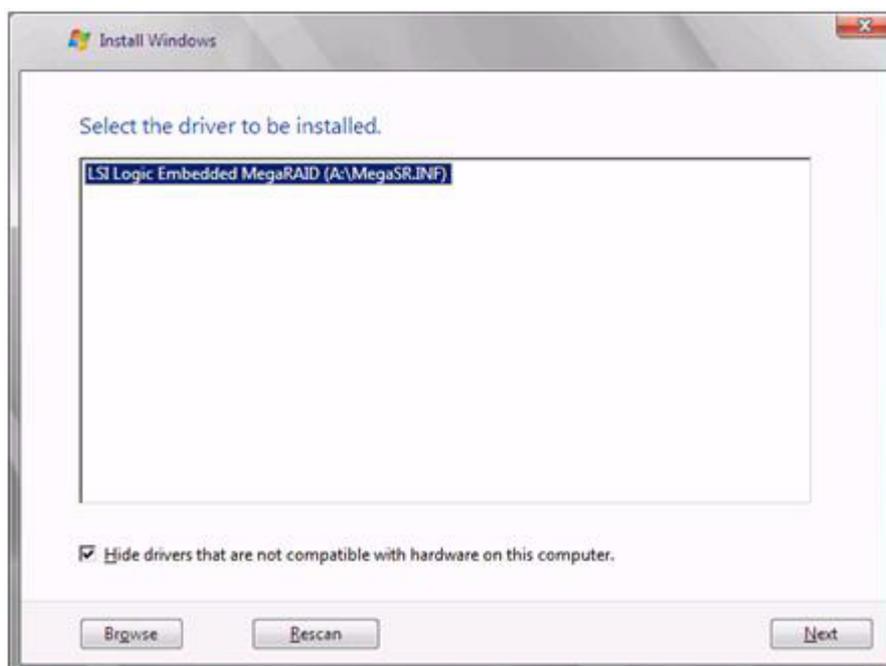
- 1 Set the driver floppy disk when the wizard window below is displayed.
- 2 Click [Browse], and select the folder in which the installed driver is saved



- 3 After selecting the driver, the following message is displayed.

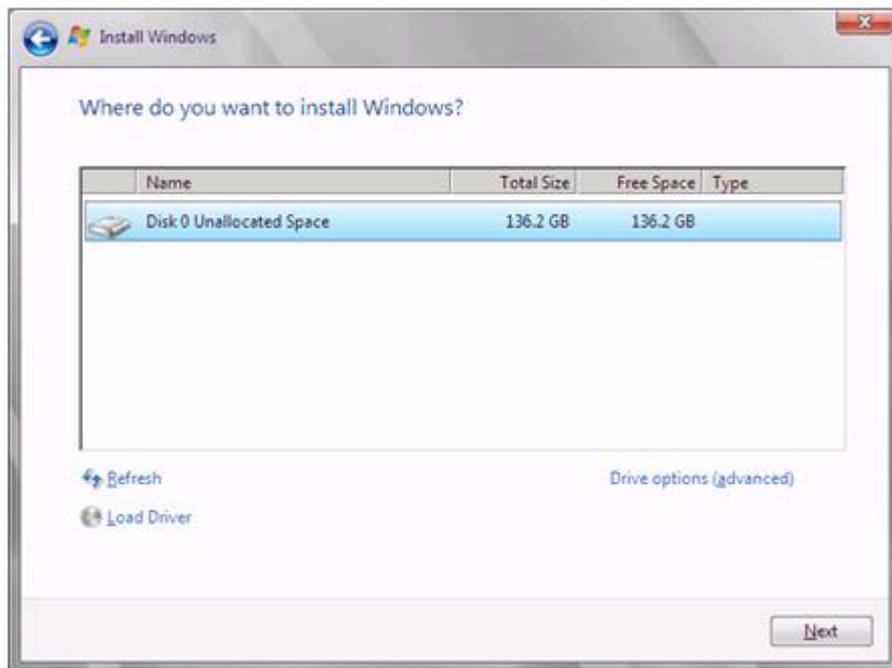
LSI Embedded MegaRAID (A:\MegaSR1.INF)

- 4 Click [Next] and go on to the [step 4 on page 45](#).

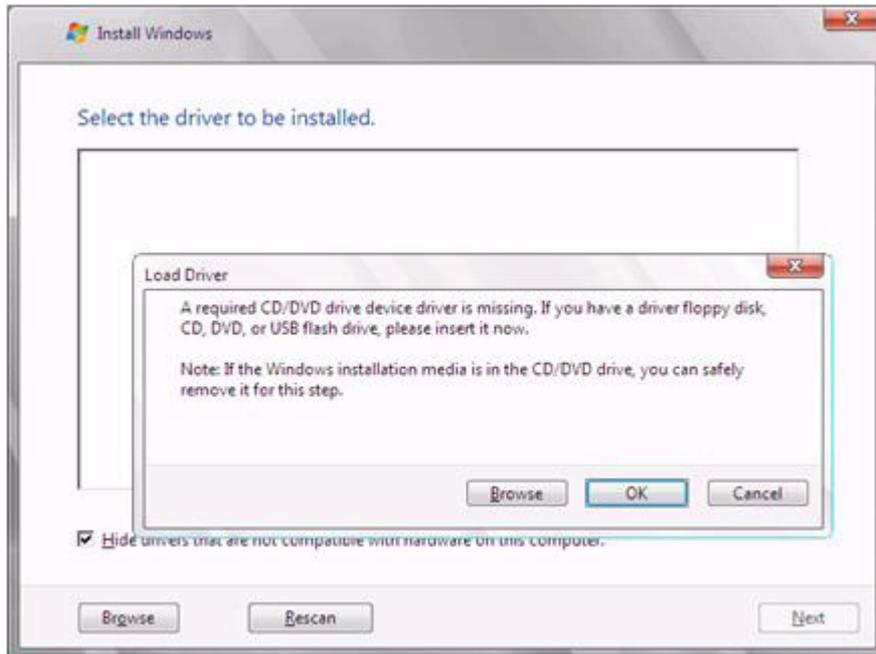


For SAS array controller card (MegaRAID SAS)

1 When the wizard window is displayed as below, click the "Load Driver", go on to the driver installation window.



2 At the display below, change the Windows installation DVD to Array Controller Document & Tool CD. Then click the [Browse].



3 Select the folder in which the installed driver is saved.

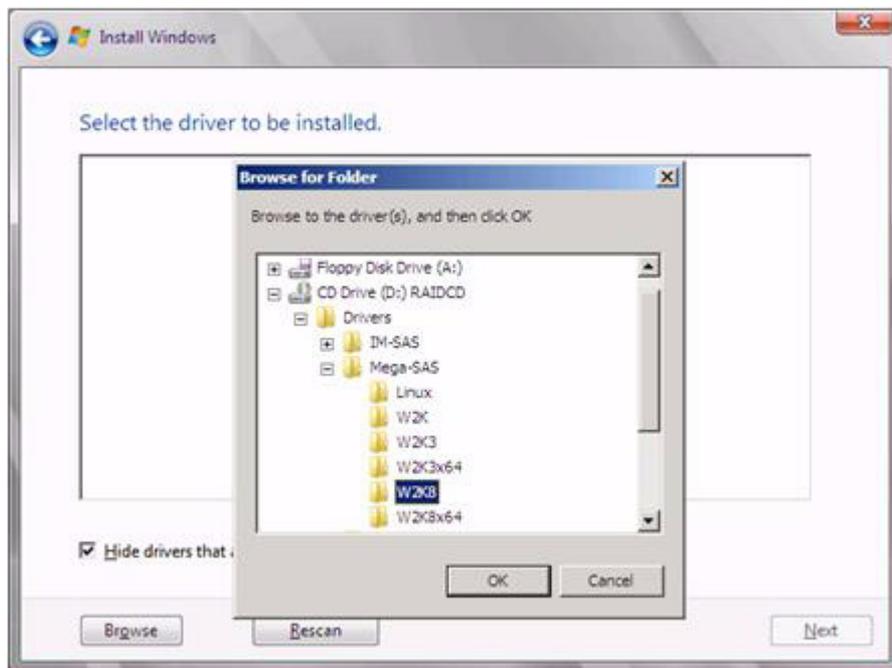
4 Select the folder at the following location, and click [OK].

For Windows Server 2008 Standard/Enterprise (32-bit)

[CD/DVD drive]:\Drivers\Mega-SAS\W2K8

For Windows Server 2008 Standard/Enterprise (64-bit)

[CD/DVD drive]:\Drivers\Mega-SAS\W2K8x64



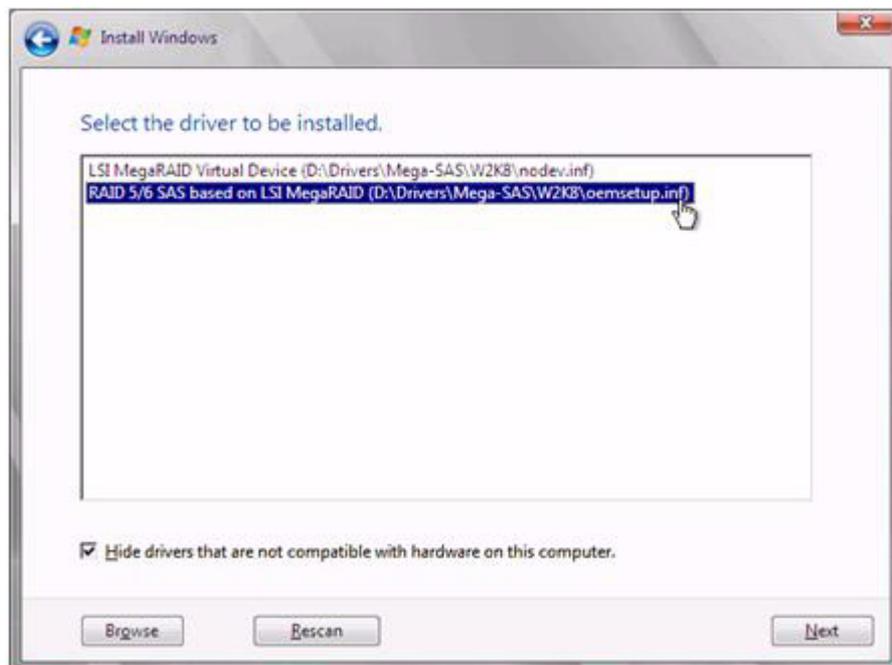
5 Select the following driver, and click [Next].

For Windows Server 2008 Standard/Enterprise (32-bit)

RAID 5/6 SAS based on LSI MegaRAID
([CD/DVD drive]:\Drivers\Mega-SAS\W2K8\oemsetup.inf)

For Windows Server 2008 Standard/Enterprise (64-bit)

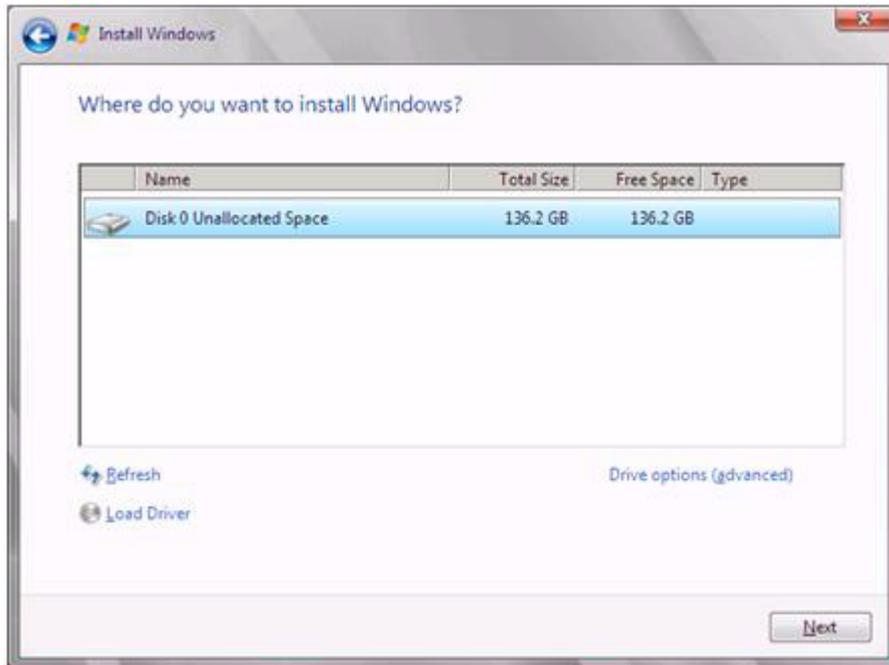
RAID 5/6 SAS based on LSI MegaRAID
([CD/DVD drive]:\Drivers\Mega-SAS\W2K8x64\oemsetup.inf)



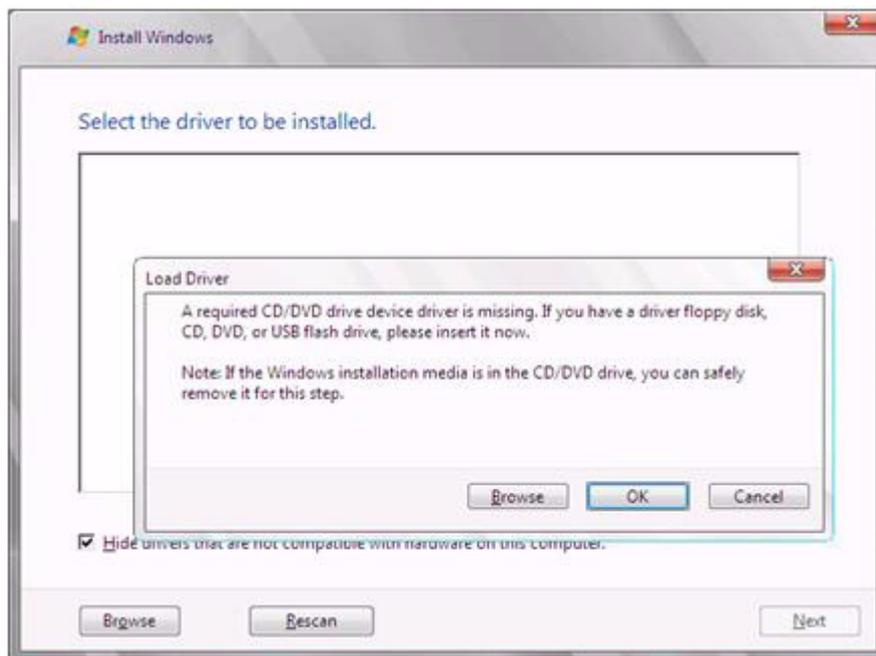
6 Change the disc to Windows installation DVD again, and go on to the [step 4 on page 45](#).

For SAS controller card or onboard IM (Integrated Mirroring SAS)

1 When the wizard window is displayed as below, click the "Load Driver", go on to the driver installation window.

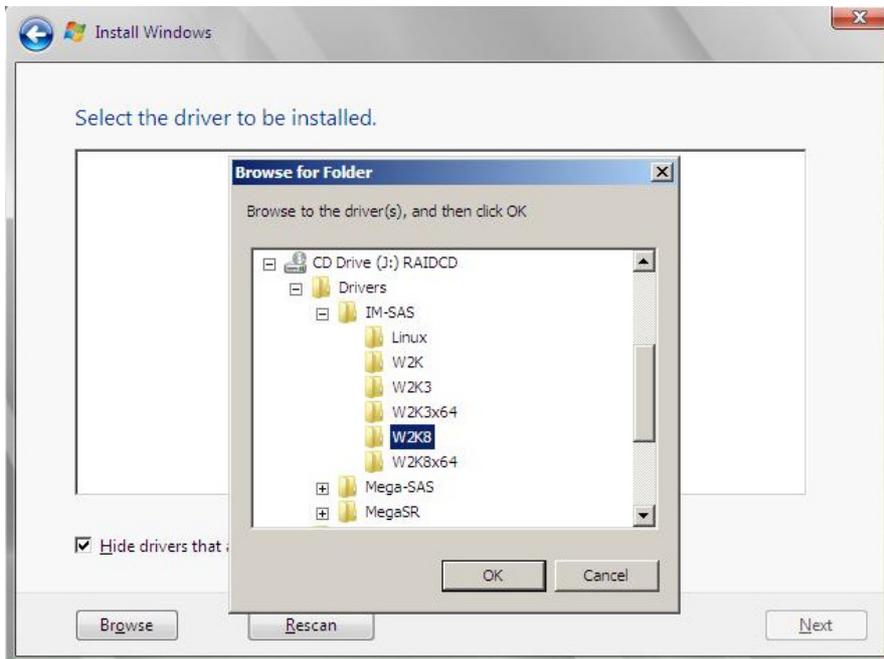


2 At the display below, change the Windows installation DVD to Array Controller Document & Tool CD. Then click the [Browse].



3 Select the folder in which the installed driver is saved. Select the folder at the following location, and click [OK].
For Windows Server 2008 Standard/Enterprise (32-bit)
[CD/DVD drive]:\Drivers\IM-SAS\W2K8
For Windows Server 2008 Standard/Enterprise (64-bit)

[CD/DVD drive]:\Drivers\IM-SAS\W2K8x64



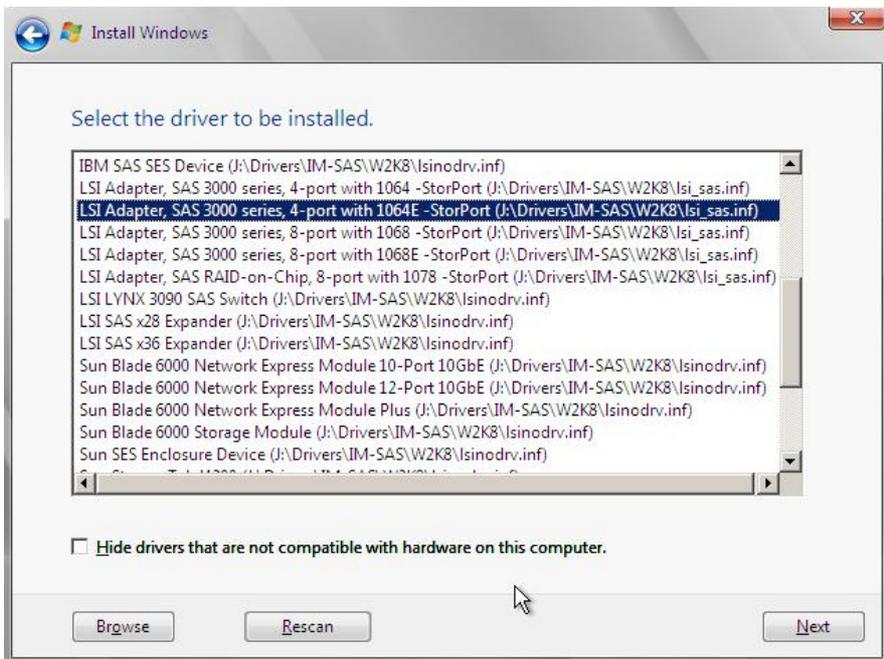
4 Select the following driver, and click [Next].

For Windows Server 2008 Standard/Enterprise (32-bit)

**LSI Adapter, SAS 3000 series, 4-port with 1064E -StorPort
([CD/DVD drive]:\Drivers\IM-SAS\W2K8\lsi_sas.inf)**

For Windows Server 2008 Standard/Enterprise (64-bit)

**LSI Adapter, SAS 3000 series, 4-port with 1064E -StorPort
([CD/DVD drive]:\Drivers\IM-SAS\W2K8x64\lsi_sas.inf)**



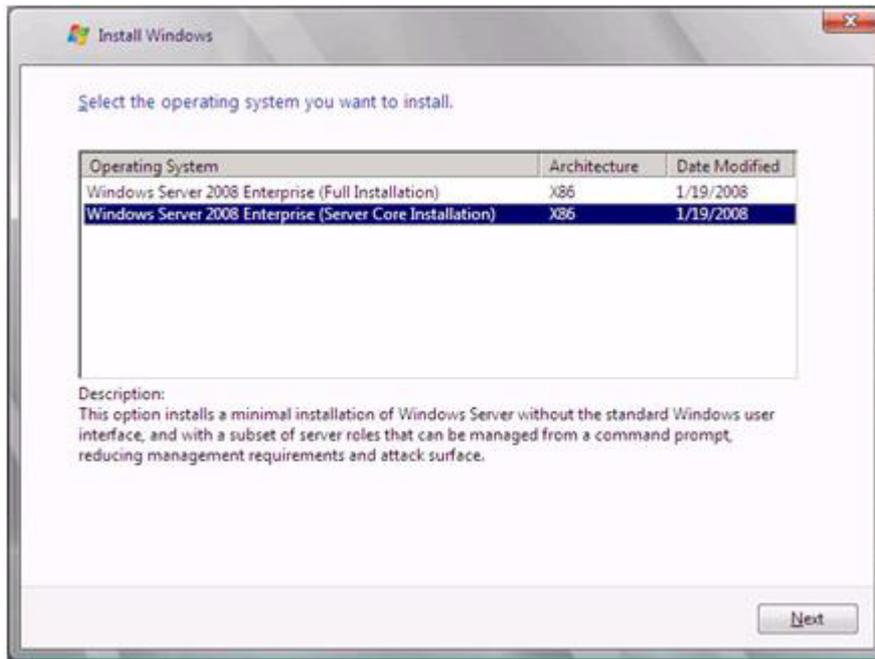
5 Change the disc to Windows installation DVD again, and go on to the [step 4 on page 45](#).

For Unconfigured array

No manual driver installation is required. Go on to the [step 4 on page 45](#).

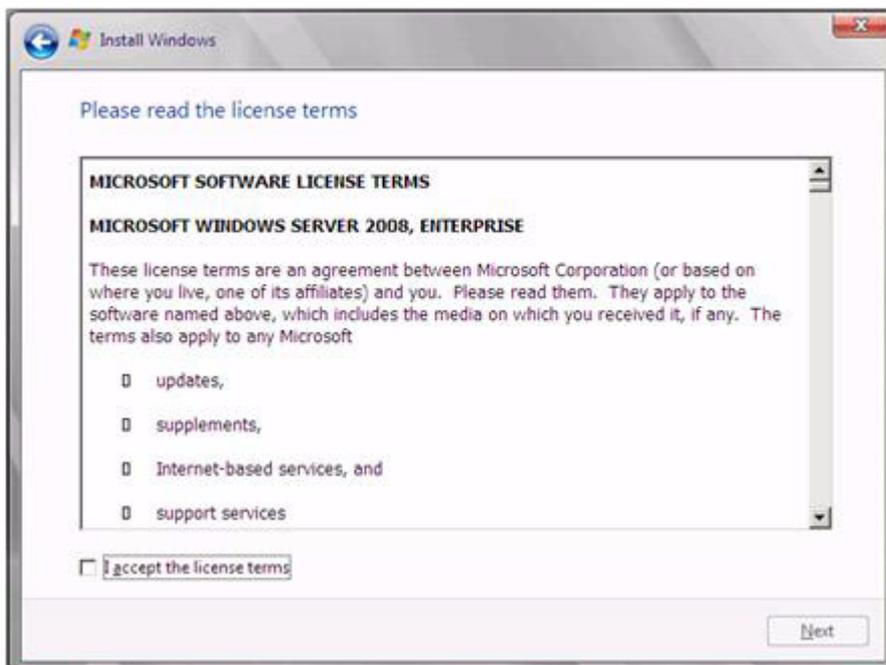
4 Select OS installation type.

Select "Windows Server 2008 Enterprise (Server Core Installation)" and click [Next].



5 When the following window appears, read the license terms and put a check-mark to agree. Then click [Next].

The program automatically executes the OS installation.(The system is rebooted a couple of times.)



6 Install the LAN driver.

Install it according to an attached manual after having downloaded the latest LAN driver in the following Web.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

7 Install the Intel Chipset driver.**For PRIMERGY ECONEL 100 S2 / PRIMERGY RX100 S5 / PRIMERGY TX150 S6**

1 Insert the installation disc into the CD/DVD drive.

2 Execute commands below under Command Prompt.

```
[CD/DVD drive]:\infinst_autol.exe -s
```

For PRIMERGY TX120 / PRIMERGY RX200 S4 / PRIMERGY TX300 S4 / PRIMERGY RX300 S4 / PRIMERGY RX600 S4

This step is not required. Go on to the **step 8**.

8 Installing the SAS Ctrl driver.

Install it according to an attached manual after having downloaded the latest PCI-Express SAS Card Document & Tool CD in the following Web.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

9 Install the SNMP Service

1 Execute commands below. (case-sensitive)

```
>start /w ocsetup SNMP-SC
```

2 Confirm installation properly

```
>oclist | findstr SNMP
```

If installed properly, the following message appears.

```
Installed:SNMP-SC
```

10 Install ServerView Agent

ServerView Agent is downloadable at the Fujitsu PRIMERGY Website.

<http://www.fujitsu.com/global/services/computing/server/ia/driver/index.html>

For instructions for installing ServerView Agent, refer to "ServerView User's Guide (For Windows Agent)".



ServerView Console and ServerView RemoteControlService cannot be installed in Windows Server 2008 Server Core. To install and use them, another system which is applicable for them is needed.

11 Configure each setting for RAID Management Tool (ServerView RAID)

Required setting differs depending on the type of array controller. Please refer to the manual enclosed Array Controller Document & Tool CD for detail and setting instruction.

- Setting up an array administrator account
- Setting HDD Check Scheduler
- Setting Battery Recalibration Scheduler
- Monitoring terminal or failure event monitoring setting via e-mail

For PRIMERGY RX600 S4**12 Make the registry editable, and adding the following registry key:**

Key:HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\services\PCI\Parameters
value name:111d8018
value kind :REG_BINARY
value data :00 00 10 00 00 00 00 00

**For PRIMERGY RX600 S4**

Execute the following file stored on the PRIMERGY Startup Disc, and apply the hot fix module.

For Windows Server 2008(32-bit)

[CD/DVD drive]: \Hotfix\Essential\W2K8\Windows6.0-KB956115-x86.msu
\Hotfix\Essential\W2K8\Windows6.0-KB955252-x86.msu
\Hotfix\Essential\W2K8\Windows6.0-KB954429-x86.msu

For Windows Server 2008(64-bit)

[CD/DVD drive]: \Hotfix\Essential\W2K8x64\Windows6.0-KB956115-x64.msu
\Hotfix\Essential\W2K8x64\Windows6.0-KB955252-x64.msu
\Hotfix\Essential\W2K8x64\Windows6.0-KB954429-x64.msu

The installation of Windows Server 2008 Server Core has completed.

■ Before starting operation

After installing OS, refer to "Chapter 4 Operations after OS Installation" in "User's Guide", and take necessary procedures.

Manual OS Installation

CA92276-8158 EN-09

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