

Installation Guide (Windows Server 2019)

NEC Express Server Express5800 Series

Express5800/R120i-1M Express5800/R120i-2M Express5800/R120h-1M, R120h-1M (2nd-Gen), R120h-1M (3rd-Gen) Express5800/R120h-2M, R120h-2M (2nd-Gen), R120h-2M (3rd-Gen) Express5800/R120h-1E Express5800/R120h-2E Express5800/R120h

- Chapter 1 Installing Windows
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Introduction

Thank you for purchasing our product.

When using the **EXPRESSBUILDER E8.10-010.03 (3.76.2)**, see this manual before installing Windows. Please read carefully the instructions and keep this document for your future reference.

Conventions Used in This Document

Notations used in the text

The symbols used in this document include the following:

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. 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)

Removal Media

Unless otherwise stated, removal media described in this document refer to both of the following.

- USB Memory
- Flash FDD

Abbreviations of Operating Systems

Windows OS 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 Server 2019	Windows Server 2019 Standard		
	Windows Server 2019 Datacenter		

About description of model names

The following models are supported by this document. If not mentioned especially, the contents is for all models. When the contents differs by model, each contents are described with model name.

Supported model is as follows.

Express5800/R120i-1M Express5800/R120i-2M Express5800/R120h-1M, R120h-1M (2nd-Gen), R120h-1M (3rd-Gen) Express5800/R120h-2M, R120h-2M (2nd-Gen), R120h-2M (3rd-Gen) Express5800/R120h-1E Express5800/R120h-2E Express5800/R120h

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zlib.h -- interface of the 'zlib' general purpose compression library version 1.2.2, October 3rd, 2004

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https://www.nec.com/

NEC Express5800 Series

Installing Windows

This manual explains the setup procedure for a physical environment. Read through this chapter to set up the Windows correctly.

1. Information of Windows Installation

Describes Supported Windows OS and mass storage controllers which is supported by EXPRESSBUILDER/Starter Pack.

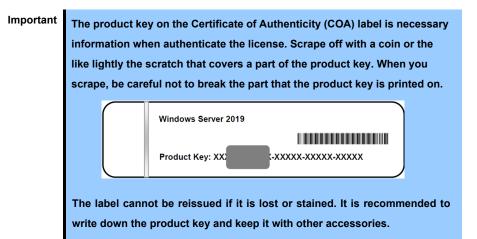
- Flow of Windows Installation
 Describes the flow chart of Windows installation.
- Installing Windows Server 2019
 Describes how to install Windows Server 2019.
- Setting up for Maintenance
 Describes the features that should be set up for maintenance in advance.

5. Backup of system information

Describes how to back up the setting information of the system in advance of troubles.

I. Information of Windows Installation

This section describes the points of using EXPRESSBUILDER/Starter Pack to install Windows operating system.



Refer to the following for the installation of virtual OS.

If your virtualization infrastructure is Hyper-V:

Refer to the following web site for the Hyper-V setting and the installation procedure of the guest OS and so on.

https://www.58support.nec.co.jp/global/download/w2019/hyper-v/hyper-v-ws2019.html

If your virtualization infrastructure is not Hyper-V:

Refer to the manual provided by virtualization infrastructure vendor to prepare the virtual environment. Prepare a media or an ISO image of the OS to install.

- 1. Start the virtual machine from a media or an ISO image of the OS to install.
- 2. Follow the on-screen instruction to complete the OS installation.
- 3. Refer to the manual provided by virtualization infrastructure vendor to install the necessary services and applications.

I.I Starting EXPRESSBUILDER

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

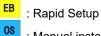
For details, see Chapter 2 (3. Details of EXPRESSBUILDER) in Maintenance Guide or Chapter 1 (4. Details of EXPRESSBUILDER) in Maintenance Guide (Common).

<u>Usage</u>

Remove a CD/DVD and removable media from the server, restart the server and press <F10> key (EXPRESSBUILDER) during POST.

1.2 Supported Windows OS

You can install the following editions of Windows operating system.



: Manual installation

Name of Windows OS		Boot mode		Installation method	
		UEFI	Legacy	EB	OS
Windows Server 2019 *	Standard	~	N/A	√	~
Windows Server 2019	Datacenter	\checkmark	N/A	\checkmark	\checkmark

✓ : Supported

* "Nano Server" is not supported.

1.3 Supported Mass Storage Controllers

The table below lists the controllers for this server, supported by EXPRESSBUILDER/Starter Pack. If a controller not mentioned below is connected, set it up while referring to the instructions supplied with the controller.

(1) Express5800/R120i-1M, R120i-2M

	R120i-1M	R120i-2M			
RAID controller supporting the installation of OS at EXPRESSBUILDER					
N8103-189 RAID Controller (RAID 0/1)	✓	✓			
N8103-190 RAID Controller (2GB, RAID 0/1/5/6)	✓	✓			
N8103-191 RAID Controller (4GB, RAID 0/1/5/6)	✓	✓			
N8103-192 RAID Controller (RAID 0/1)	✓	N/A			
N8103-193 RAID Controller (2GB, RAID 0/1/5/6)	✓	N/A			
N8103-194 RAID Controller (4GB, RAID 0/1/5/6)	✓	N/A			
N8103-195 RAID Controller (RAID 0/1)	✓	~			
N8103-201 RAID Controller (2GB, RAID 0/1/5/6)	✓	~			
N8103-237 RAID Controller (4GB, RAID 0/1/5/6)	✓	~			
N8103-238 RAID Controller (8GB, RAID 0/1/5/6)	✓	~			
N8103-239 480GB SSD Adapter for OS Boot (RAID 1)	✓	✓			
Other options					
N8103-184/E184 SAS Controller	✓	~			
N8103-197 SAS Controller	✓	~			
N8190-163 Fibre Channel Controller (1ch)	✓	~			
N8190-164 Fibre Channel Controller (2ch)	✓	~			
N8190-165 Fibre Channel Controller (1ch)	✓	~			
N8190-166 Fibre Channel Controller (2ch)	✓	~			
N8190-171 Fibre Channel Controller (1ch)	✓	~			
N8190-172 Fibre Channel Controller (2ch)	✓	~			

(2) Express5800/R120h-1M, R120h-2M (2nd-Gen) (3rd-Gen)

	R120h-1M	R120h-2M	R120h-1M (2nd-Gen)	R120h-2M (2nd-Gen)	R120h-1M (3rd-Gen)	R120h-2M (3rd-Gen)		
RAID controller supporting the installation of OS at EXPRESSBUILDER								
Onboard RAID Controller	~	~	~	~	~	~		
N8103-189 RAID Controller (RAID 0/1)	✓	~	~	~	~	✓		
N8103-190 RAID Controller (2GB, RAID 0/1/5/6)	~	~	~	~	~	~		
N8103-191 RAID Controller (4GB, RAID 0/1/5/6)	✓	✓	~	✓	✓	✓		
N8103-192 RAID Controller (RAID 0/1)	✓	N/A	~	N/A	✓	N/A		
N8103-193 RAID Controller (2GB, RAID 0/1/5/6)	✓	N/A	~	N/A	✓	N/A		
N8103-194 RAID Controller (4GB, RAID 0/1/5/6)	✓	N/A	✓	N/A	✓	N/A		
N8103-195 RAID Controller (RAID 0/1)	✓	✓	~	✓	✓	~		
N8103-201 RAID Controller (2GB, RAID 0/1/5/6)	✓	✓	~	✓	✓	✓		
N8103-239 480GB SSD Adapter for OS Boot (RAID 1)	N/A	N/A	N/A	N/A	~	~		
Other options								
N8103-196 RAID Controller (2GB, RAID 0/1/5/6)	~	~	~	~	~	~		
N8103-184/E184 SAS Controller	~	~	~	~	~	~		
N8103-197 SAS Controller	~	~	~	~	~	~		
N8190-163 Fibre Channel Controller (1ch)	~	~	~	~	~	~		
N8190-164 Fibre Channel Controller (2ch)	✓	~	~	✓	~	~		
N8190-165 Fibre Channel Controller (1ch)	✓	~	~	~	~	~		
N8190-166 Fibre Channel Controller (2ch)	~	~	~	~	~	~		
N8190-171 Fibre Channel Controller (1ch)	~	~	~	~	~	~		
N8190-172 Fibre Channel Controller (2ch)	✓	~	~	~	~	~		

(3) Express5800/R120h-1E, Express5800/R120h-2E

	R120h-1E	R120h-2E				
RAID controller supporting the installation of OS at EXPRESSBUILDER						
Onboard RAID Controller	✓	~				
N8103-189 RAID Controller (RAID 0/1)	N/A	~				
N8103-190 RAID Controller (2GB, RAID 0/1/5/6)	N/A	~				
N8103-191 RAID Controller (4GB, RAID 0/1/5/6)	N/A	N/A				
N8103-192 RAID Controller (RAID 0/1)	✓	N/A				
N8103-193 RAID Controller (2GB, RAID 0/1/5/6)	✓	N/A				
N8103-194 RAID Controller (4GB, RAID 0/1/5/6)	N/A	N/A				
N8103-195 RAID Controller (RAID 0/1)	✓	~				
N8103-201 RAID Controller (2GB, RAID 0/1/5/6)	✓	~				
Other options						
N8103-196 RAID Controller (2GB, RAID 0/1/5/6)	✓	✓				
N8103-184/E184 SAS Controller	✓	✓				
N8103-197 SAS Controller	✓	✓				
N8190-163 Fibre Channel Controller (1ch)	✓	✓				
N8190-164 Fibre Channel Controller (2ch)	✓	✓				
N8190-165 Fibre Channel Controller (1ch)	✓	✓				
N8190-166 Fibre Channel Controller (2ch)	✓	~				
N8190-171 Fibre Channel Controller (1ch)	✓	~				
N8190-172 Fibre Channel Controller (2ch)	✓	✓				

(4) Express5800/T120h

	T120h			
RAID controller supporting the installation of OS at EXPRESSBUILDER				
Onboard RAID Controller	✓			
N8103-189 RAID Controller (RAID 0/1)	✓			
N8103-190 RAID Controller (2GB, RAID 0/1/5/6)	✓			
N8103-191 RAID Controller (4GB, RAID 0/1/5/6)	✓			
N8103-192 RAID Controller (RAID 0/1)	N/A			
N8103-193 RAID Controller (2GB, RAID 0/1/5/6)	N/A			
N8103-194 RAID Controller (4GB, RAID 0/1/5/6)	N/A			
N8103-195 RAID Controller (RAID 0/1)	✓			
N8103-201 RAID Controller (2GB, RAID 0/1/5/6)	✓			
Other options				
N8103-196 RAID Controller (2GB, RAID 0/1/5/6)	✓			
N8103-184/E184 SAS Controller	✓			
N8103-197 SAS Controller	✓			
N8190-163 Fibre Channel Controller (1ch)	✓			
N8190-164 Fibre Channel Controller (2ch)	✓			
N8190-165 Fibre Channel Controller (1ch)	✓			
N8190-166 Fibre Channel Controller (2ch)	✓			
N8190-171 Fibre Channel Controller (1ch)	✓			
N8190-172 Fibre Channel Controller (2ch)	✓			

(5) Express5800/R110j-1

	R110j-1			
RAID controller supporting the installation of OS at EXPRESSBUILDER				
Onboard RAID Controller	✓			
N8103-192 RAID Controller (RAID 0/1)	✓			
N8103-193 RAID Controller (2GB, RAID 0/1/5/6)	\checkmark			
Other options				
N8103-196 RAID Controller (2GB, RAID 0/1/5/6)	✓			
N8103-184/E184 SAS Controller	✓			
N8103-197 SAS Controller	✓			
N8190-163 Fibre Channel Controller (1ch)	✓			
N8190-164 Fibre Channel Controller (2ch)	✓			
N8190-165 Fibre Channel Controller (1ch)	✓			
N8190-166 Fibre Channel Controller (2ch)	✓			
N8190-171 Fibre Channel Controller (1ch)	✓			
N8190-172 Fibre Channel Controller (2ch)	\checkmark			

1.4 Supported Optional LAN board

The table below lists the optional LAN boards for this server, supported by Starter Pack.

(1) Express5800/R120i-1M, R120i-2M

		R120i-1M	R120i-2M
N8104-206	Quad Port 1000BASE-T LOM Card	✓	✓
N8104-207	Dual Port 10GBASE-T LOM Card	✓	✓
N8104-208	Dual Port 10/25GBASE SFP+ LOM Card	~	✓
N8104-209	Quad Port 1000BASE-T Adapter	~	✓
N8104-210	Dual Port 10GBASE-T Adapter	\checkmark	\checkmark
N8104-211	Dual Port 10/25GBASE SFP28 Adapter	\checkmark	\checkmark
N8104-212	Dual Port 10/25GBASE SFP28 Adapter	\checkmark	\checkmark
N8104-217	Dual Port 10GBASE-T LOM Card	~	\checkmark
N8104-219	Dual Port 10GBASE-T Adapter	\checkmark	\checkmark

(2) Express5800/R120h-1M, R120h-2M (2nd-Gen) (3rd-Gen)

	R120h-1M	R120h-2M	R120h-1M (2nd-Gen)	R120h-2M (2nd-Gen)	R120h-1M (3rd-Gen)	R120h-2M (3rd-Gen)
N8104-171 Quad Port 1000BASE-T LOM Card	~	~	~	~	N/A	N/A
N8104-172 Quad Port 1000BASE-T LOM Card	~	~	~	~	~	~
N8104-173 Dual Port 10GBASE-T LOM Card	~	~	~	~	N/A	N/A
N8104-175 Dual Port 10GBASE-T LOM Card	~	~	~	~	~	~
N8104-176 Dual Port 10GBASE SFP+ LOM Card	~	~	~	~	N/A	N/A
N8104-177 Dual Port 25GBASE SFP+ LOM Card	~	~	~	~	N/A	N/A
N8104-178 Dual Port 1000BASE-T Adapter	~	~	~	~	~	✓
N8104-179 Quad Port 1000BASE-T Adapter	~	~	~	~	~	~
N8104-180 Dual Port 1000BASE-T Adapter	~	~	~	~	~	✓
N8104-181 Quad Port 1000BASE-T Adapter	~	~	~	~	~	✓
N8104-182 Dual Port 10GBASE-T Adapter	~	~	~	~	~	✓
N8104-183 Dual Port 10GBASE-T Adapter	~	~	~	~	~	✓
N8104-184 Dual Port 10GBASE-T Adapter	~	~	~	~	~	✓
N8104-185 Dual Port 10GBASE SFP+ Adapter	~	~	~	~	~	✓
N8104-186 Dual Port 10GBASE SFP+ Adapter	~	~	~	\checkmark	\checkmark	~
N8104-187 Dual Port 25GBASE SFP28 Adapter	~	~	~	~	~	√
N8104-213 Dual Port 10GBASE-T LOM Card	N/A	N/A	N/A	N/A	~	√
N8104-215 Dual Port 10GBASE-T Adapter	N/A	N/A	N/A	N/A	~	√

(3) Express5800/R120h-1E, R120h-2E

		R120h-1E	R120h-2E
N8104-171	Quad Port 1000BASE-T LOM Card	✓	\checkmark
N8104-172	Quad Port 1000BASE-T LOM Card	✓	✓
N8104-173	Dual Port 10GBASE-T LOM Card	✓	✓
N8104-175	Dual Port 10GBASE-T LOM Card	✓	✓
N8104-176	Dual Port 10GBASE SFP+ LOM Card	\checkmark	✓
N8104-177	Dual Port 25GBASE SFP+ LOM Card	\checkmark	✓
N8104-178	Dual Port 1000BASE-T Adapter	\checkmark	✓
N8104-179	Quad Port 1000BASE-T Adapter	\checkmark	✓
N8104-180	Dual Port 1000BASE-T Adapter	\checkmark	✓
N8104-181	Quad Port 1000BASE-T Adapter	\checkmark	✓
N8104-182	Dual Port 10GBASE-T Adapter	\checkmark	✓
N8104-183	Dual Port 10GBASE-T Adapter	\checkmark	✓
N8104-184	Dual Port 10GBASE-T Adapter	\checkmark	✓
N8104-185	Dual Port 10GBASE SFP+ Adapter	\checkmark	✓
N8104-186	Dual Port 10GBASE SFP+ Adapter	\checkmark	✓
N8104-187	Dual Port 25GBASE SFP28 Adapter	✓	\checkmark
N8104-193	Dual Port 1000BASE-T LOM Card	\checkmark	✓
N8104-194	Dual Port 10GBASE-SR LOM Card	✓	\checkmark
N8104-195	Dual Port 10GBASE-T LOM Card	~	✓

(4) Express5800/T120h

	T120h
N8104-178 Dual Port 1000BASE-T Adapter	\checkmark
N8104-179 Quad Port 1000BASE-T Adapter	\checkmark
N8104-180 Dual Port 1000BASE-T Adapter	\checkmark
N8104-181 Quad Port 1000BASE-T Adapter	\checkmark
N8104-182 Dual Port 10GBASE-T Adapter	\checkmark
N8104-183 Dual Port 10GBASE-T Adapter	\checkmark
N8104-184 Dual Port 10GBASE-T Adapter	\checkmark
N8104-185 Dual Port 10GBASE SFP+ Adapter	\checkmark
N8104-186 Dual Port 10GBASE SFP+ Adapter	\checkmark
N8104-187 Dual Port 25GBASE SFP28 Adapter	✓

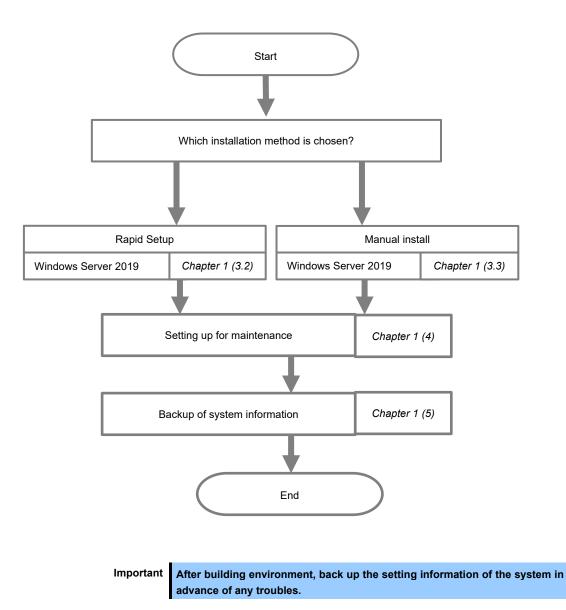
 \checkmark : Supported

(5) Express5800/R110j-1

		R110j-1
N8104-171	Quad Port 1000BASE-T LOM Card	\checkmark
N8104-172	Quad Port 1000BASE-T LOM Card	\checkmark
N8104-173	Dual Port 10GBASE-T LOM Card	\checkmark
N8104-176	Dual Port 10GBASE SFP+ LOM Card	\checkmark
N8104-178	Dual Port 1000BASE-T Adapter	\checkmark
N8104-179	Quad Port 1000BASE-T Adapter	\checkmark
N8104-180	Dual Port 1000BASE-T Adapter	\checkmark
N8104-181	Quad Port 1000BASE-T Adapter	\checkmark
N8104-182	Dual Port 10GBASE-T Adapter	\checkmark
N8104-183	Dual Port 10GBASE-T Adapter	✓
N8104-185	Dual Port 10GBASE SFP+ Adapter	✓
N8104-186	Dual Port 10GBASE SFP+ Adapter	✓

2. Flow of Windows Installation

Read a proper section to install Windows according to the following figure.



3. Installing Windows Server 2019

3.1 Precautions of Windows Server 2019 Installation

Read the precautions explained this section before installing.

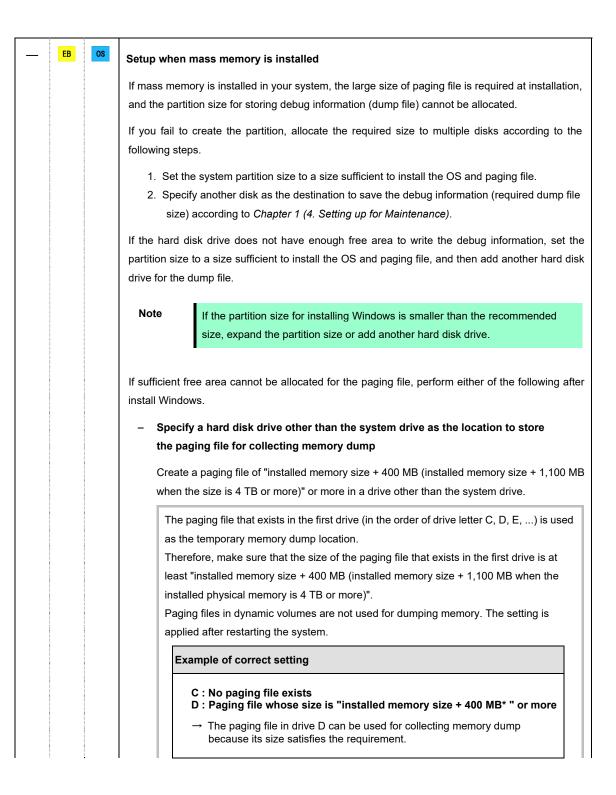


: Rapid Setup

: Manual Installation

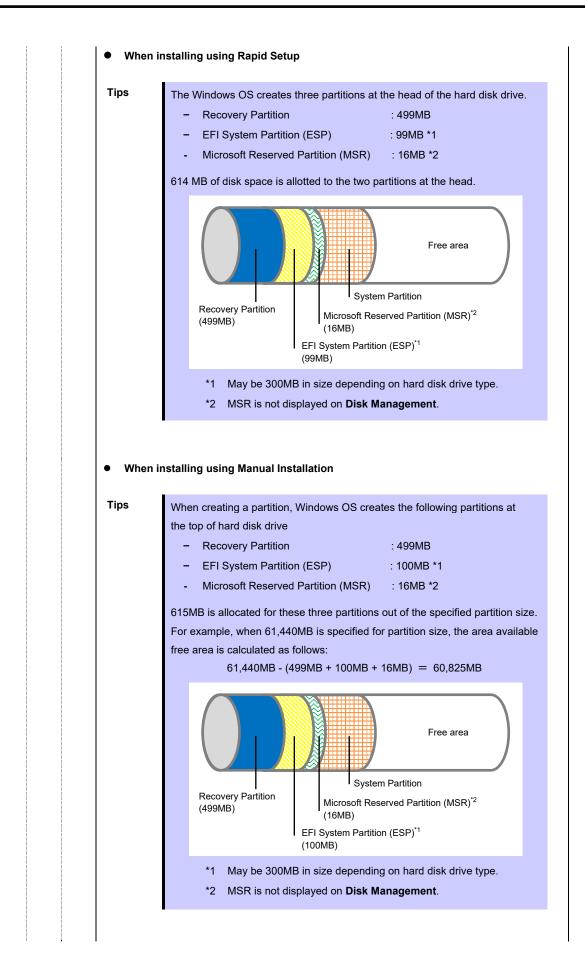
BIOS	settin	g	
	EB	08	Change Boot Mode to UEFI Mode . For details, see <i>Chapter 2 (1. System Utilities)</i> in <i>Maintenance Guide</i> .
			System Configuration > BIOS/Platform Configuration (RBSU) > Boot Options > Boot Mode > UEFI Mode
	EB	08	Select Enabled for x2APIC feature of processor. For details, see <i>Chapter 2 (1. System Utilities)</i> in <i>Maintenance Guide</i> .
			System Configuration > BIOS/Platform Configuration (RBSU) > Processor Options > Processor x2APIC Support > Enabled
	EB	08	R120h-1M, R120h-2M, R120h-1E, R120h-2E, T120h Change time zone to the Unspecified Time Zone. For details, see <i>Chapter 2 (1. System Utilities)</i> in <i>Maintenance Guide</i> .
			System Configuration > BIOS/Platform Configuration (RBSU) > Date and time > Time Zone : Unspecified Time Zone
	EB	08	R120h-1M, R120h-2M, R120h-1E, R120h-2E, T120h Change time format to the Local Time. For details, see Chapter 2 (1. System Utilities) in Maintenance Guide. System Configuration > BIOS/Platform Configuration (RBSU) > Date and time > Time Formation Solos/Platform Configuration (RBSU) > Date and time >
	EB	08	Time Format : Local Time <u>R120i-1M/R120i-2M, 120h-1M(2nd-Gen)/(3rd-Gen), R120h-2M(2nd-Gen)/(3rd-Gen), R110j-1</u> Change time format to the Coordinated Universal Time (UTC).
			For details, see Chapter 1 (1. System Utilities) in Maintenance Guide (Common). System Configuration > BIOS/Platform Configuration (RBSU) > Date and time >
			Time Format : Coordinated Universal Time (UTC)
	EB	08	R120i-1M/R120i-2M, 120h-1M(2nd-Gen)/(3rd-Gen), R120h-2M(2nd-Gen)/(3rd-Gen), R110j-1 Change time zone to the Set arbitrary time zone. For details, see <i>Chapter 1 (1. System Utilities</i>) in <i>Maintenance Guide (Common)</i> .
			System Configuration > BIOS/Platform Configuration (RBSU) > Date and time > Time Zone : Set arbitrary time zone

ЕВ	05	If your system has 64 or more logical CPU per 1 processor, set one of the following settings. For details, see <i>Chapter 1 (1. System Utilities)</i> in <i>Maintenance Guide (Common)</i> . If [Sub-NUMA Clustering] is [Disabled] System Configuration > BIOS/Platform Configuration (RBSU) > Memory Options > Virtual NUMA > [Enabled] If [Sub-NUMA Clustering] is [Enable SNC2 (2-clusters)] * System Configuration > BIOS/Platform Configuration (RBSU) > Memory Options > Virtual NUMA > [Disabled] * Sub-NUMA Clustering depends on hardware configuration. For hardware configurations where this feature is not available, set according to the case of setting [Disabled]. For details, see <i>Chapter 1 (1. System Utilities</i>) in <i>Maintenance Guide (Common)</i> .
Hardware o	config	uration
		The following hardware configurations require special procedures.
EB	OS	Installation When Multiple Logical Drives Exist If you select wrong hard disk drive in Windows Server 2019 installation, the setup may erase existing data unexpectedly. Refer to displayed disk capacity or partition size to find target hard disk drive.
EB	08	Reinstalling to a mirrored volume When you install Windows Server 2019 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	Peripherals such as RDX Remove a RDX device before installing. Some peripherals need to be halted before installation. Refer to the manual provided with the peripherals for how to set a device appropriate to installation.
ЕВ	OS	DAT, LTO, and similar media Do not set media that is unnecessary to installation during setup.
EB	OS	Reinstalling to dynamic disks If the hard disk drive has been upgraded to a dynamic disk, the Windows cannot be reinstalled to it with the existing partitions. Install Windows with Manual Installation.



	C : Paging file whose size is smaller than the installed memory size D : Paging file whose size is "installed memory size + 400 MB* " or more
	→ The paging file in drive C is used for collecting memory dump, but collection may fail because the size of the paging file is smaller than the installed memory size.
	Example of incorrect setting 2
	C : Paging file whose size is "installed memory size x 0.5" D : Paging file whose size is "installed memory size x 0.5 E : Paging file whose size is 400 MB*
	→ The total paging file size in all drives is "installed memory size + 400 MB* ", but collection may fail because only the paging file in drive C is used for collecting memory dump.
	Example of incorrect setting 3
	C : No paging file exists D : Paging file whose size is "installed memory size + 400 MB* " or more (in dynamic volume)
	→ Paging files in a dynamic volume cannot be used for collecting memory dump. Thus, collecting memory dump fails.
	* This value is installed memory size +1,100 MB when the installed memory size is 4 TB or more
р	ecify a drive other than the system drive for "Dedicated Dump File".
	Create the registry shown below by using the Registry Editor and specify the na
	Create the registry shown below by using the Registry Editor and specify the na Dedicated Dump File. <for "dedicateddumpfile.sys"="" d="" drive="" example:="" in=""></for>
))	reate the registry shown below by using the Registry Editor and specify the na edicated Dump File.
) (reate the registry shown below by using the Registry Editor and specify the na edicated Dump File. For example: "dedicateddumpfile.sys" in drive D> Key : HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl Name : DedicatedDumpFile Type : REG_SZ
	Create the registry shown below by using the Registry Editor and specify the na redicated Dump File. <for "dedicateddumpfile.sys"="" d="" drive="" example:="" in=""> Key : HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl Name : DedicatedDumpFile</for>
	<pre>wreate the registry shown below by using the Registry Editor and specify the na redicated Dump File.</pre> <pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre>Key : HKEY_LOCAL_MACHINE\SYSTEM \CurrentControlSet\Control\CrashControl Name : DedicatedDumpFile Type : REG_SZ Data : D:\dedicateddumpfile.sys</pre>
	reate the registry shown below by using the Registry Editor and specify the na edicated Dump File. For example: "dedicateddumpfile.sys" in drive D> 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:
	<pre>wreate the registry shown below by using the Registry Editor and specify the na redicated Dump File.</pre> <pre></pre> <p< td=""></p<>
Ci De	reate the registry shown below by using the Registry Editor and specify the natedicated Dump File. For example: "dedicateddumpfile.sys" in drive D> 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:
<t< td=""><td> reate the registry shown below by using the Registry Editor and specify the natedicated Dump File. For example: "dedicateddumpfile.sys" in drive D> 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: The setting is applied after restarting the system. Specify a drive that has free space of "installed memory size + 400MB (instal memory size + 1,100 MB when the installed memory size is 4 TB or more)" </td></t<>	 reate the registry shown below by using the Registry Editor and specify the natedicated Dump File. For example: "dedicateddumpfile.sys" in drive D> 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: The setting is applied after restarting the system. Specify a drive that has free space of "installed memory size + 400MB (instal memory size + 1,100 MB when the installed memory size is 4 TB or more)"
	<pre>reate the registry shown below by using the Registry Editor and specify the na edicated Dump File. For example: "dedicateddumpfile.sys" in drive D> 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: • The setting is applied after restarting the system. • Specify a drive that has free space of "installed memory size + 400MB (instal memory size + 1,100 MB when the installed memory size is 4 TB or more)" more.</pre>
Ci De	 reate the registry shown below by using the Registry Editor and specify the natedicated Dump File. For example: "dedicateddumpfile.sys" in drive D> 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: The setting is applied after restarting the system. Specify a drive that has free space of "installed memory size + 400MB (instal memory size + 1,100 MB when the installed memory size is 4 TB or more)" more. Dedicated Dump File cannot be placed in dynamic volumes.

	BOS	The system partition size can be	calculated by using the following formula.
			+ paging file size + dump file size + application size
		Desktop Experience	
		Size required to install the C	
		Paging file size (recommen	ded) = installed memory size + 400MB
		Dump file size	 installed memory size + 400MB (installed memory size is 4 TB or less) installed memory size + 1,100MB (installed memory size is exceeding 4 TB)
		Application size	= as required by the application
		Server Core	
		Size required to install the C	DS = 8,600MB
		Paging file size (recommen	· ·
		Dump file size	 installed memory size + 400MB (installed memory size is 4 TB or less)
			 installed memory size + 1,100MB (installed memory size is exceeding 4 TB)
		Application size	 as required by the application
		Ensure that the partition size is s	
		The following partition sizes are r	
		Desktop Experience Server Core *1GB = 1,024MB	: 32,768MB(32GB) or more : 32,768MB(32GB) or more
		information (du must be large e Make sure you insufficient, the inability to colle • Regardless of maximum size memory size + • When installing	ing file sizes are recommended for collecting debug mp file). The initial size of the Windows partition paging file enough to store dump files. set a sufficient paging file size. If the paging file is re will be a virtual memory shortage that may result in an ect correct debug information. the sizes of internal memory and write debug information, the of the dump file is "installed memory size + 400 MB (installed 1,100 MB when installed memory size is 4 TB or more)". I other applications or other items, add the amount of space application to the partition.
		If the partition size for installing partition size or add another hard	Windows is smaller than the recommended size, expand th disk drive.



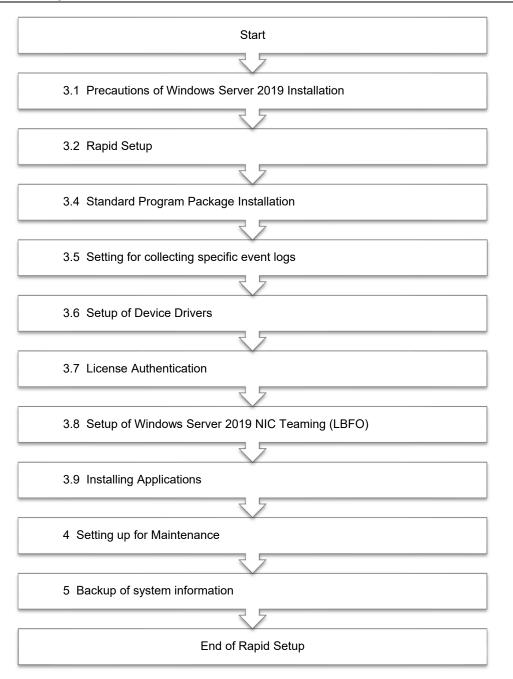
Windows Serve	r 2019 Hyper-V support		
EB 08	EB OS Refer to the following web site for information related to Windows Server 2019 Hyper-V. <u>https://www.58support.nec.co.jp/global/download/w2019/hyper-v/hyper-v-ws2019.html</u>		
Using BitLocker			
EB 0S	 If using BitLocker, note the following. Be sure to 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 Change of BIOS setting Initialization of trusted platform module (TPM) * * Depending on your system, it may not be supported. Refer to the Instruction Manuals about hardware. 		
	• To reinstall the operating system into a partition that is encrypted with BitLocker, delete the BitLocker-encrypted partition prior to reinstallation.		
Support for NIC	Support for NIC teaming in Windows Server 2019		
EB 05	The NIC teaming feature, which used to be provided by network interface card (NIC) vendors, is built into Windows Server 2019. In Windows Server 2019, this feature is also called "load balancing and failover (LBFO)". Refer to <i>Chapter 1 (3.8 Setup of Windows Server 2019 NIC Teaming (LBFO)</i> and specify any required settings.		
Installing bund	ed software		
EB OS	When you install software from Applications on Starter Pack menu, confirm each install procedure beforehand by referring to Installing Bundled Software in Installation Guide (Windows). Hardware setting may be required, be sure to confirm it.		

3.2 Rapid Setup

This section describes how to install Windows Server 2019 with Rapid Setup.

Important
Setup will delete all data of the hard disk drive.
Disconnect hard disk drives from the RAID controller that is not to be setup.

3.2.1 Setup flow



3.2.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- > Either of the following OS installation media
 - NEC operating system installation media (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation media (hereafter referred to as *Windows Server 2019 DVD-ROM*)
- Starter Pack
 - Starter Pack DVD (Optional or downloading from our website)
 - → The Starter Pack which supports Windows Server 2019 is "S8.10-010.03" or later. Download it from Web site.

3.2.3 Installation procedure

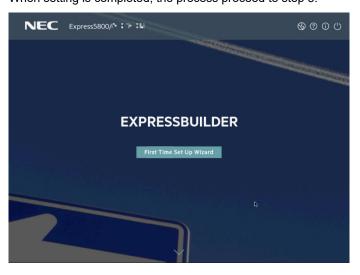
Note

Read the precautions in *Chapter 1 (3.1 Precautions of Windows Server 2019 Installation)* in advance.

- 1. Turn on peripherals (such as a display), and then turn on the server.
- 2. To run EXPRESSBUILDER, press <F10> key during POST.

Provisioning
Smart Storage Administrator
Server Hardware Diagnostics UEFI
Server Hardware Diagnostics Full Test
The highlighted entry will be executed automatically in 12s.

Only when running an OS for the first time, operating environment of EXPRESSBUILDER is set. When the following screen appears, click "First Time Set Up Wizard". When setting is completed, the process proceed to step 3.



For details of EXPRESSBUILDER and "First Time Set Up Wizard", see *Chapter 2 (3.Deltails of EXPRESSBUILDER) in Maintenance Guide*.

3. The next screen is displayed, click Rapid Setup.

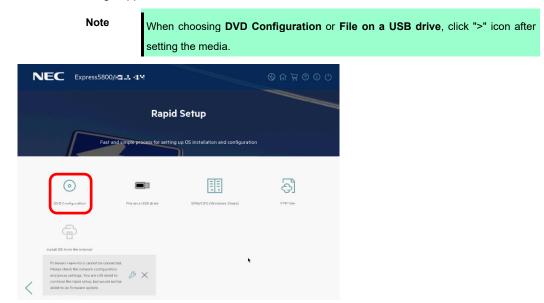
NEC Express5800/11 11	© 命 戸 © U
EXPRESSI	BUILDER
Rapid Setup	Perform Maintenance
	•

4. When the following window appears, click Skip.

proxy configuration below first if it does. Web Praxy Server *	e de		
	Web Proxy Server *		Port
	Web Proxy Server *		Port
Web Proxy Server Port	Web Proxy Server		Port
	https://		
		Skip	conne
Skip con			

5. Select **DVD Configuration**.

When the message appears in the lower left of the screen, click "×" to close it.



Choose an OS installation source from the following types.

DVD Configuration	DVD-ROM
File on a USB drive	USB flash drive
SMB/CIFS (Windows Share)	Network sharing folder
FTP Site	This option is not available.
Install OS from the internet	This option is not available.

Each media supports the following file format.

File on a USB drive	Flat, ISO
SMB/CIFS (Windows Share)	Flat, ISO

Flat: a standard folder/file structure

ISO: single ISO or UDF file

Choose an OS source media depending on the media type.

DVD Configuration	Automatically detects on OS installation media. If the detection fails, try again.	
File on a USB drive	Choose OS installation file on USB flash drive connected. Supports only a USB drive formatted with FAT or exFAT format.	
SMB/CIFS (Windows Share)	Set the network settings of network sharing that includes OS installation file, and then choose OS installation file after connecting the network sharing. • Server Name/IP Address • Share Name • Domain Name • Network Share User • Network Share Password • Confirm Password	

When you select "DVD Configuration" and connected multiple optical disk drive, next screen is displayed. Select the optical disk drive in which the OS installation media was inserted. Click **connect** of the lower right of the screen.

NEC	Express5800/	HC RL	
	of DVD Configu	ration	×
	2 DVD-ROM M	edia	
0	۲	hp_DVD-ROM_DUDDN /dev/sr0 Microsoft Windows Server ** #Standard (Desktop Experience)	<u>.</u>
DVD Confi	0	HPE DVDRW_GP70N /dev/sr1 not found	TP Site
Install OS from		€ con	nect
<			

6. Mounted RAID controller is automatically recognized. Wait until installation completes.

NEC	Express5800/I="1", -1	\$ A 7 0 0 U
RSS > Preparing Con	figuration	
Summary and Install	1	
View/Edit Details:	Preparing a recommended RAID configuration	on
	C	
	Cancel	
	*	
<		

- When the RAID system is not configured.

EXPRESSBUILDER configures RAID system automatically. RAID system configuration can be changed from "Storage controllers" setting screen of Step 7.

- When the RAID system is already configured.

EXPRESSBUILDER do not configure RAID system.

When the next screen is displayed, confirm the contents and proceed.

SS > Preparing Configuration	
Summary and Install	
view/Edit Details: OS Settings	Rapid Setup is not able to create a recommended array settings since the system found the detected RAID controller contain at least one logical drive.
Storage Controllers	inguest street
OS Volume Partitions	you can select to manually configure RAID from the Rapid Setup Dishboard.
Firmware Update	Click "Exit" If you wish to cancel the preparation and return to EXPRESSBUILDER.
	Exit
	Υ.

7. Click menu of left pane or edit button on the item you want to edit to confirm and modify details.

After completion, click Accept Configuration to start installation.

NEC Expre	ss5800/ F_1;+_1 •	\$ \$ 7 0 0 4
RSS > Summary and Install		
Summary and Install		Accept Configuration
View/Edit Details:	OS Settings 🖉	
OS Settings Storage Controllers OS Volume Partitions Firmware Update	Media Source: DVD-ROM Media Operating System: Microsoft Windows Server 🖓 *Standard (De	sktop Experience)
	Storage Controllers 🖉	
	Boot Controller: • • • • • • • • • • • • • • • • • • •	×
	OS Volume Partitions 🖉	
	Use Recommended Partition: Yes	1
<	Firmware Update 🥒	

Tips

When you configure RAID system from EXPRESSBUILDER, the system reboots automatically after clicking **Accept Configuration**. After reboot, EXPRESSBUILDER starts automatially and resumes from the next procedure. Wait a moment without any operation.

Confirm the settings and specify any required settings.

OS Setting

- On the following "Operating System", specify settings for the OS installation.
- Password can be used alphanumeric characters only.
 If a sign (such as "!") is included, an error message will appear.
- Set your time zone.
- You can enable the functions of Windows, if necessary.

Install the HyperV role on this system	The HyperV role can be Enabled.
Enable Windows Firewall	Windows Firewall can be Enabled.

Storage controller

• Choose the RAID controller of installation destination.

Tips

When you connect multiple cage of hard disk drive, a part of information of box may not be displayed. This event does not affect system operation.

Partition of the OS volume

- Specify the any partition size, and then remove the choice of **Use Recommended Partition**. Enter the partition size of Basic data partition to installation destination (Unit: MB *), or specify it with percentage. The following partitions cannot be changed.
 - Recovery
 - EFI system partition
 - Microsoft reserved partition

- When choosing **Use Recommended Partition**, the OS is installed using all area of a hard disk drive.
- Select hard disk drive (logical drive) to install OS.

Important	You can confirm name of hard disk drives (e.g.: Logical Drive 1) from
	"Storage controllers" setting screen. If you select wrong hard disk drive as OS destination drive(logical drive),
	If you select wrong hard disk drive as OS destination drive(logical drive),
	existing data may be cleared unexpectedly.
	Be careful when you select hard disk drive for installation.

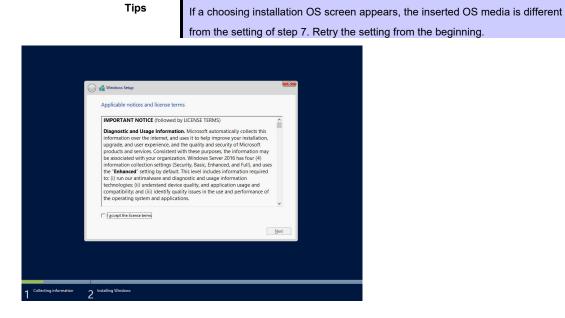
Firmware Update

- This feature is the reservations in future.
- 8. When copying is complete, the system restart automatically.

bb Viewer Server Status	×
Server Status	k
Server Status	
Server has booted	
Job Status	
© Express OS Install Copying (592KB / 20084 KB) 75.1%	× 0

9. Confirm the license terms.

Click I accept the license terms if you accept this license, and then click Next.



The following screen is displayed, and Windows installation automatically starts.

	Windows Stup
	Status Copylog Windows files (9%) Cetting life ready for installation Installing relatives Installing systems Feasibles up
1 Collecting information	2 Installing Windows

10. The following screen appears depending on the setting of Step 7.

Desktop Experience

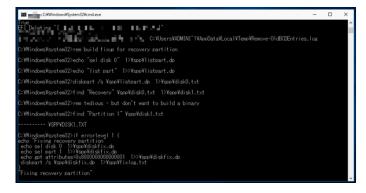
administrator account that you can	use to sign in to this computer.	

Type a password and click **Finish**.

If you entered a password in step 7, this screen is not displayed.

After signing in, installation automatically resumes.

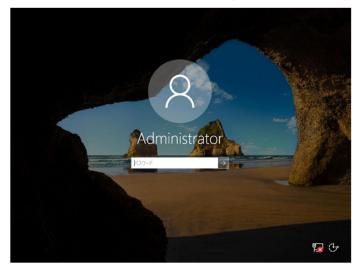
After installation is complete, the system automatically restarts.



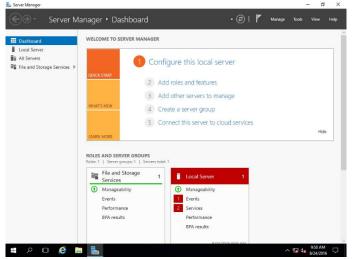
Press <Ctrl> + <Alt> + <Delete> key to unlock.



Enter the password and press <Enter> key.



Windows Server 2019 starts.

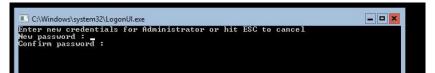


Server Core

Press <Ctrl> + <Alt> + <Delete> keys to unlock.



Type a new password and press <Enter> key.



Choose OK and press <Enter> key after the following message is displayed.

C:\Windows\system32\LogonUI.exe	×
Administrator Your password has been changed.	
Ok	

Windows Server 2019 starts.

Administrator: C:\Windows\system32\cmd.exe	
C:\Users\Administrator>	

11. After signing in, installation automatically resumes.

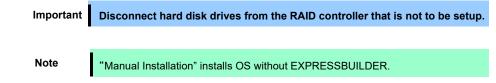
After installation is complete, the system automatically restarts.

- 12. See Chapter 1 (3.4 Standard Program Package Installation) to install SPP.
- 13. See Chapter 1 (3.5 Setting for collecting specific event log) to setup it.
- 14. Install drivers and specify detailed settings according to Chapter 1 (3.6 Setup of Device Drivers).
- 15. Confirm if Windows is activated according to Chapter 1 (3.7 License Authentication).
- 16. See Chapter 1 (3.8 Setup of Windows Server 2019 NIC Teaming (LBFO)) to setup a team as needed.
- 17. Install the applications as needed according to Chapter 1 (3.9 Installing Applications).
- 18. Set the other OS settings according to Chapter 1 (4. Setting up for Maintenance).
- 19. See Chapter 1 (5. Backup of system information) to back up the system.

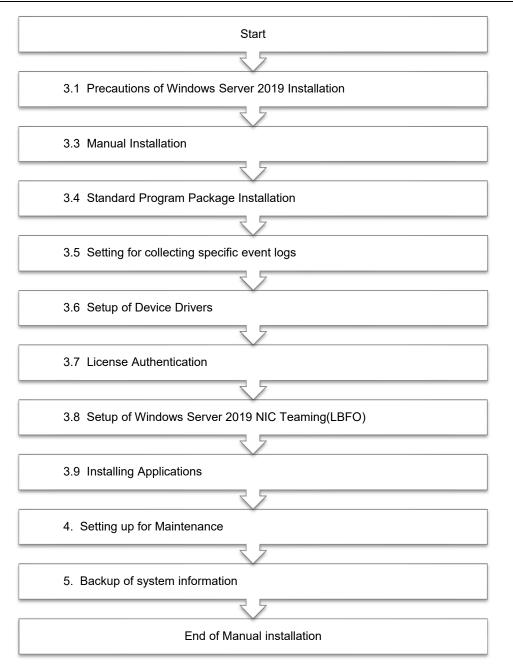
The Windows installation with Rapid Setup option is now complete.

3.3 Manual Installation

This section describes how to install Windows Server 2019 with Manual option.



3.3.1 Setup flow



3.3.2 Requirements for Setup

Prepare the following media and instruction manuals before starting setup.

- > Either of the following OS installation media
 - NEC operating system installation media (hereafter referred to as Backup DVD-ROM)
 - Microsoft operating system installation media (hereafter referred to as Windows Server 2019 DVD-ROM)
- Starter Pack
 - Starter Pack DVD (Optional or downloading from our website)
 - $\rightarrow\,$ The Starter Pack which supports Windows Server 2019 is "S8.10-010.03" or later. Download it from Web site.

Note

If using the onboard RAID controller and the internal optical disk drive, the driver is loaded from a removable media device. Copy and prepare the following files onto a removable media in advance. <Starter Pack>:\software\010\drivers\sw_raid1_driver

3.3.3 Installation procedure

Note

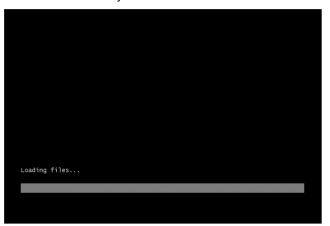
Read the precautions in *Chapter 1* (3.1 *Precautions of Windows Server 2019 Installation*) in advance.

- Turn on peripherals (such as a display), and then turn on the server. Insert OS installation media into the drive.
- 2. To run EXPRESSBUILDER, press <F11> key during POST.

On the **One-Time Boot Menu**, select the optical disk drive in which the OS installation media was inserted.

3. The system starts from the OS installation media

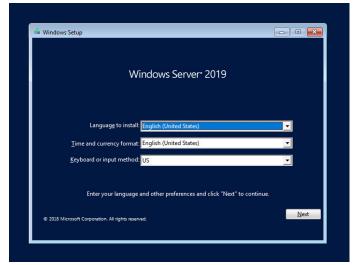
he message "Press any key to boot from CD or DVD..." is displayed on the upper of the screen. Press the <Enter> key to start from the media.



Note

If the Windows Setup screen (the screen in the next step) does not display, the <Enter> key was not properly pressed. Turn the system power on again, and then start again.

4. Click Next.



5. Click Install now.

🖆 Windows Setup		
	Windows Server* 2019	
	Install now	
<u>R</u> epair your computer © 2018 Microsoft Corporation. All		

If the following message is displayed: Go to Step 6.

If the following message is not displayed: Go to Step 8.

ad driver	
	needs is missing. This could be a DVD, USB or Hard disk or USB flash drive with the driver on it, please insert it
Note: If the installation media can safely remove it for this sto	for Windows is in the DVD drive or on a USB drive, you ep.

6. After connecting the removable media where the onboard RAID controller driver was copied, specify the path and click **OK**.

<Removable media>:\sw_raid1_driver\ws2016_ws2019

7. Select the following driver from the displayed list of drivers, and click Next.

HPE Smart Array S100i SR Gen10 SW RAID

8. Type the product key, and then click **Next**.

	🌀 🛃 Windows Setup	
	you need to enter a valid Windows prod email you received after buying a digital Windows came in. The product key looks like this: X0000->	indows on this PC (or you're installing a different edition), but key You product key aboud be in the continuation or Workson or an able inside the bounthat 0000- 00000- 00000C wit have a product key. Your copy of Windows will be
Calecting information	Privacy statement] don't have a product key Bios
	Tips	If you are using Backup DVD-ROM, this screen does not appear.

9. Choose an operating system you want to install and click Next.

G	Vindows Setup				
	Select the operating system you want to install				
	Operating system	Architecture	Date modified		
	Windows Server 2019 Standard	x64	10/29/2018		
	Windows Server 2019 Standard (Desktop Experience)	x64	10/29/2018		
	Windows Server 2019 Datacenter	×64	10/29/2018		
	Windows Server 2019 Datacenter (Desktop Experience)	x64	10/29/2018		
	Decorptions Recommended Command prompt and PowerShell, or tennelity with Window	aphical environmen vs Admin Center or	et. Manage with a other tools.	nt	

Tips

Options are displayed depending on the installation media you are using.

Read	the message of the screen, and then choose an installation option.
•	Windows Server 2019 Standard or Windows Server 2019 Datacenter
	\rightarrow Described as "Server Core" by this manual
•	Windows Server 2019 Standard (Desktop Experience) or Windows
	Server 2019 Datacenter (Desktop Experience)
	ightarrow Described as "Desktop Experience" by this manual

10. Read the license terms carefully.

If you agree, check I accept the license terms and click Next.

IMPORTANT NOTCE (followed by LICENSE TERMS) Diagnostic and Usage Information. Microsoft automatically collects this information, which may be associated with your organization, over the internet, and uses it to help improve your installation, uppraced and user experience, and the quality and security of Microsoft purpodets and services. Windows Sever has toat (4) information earlier to interms (50%) (10%)	Applicable notices and license terms	_
laccept the license terms	Diagnostic and Usage Information. Microsoft automatically collects this information, which may be associated with your organization, over the internet, and uses it to help improve your installation, upgrade, and user experience, and the quality and security of Microsoft products and services. Windows Sever has four (d) information collection settings (Security, Basic, Enhanced, and Full), and uses the "Enhanced" setting by default. The Enhanced level includes information required to: (i) run our anti-malware and diagnostic and usage information technologies (iii) understand device quality, and application usage and compatibility, and (iii) devirty quality issues in the use and performance of the operating system and applications.	1
Next	I accept the license terms	

11. Select Custom: Install Windows only (advanced).

G	🔏 Windows Setup	3
	Which type of installation do you want?	
	Upgrade: Install Windows and keep files, settings, and applications The files, settings, and applications are moved to Windows with this option. This option is only available when a supported version of Windows is already running on the computer.	
	Custom: Install Windows only (advanced) The files, settings, and applications aren't moved to Windows with this option. If you want to make changes to partitions and drives, start the compader using the installation dor. We recommend backing up your files before you continue.	
	Help me decide	

12. The "Select Windows installation location" screen is displayed.

If the driver was loaded in steps 6 and 7, or if the onboard RAID controller is not in use,

proceed to step 15. If you select Load driver here, the following screen will be displayed.

ad driver	
	r needs is missing. This could be a DVD, USB or Hard disk or USB flash drive with the driver on it, please insert it
Note: If the installation media can safely remove it for this st	for Windows is in the DVD drive or on a USB drive, you tep.
	Browse OK Cancel

- 13. After setting the Starter Pack DVD in the UBS-DVD drive, assign a file directory, and click **OK**. *<Starter Pack DVD>:*\software\010\drivers\sw_raid1_driver\ws2016_ws2019
- 14. Select the following driver from the displayed list of drivers, and click Next.

HPE Smart Array S100i SR Gen10 SW RAID

15. Click New.

₩ Ngw			
Next			
∑Qdelte ⊈Eornat	2 Litered	2 Istend	2 Istend

16. Specify the partition size in the text box, and the click **Apply**.

Nan	ne	Total size	Free space Typ	c
Iniv	e 0 Unallocated Space	100.0 GB	100.0 GB	
€≱ Befresh ⊛ Lead driv	er A Egtend	Size: 102400	¥ Ngw ■ MB Apply	<u>C</u> ancel <u>N</u> ext

When the following window appears, click **OK**.

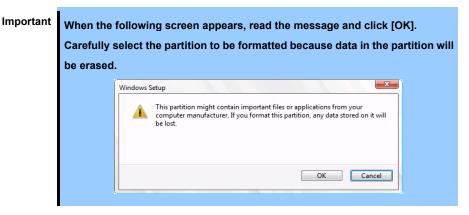
Windows S	Setup
1	To ensure that all Windows features work correctly, Windows might create additional partitions for system files.
	OK Cancel

Tips

When creating a partition, the OS creates the following partitions at top of the hard disk drive.
Recovery Partition
EFI System Partition (ESP)

- Microsoft Reserved Partition (MSR)

17. Select the partition created in step 16, and then click **Format**.



18. Select the created partition, and then click Next.

	😋 🔏 Windows Setup				×	1				
		vant to install Win	dows?							
	- P	ition 1: Recovery	Total size 499.0 MB	Free space 482.0 MB	Recovery					
	Drive 0 Part Drive 0 Part		100.0 MB 16.0 MB	95.0 MB	MSR (Reserved)					
	Drive 0 Part		99.4 GB	99.3 GB						
	4 _{9 B} efresh € Load driver	▶ Delete	✓ Format	∰ N <u>e</u> w	Next					
ing information	2 Installing Windows									
	Tips	The nu	mber of p	artitic	ns display	yed differs de	epending	on the ha	rdware co	nfigurat

If Starter Pack DVD is in the drive, change it to the OS disk, and then click Refresh.

When the following message appears, Windows installation starts automatically.

	🔏 Windows Satup
	Installing Windows Sense ✓ Cepting Windows Files Cepting Flar roady for installation (PN) Installing features Faithing up
1 Collecting information	2 Installing Windows

The server will automatically restart after Windows Server 2019 is installed.

You will proceed to Windows setup after restart.

19. Set user settings according to operating system chosen in step 9.

Desktop Experience

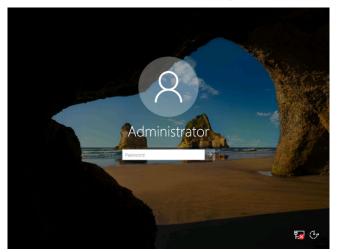
Type a password and click **Finish**.

Custonnize	e settings			
Type a password for th User name	e built-in administrator accou	nt that you can use to sign in	to this computer.	
Password	•••••			
Reenter password		^		

Press <Ctrl> + <Alt> + <Delete> keys to unlock.



Enter the password and press <Enter> key.



Windows Server 2019 starts.

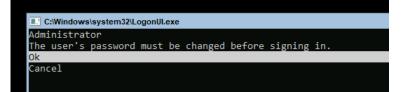
Dashboard	WELCOME TO SERVER MANAGER	
Local Server		
All Servers	📠 Server Manager	×ver
File and Storage Ser	Try managing servers with Windows Admin Center	ver
	Vindows Admin Center brings together new and familiar features in one browser- age it runs on a server or a PC, and Rene's no additional cost beyond your Vindo licenses.	ased as 3ge
	Don't show this message again	
	LEARN MORE	jid services Hide
	ROLES AND SERVER GROUPS Roles: 1 Server groups: 1 Servers total: 1	Hide
	RoLES AND SERVER GROUPS Roles 1 Server groups 1 Servers totals 1 File and Storage 1 Services 1 Services 1	Hide Inver 1
	RoLES AND SERVER GROUPS Roles: Severa groups: Severa total 1 File and Storage 1 G Manageability Manageability	Hide Inver 1
	ROLES AND SERVER GROUPS Roles 1 Servers groups 1 Servers total 1 File and Storage 1 Services 1 Manageability Events Events	Hide Inver 1
	RoLES AND SERVER GROUPS Roles: Severa groups: Severa total 1 File and Storage 1 G Manageability Manageability	Hde rver 1 bility

Server Core

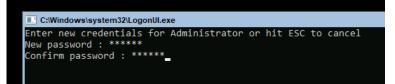
Press <Ctrl> + <Alt> + <Delete> keys to unlock.



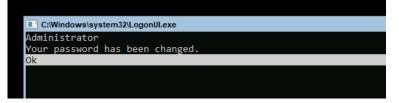
The password is needed to change. Choose OK and press <Enter> key.



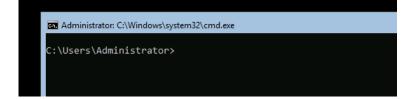
Enter a new password and press <Enter> key.



Choose OK and press <Enter> key after the following message is displayed.



Windows Server 2019 starts.



- 20. See Chapter 1 (3.4 Standard Program Package Installation) to install SPP.
- 21. See Chapter 1 (3.5 Setting for collecting specific event logs) to set it.
- 22. Install drivers and specify detailed settings according to Chapter 1 (3.6 Setup of Device Drivers).
- 23. Confirm if Windows is activated according to Chapter 1 (3.7 License Authentication).
- 24. See Chapter 1 (3.8 Setup of Windows Server 2019 NIC Teaming (LBFO)) to setup a team as needed.
- 25. Install the applications as needed according to Chapter 1 (3.9 Installing Applications).
- 26. Set the other OS settings according to Chapter 1 (4. Setting up for Maintenance).
- 27. See Chapter 1 (5. Backup of system information) to back up the system.

The Windows installation with Manual Installation is now complete.

3.4 Standard Program Package Installation

Standard Program Package (SPP) contains drivers customized for this server.

Make sure to install Standard Program Package before running the server system.

System reboot is required after applying Standard Program Package.

This program can apply using iLO remote console and iLO virtual media.

Important	 Make sure to update firmware by booting "Starter Pack DVD" before applying Standard Program Package. If you mistake procedure, the system may not start. When you use these options, refer to the following procedure to install these drivers individually from "Starter Pack DVD" before installing SPP. SPP may be stopped with error if you do not install the driver beforehand.
	When the R120h-1M / R120h-1M (2nd-Gen) / R120h-2M / R120h-2M (2nd-Gen) / R110j-1 standard LAN adapter or N8104-171/178/179 is installed to the server
	Run \packages\cp047793.exe on the DVD. Although the message indicated that the latest version has already been installed may be displayed, proceed with the installation. After that, restart the server.
	When N8103-217/219 is installed to the server
	Run \packages\cp047541.exe on the DVD. Although the message indicated that the latest version has already been installed may be displayed, proceed with the installation. After that, restart the server.
	When N8103-189/190/191/192/193/194/195/196/197/201/237/238 is installed to the server
	When the RAID controller is installed to the server, \packages\cp049387.exe on the DVD to install the driver. After that, restart the server.

3.4.1 Installing Standard Program Package on Desktop Experience

- 1. Sign-in to the Windows with an Administrators privilege.
- 2. Set the Starter Pack DVD to the drive.
- 3. Run the **start_up.bat** under the root folder on DVD.
- 4. Click Integrated Installation on the menu.

Starter Pack		NEC
	Instruction Manuals	
0	Versions	
Ŧ	Integrated Installation	
	Applications	
	Exit	
		Version S8.10-01.01(001)

5. Choose **Standard Program Package** on the following screen, and then click **Install**.

Pack		NEC			
Integrated Installation					
Install the following confusers. - Install Standard Program Package prior to installing the application. - Uninstall the application prior to reinstalling the application.					
 Standard Program Package 					
NEC ESMPRO ServerAgentService	Rev2.0	Not installed			
Express Report Service	Rev3.5E	Not installed			
		Not installed			
RAID Report Service	Rev1.00 (3459)	Not installed			
Product Info Collection Utility	Rev3.0.5	Not installed			
RESTful Interface Tool	Rev2.0.0.0	Not installed			
		Install			
	Integrated Installation Intell the following software - Iretail Standard Program Package prior to in - Uninstall the application prior to reinstalling t Standard Program Package Isoparam Package Isoparama Rec ESMPRO Server AcentService Express Report Service Express Report Service Product Info Collection Utility	Integrated Installation Install the following software. - Install Standard Program Package prior to Installing the application. - Unitable in application prior to reinstalling the application. • Standard Program Package • Standard Program Package • Standard Program Package • RevESNPRO ServerAgentService • RevEsNPRO ServerAgentService • Express Report Service (HTTPS) • Rev100 Collection Utility • Product Into Collection Utility			

 If you had updated firmware beforehand, click **OK** to start the installation of Standard Program Package.

Wait until installation completes (about 5 to 15 minutes).

		×
?	After updating the BIOS/FW of the server by booting this Starter Pack DVD, you can install the Standard Program Package(SPP) by using this feature. If you install the SPP before updating the BIOS/FW included in this DVD, the server becomes failing to boot. Are you ready to install the SPP?	
	OK Cancel	

 Note
 iLO may be reset during applying Standard Program Package.

 If iLO is reset, iLO remote console and iLO virtual media is disconnected.

 When iLO remote console and iLO virtual media is disconnected, connect again after 30 seconds or more.

7. Click OK.



Package, click **No** to continue process.

Stop running this script?

A script on this page is causing your web browser to run slowly. If it continues to run, your computer might become unresponsive.

8. Windows Server 2019 restarts automatically.

Then, remove the Starter Pack DVD.

Starter Pa	ack	×
	Click [Ok] to restart the computer. If the Starter Pack disc is inserted, click [Ok] and then remove it.	
	ОК	

SPP installation is now complete.

3.4.2 Installing Standard Program Package on Server Core

- 1. Sign-in to the Windows with an Administrators privilege.
- 2. Set the Starter Pack DVD to the drive.
- 3. From the command prompt, type the following command.

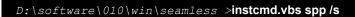
In the example below, the optical disk drive is the D drive.

cd /d D:\software\010\win\seamless

C:\Users\administrator>cd /d D:\software\010\win\seamless

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

instcmd.vbs spp /s



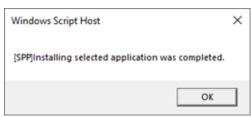
 If you had updated firmware beforehand, click **OK** to start the installation of Standard Program Package.

Wait until installation completes (about 5 to 25 minutes).

Starter Pack DVD, you Package(SPP) by using If you install the SPP b	efore updating the BIOS/FW included becomes failing to boot. I the SPP?
	OK Cancel
Note	iLO may be reset during applying Stand If iLO is reset, iLO remote console and

iLO may be reset during applying Standard Program Package. If iLO is reset, iLO remote console and iLO virtual media is disconnected. When iLO remote console and iLO virtual media is disconnected, connect again after 30 seconds or more.

6. Click OK.



7. After removing the Starter Pack DVD, restart Windows Server 2019 manually.

SPP installation is now complete.

3.5 Setting for collecting specific event logs

Note

Run following (1) or (2) method, or Apply KB4490481 or later Cumulative Update. This symptom had been repaired by Windows Server 2019 Cumulative Update. Refer to Microsoft web site "Windows 10 and Windows Server 2019 update history" for latest Cumulative Update.

(1) Desktop Experience

Sign-in to the account with an Administrators privilege for following settings.

- 1. Press <Windows logo> + <R> key to start **Run**.
- 2. Type "gpedit.msc", and then press <Enter> key. Local Group Policy Editor is displayed.
- 3. Click Computer Configuration > Administrative Templates > System on the left pane.
- 4. Right-click Enable Persistent Time Stamp on the right pane, and then click Edit.
- 5. Check Enable on Enable Persistent Time Stamp screen.
- 6. Click Apply, and then confirm the contents and click OK.

The setting is now complete. Close Local Group Policy Editor.

(2) Server Core

Sign-in with the built-in Administrators privilege to Windows Server system which can recognize the Server Core Environment that have applied SPP by above procedure, for the following settings.

- 1. Press <Windows logo> + <R> key to start Run.
- 2. Type "mmc.exe", and then press <Enter> key. Console window is displayed.
- 3. Click Add/Remove Snap-in ... of File.
- 4. Select Group Policy Object Editor, and click Add.
- 5. Click Browse... of Select Group Policy Object window, and select Another Computer.
- 6. Input IP address or computer name, and click **OK**.
- 7. Click **OK** on Add or Remove Snap-ins window.
- Click <Server Core Environment> Policy > Computer Configuration > Administrative Templates > System on the left pane of Console window.
- 9. Right-click Enable Persistent Time Stamp on the right pane, and then click Edit.
- 10. Check **Enabled** on Enable Persistent Time Stamp screen.
- 11. Click Apply, and then confirm the contents and click OK.

The setting is now complete.

Save settings as needed, and close Console window.

3.6 Setup of Device Drivers

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

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

3.6.1 Installing the LAN drivers

(1) LAN drivers

The drivers are installed by Standard Program Package.

Important	Wake On LAN (WOL) is supported by onboard network adapters and		
	N8104-171/172/173/175/193/194/195/206/207/208/213/217 only. Wake On LAN		
	is available after installing the LAN driver.		
	For Wake On LAN of R120h-1E / R120h-2E / T120h onboard network		
	adapters and N8104-172/175/193/194/195/206/208/213/217, when using Wake		
	On LAN see Chapter 1 (3.6.2 Setting up LAN drivers - (3) Setting up Wake on		
	LAN). BIOS settings, check Maintenance Guide.		
Note	 To change the LAN driver settings, sign in 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.

• Choose the Internet Protocol (TCP/IP) check box when specifying an IP

(2) Optional LAN board

This server supports the following optional LAN boards.

address.

R120i-1M R120i-2M	N8104-206/207/208/209/210/211/212/217/219	
R120h-1M R120h-1M (2nd-Gen) R120h-2M R120h-2M (2nd-Gen)	N8104-171/172/173/175/176/177/178/179/180/181/182/183/184/185/186/187	
R120h-1M (3rd-Gen) R120h-2M (3rd-Gen) N8104-172/175/178/179/180/181/182/183/184/185/186/187/213/215		
R120h-1E R120h-2E	N8104-171/172/173/175/176/177/178/179/180/181/182/183/184/185/186/187/ 193/194/195	
T120h	N8104-178/179/180/181/182/183/184/185/186/187	
R110j-1	110j-1 N8104-171/172/173/176/178/179/180/181/182/183/185/186	

If you install the LAN boards after installing Standard Program Package, install Standard Program Package again according to *Chapter 1 (3.4 Standard Program Package Installation)*.

(3) Network adapter name

_

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

- Network adapters for the standard configuration

R120h-1M R120h-1M (2nd-Gen) R120h-2M R120h-2M (2nd-Gen)	HPE Ethernet 1Gb 4-port 331i Adapter #xx(*1)
R120h-1E R120h-2E	HPE Ethernet 1Gb 2-port 368i Adapter #xx(*1)
T120h	HPE Ethernet 1Gb 4-port 369i Adapter #xx(*1)
R110j-1	HPE Ethernet 1Gb 2-port 332i Adapter #xx(*1)

If connecting with an optional LAN board:

N8104-171	HPE Ethernet 1Gb 4-port 331FLR Adapter #xx(*1)
N8104-172	HPE Ethernet 1Gb 4-port 366FLR Adapter #xx(*1)
N8104-173	HPE FlexFabric 10Gb 2-port 533FLR-T Adapter #xx(*1)
N8104-175	HPE Ethernet 10Gb 2-port 562FLR-T Adapter #xx(*1)
N8104-176	Port1 : HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter #xx(*1)
	Port2 : HPE Ethernet 10Gb 562SFP+ Adapter #xx(*1)
N8104-177	HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter #xx(*1)
N8104-178	HPE Ethernet 1Gb 2-port 332T Adapter #xx(*1)
N8104-179	HPE Ethernet 1Gb 4-port 331T Adapter #xx(*1)
N8104-180	HPE Ethernet 1Gb 2-port 361T Adapter #xx(*1)
N8104-181	HPE Ethernet 1Gb 4-port 366T Adapter #xx(*1)
N8104-182	HPE Ethernet 10Gb 2-port 530T Adapter #xx(*1)
N8104-183	HPE Ethernet 10Gb 2-port 521T Adapter #xx(*1)
N8104-184	HPE Ethernet 10Gb 2-port 562T Adapter #xx(*1)
N8104-185	HPE Ethernet 10Gb 2-port 530SFP+ Adapter #xx(*1)
N8104-186	Port1 : HPE Ethernet 10Gb 2-port 562SFP+ Adapter #xx(*1)
	Port2 : HPE Ethernet 10Gb 562SFP+ Adapter #xx(*1)
N8104-187	HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter #xx(*1)
N8104-193	HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter #xx(*1)
N8104-194	HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter #xx(*1)
N8104-195	HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter #xx(*1)
N8104-206	Intel(R) Ethernet Network Adapter I350-T4 for OCP NIC 3.0 #xx(*1)
N8104-207	Marvell FastLinQ Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter #xx(*1)
N8104-208	Intel(R) Ethernet Network Adapter E810-XXV-2 for OCP 3.0 #xx(*1)
N8104-209	Intel(R) Ethernet Server Adapter I350-T4 #xx(*1)
N8104-210	Marvell FastLinQ Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter #xx(*1)

- N8104-211 Marvell FastLinQ Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter #xx(*1)
- N8104-212 Intel(R) Ethernet Network Adapter E810-XXV-2 #xx(*1)
- N8104-213 HPE Ethernet 10Gb 2-port 535FLR-T Adapter #xx(*1)
- N8104-215 HPE Ethernet 10Gb 2-port 535T Adapter #xx(*1)
- N8104-217 Broadcom NetXtreme E-Series Dual-port 10GBASE-T Ethernet OCP 3.0 Adapter #xx(*1)
- N8104-219 Broadcom P210tep NetXtreme-E Dual-port 10GBASE-T Ethernet PCIe Adapter #xx(*1)

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

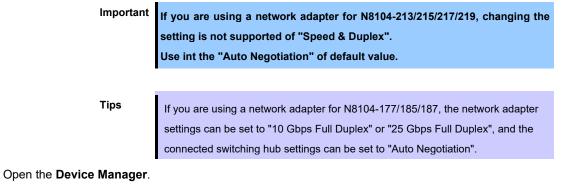
Tips	The ID for N8104-173/177/182/183/185/187/207/210/211 might be a number of two or more digits. This is due to the LAN driver specifications and not an error. This number cannot be changed.			
Tips	The network adapter name displayed in the device manager may be different from			
	the one listed above.			
	In this case, the correct network adapter name can be displayed by following the			
	procedure below.			
	1. Start Device Manager.			
	2. Open Network Adapters, right click on the relevant adapter, and select			
	Uninstall Device.			
	Do not check the Delete the driver software of this device checkbox.			
	3. Select Scan hardware change from Control.			

3.6.2 Setting up LAN drivers

(1) Setting link speed

1.

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.



2. Expand **Network Adapters**, and then double-click the name of the network adapter you want to configure.

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.

Tips

When using the N8104-177/183/187/207/210/211, Link control set to Driver controlled. *When Link control is Preboot controlled, link speed setting of BIOS take a priority.

- 4. Click OK in the Network Adapter Properties dialog box.
- 5. Restart the system.

The link speed setting is now complete.

(2) Configuring Flow Control

Flow Control is a feature to stop transmitting frames temporarily by sending a pause frame to the destination device when the receive buffer is about to run out. When it receives a pause frame, it regulates the transmission.

Configure the Flow Control following the procedure below

Tips

The settings of Flow Control of the network adapter should match those of the destination device. For example, if Flow Control in the destination device is set as Enabled, that in the network adapter should be set as Enabled. The default value of Flow Control is may become disabled, so if Flow Control in the destination device is set as Enabled, enable the network adapter.

- 1. Open the **Device Manager**.
- 2. Expand **Network Adapters**, and then double-click the name of the network adapter you want to configure.

The properties of the network adapter will be displayed.

- 3. Open Advanced tab, click Flow Control to show Value.
- 4. The Value can be changed by the down-arrow button.
- 5. Click **OK**, and then restart the system.

The Flow Control setting is now complete.

(3) Setting up Wake on LAN

- When using R120h-1E / R120h-2E / T120h onboard network adapters and N8104-172/175/193/194/195/206/208/213/217 with the server, follow the procedure below to set it.
 - 1. Open the **Device Manager**.
 - 2. Expand **Network Adapters**, and then double-click the name of the network adapter you want to configure.

The properties of the network adapter will be displayed.

3. Open **Advanced** tab, click **Enable PME** to show Value.

Tips

For N8104-213/217, set the Enable PME on shutdown value to Enabled.

- 4. Change the value to **Enabled** by the down-arrow button.
- 5. Click **OK**, and then restart the system. Setup is now complete.

- When not using Wake On LAN on the N8104-208, be sure to follow the procedure below to set it.
 - 1. Start the system.
 - 2. Press the <F9> key during the startup process to access System Utility.
 - 3. Enter the **System Configuration**, select the LAN controller to set Wake On LAN. In the case of this product, it is the following name.
 - OCP Slot 10 Port 1 : Intel(R) Ethernet Network Adapter E810-XXV-2 for OCP 3.0 xx:xx:xx:xx:xx:xx:xx
 - OCP Slot 10 Port 2 : Intel(R) Ethernet Network Adapter E810-XXV-2 for OCP 3.0 xx:xx:xx:xx:xx:xx
 - 4. Select NIC Configuration, set the Wake On LAN to Disabled.
 - 5. Select F12: Save and Exit, and select OK or Yes Save Changes.

When the Reboot button appears, press <Enter> to restart the system. Setup is now complete.

- When not using Wake On LAN on the N8104-213/217, be sure to follow the procedure below to set it.
 - 1. Start the system.
 - 2. Press the <F9> key during the startup process to access **System Utility**.
 - Enter the System Configuration, select the LAN controller to set Wake On LAN. In the case of N8104-213, it is the following name.
 - Embedded FlexibleLOM Port 1 : HPE Ethernet 10Gb 2-Port 535T Adapter xx:xx:xx:xx:xx:xx

In the case of N8104-217, it is the following name.

- OCP Slot 10 Port 1 : Broadcom NetXtreme-E 2Px10GBASE-T OCP 3.0 Ethernet xx:xx:xx:xx:xx:xx
- OCP Slot 10 Port 2 : Broadcom NetXtreme-E 2Px10GBASE-T OCP 3.0 Ethernet xx:xx:xx:xx:xx:xx
- 4. Select Device Configuration Menu, set the Enable PME Capability to Disabled.
- 5. Select F12: Save and Exit, and select OK or Yes Save Changes.

When the Reboot button appears, press <Enter> to restart the system. Setup is now complete.

3.6.3 Using Graphics Accelerator

For installation with the Rapid Setup or Manual installation, the drivers are installed by Standard Program Package.

If you install the Graphics Accelerator driver after installing Standard Program Package, install Standard Program Package again according to *Chapter 1 (3.4 Standard Program Package Installation)*.

3.6.4 Using SAS Controller (N8103-184/E184)

The driver for SAS controller N8103-184/E184 is automatically installed by Windows Plug-and-Play.

3.6.5 Using SAS Controller (N8103-197)

For installation with the Rapid Setup or Manual installation, the drivers are installed by Standard Program Package.

If you install the SAS controller (N8103-197) after installing Standard Program Package, install driver by following steps.

- 1. Insert the Starter Pack DVD into the optical disk drive.
- 2. Run the \packages\cp049387.exe on the DVD to install the driver.
- 3. After installing driver, restart the server.

3.6.6 Using RAID Controller (N8103-189/190/191/192/193/194/195/196/201/237/238)

For installation with the Rapid Setup or Manual installation, the drivers are installed by Standard Program Package.

If you install the RAID controller (N8103-189/190/191/192/193/194/195/196/201/237/238) after installing

Standard Program Package, install driver by following steps.

- 1. Insert the Starter Pack DVD into the optical disk drive.
- 2. Run the \packages\cp049387.exe on the DVD to install the driver.
- 3. After installing driver, restart the server.

3.6.7 Using 480GB SSD Adapter for OS Boot (N8103-239)

The driver for the 480GB SSD Adapter for OS Boot (N8103-239) is automatically installed by Windows Plug-and-Play.

3.6.8 Using Fibre Channel Controller (N8190-163/164/165/166/171/172)

For installation with the Rapid Setup or Manual installation, the drivers are installed by Standard Program Package.

If you install the Fibre Channel controller (N8190-163/164/165/166/171/172) after installing Standard Program Package, install Standard Program Package again according to *Chapter 1 (3.4 Standard Program Package Installation)*.

3.7 License Authentication

To use Windows Server 2019, you need finish the license authentication procedure.

Confirm if the license is authenticated or not in the next step.

Note

To activate Windows Server 2019, enter the Product Key written on the COA (Certificate of Authenticity) label. The COA label of Windows Server 2019 is attached to the operating system media package.

3.7.1 Desktop Experience

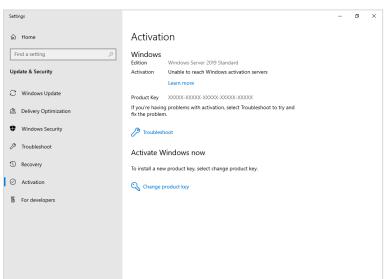
1. Right-click the lower left of the screen, and click **System** from the menu displayed.



2. Click Change product key or upgrade your edition of Windows.

Settings		-	٥	×
û Home	About			
Find a setting				
System	Windows specifications			
 □ Display 10 Sound □ Notifications & actions J Focus assist ○ Power & sleep □ Storage □ Tablet mode □ Multitasking 	Edition Windows Server 2019 Standard Version IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			
Remote Desktop About	Related settings System info			

3. Perform license authentication.



When connected to the Internet:

Click Change product key.

Complete license authentication process according to the message.

When not connected to the Internet:

Go to Step 4.

4. Perform the license authentication by phone.

Windows Server 2019 DVD-ROM:

Go to the appropriate step according to OS installation media you are using.

Backup DVD-ROM:

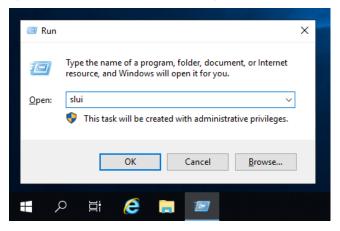
Go to Step 5.

Product key is <u>already entered</u> :	Go to Step 8.
Product key is <u>not entered</u> :	Go to Step 5.

5. Right-click the lower left of the screen, and click **Run** from the menu displayed.

Task Manager	
Setti <u>ng</u> s	
File <u>E</u> xplorer	
<u>S</u> earch	
<u>R</u> un	
Sh <u>u</u> t down or sign out	
<u>D</u> esktop	

6. Type "slui", and then press <Enter> key.



7. Change the product key. On the next screen, type the product key.

Enter a product key		
Enter a product key		
Your product key should be in an email from whoever sold or distributed Windows to you, or on the box the Windows DVD or USB came in.		
Product key		
xxxxx-xxxxxx-xxxxxx-xxxxxx		
	Next Cancel	

8. Right-click the lower left of the screen, and click **Run** from the menu displayed.

<u>T</u> ask Manager	
Setti <u>n</u> gs	
File <u>E</u> xplorer	
<u>S</u> earch	
<u>R</u> un	
Sh <u>u</u> t down or sign out	
<u>D</u> esktop	

9. Type "slui 4", and then press <Enter> key.

🖅 Run		×	
	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.		
<u>O</u> pen:	slui 4 🗸 🗸		
	This task will be created with administrative privileges.		
		_	
	OK Cancel <u>B</u> rowse		
	o e i \land 🧎 📨		
/			

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

United States	~		
		Next	Cancel

Get the installation ID required for license activation.

€	Call a	nd pr	ovide	your i	nstall	ation	ID				
	Call one of these numbers. The automated phone system will ask for your installation ID (IID). Some charges may be applied by local operators for toll-free numbers in certain countries or regions.										
	Toll free : 855-801-										
	Toll: not availa	able									
	Installati	on ID:									
	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000		
		privacy st	atement								
							Enter co	onfirmatic	n ID	Cancel]

11. Call the Microsoft license activation hotline and then tell your installation ID.

Type the confirmation ID, and then click Activate Windows.

Enter your confirmation ID The automated phone system will tell you what to enter.									
	А	В	с	D	E	F	G	н	
1									
					[Activate W	indows	Cancel]

The authentication is now complete.

3.7.2 Server Core

1. Confirm if your license is activated.

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

C:¥Users¥administrator>**slmgr-dli**

When license authentication is required, go to the next step.

When your license is already authenticated, you can skip the next and the subsequent steps.

2. Change the product key.

Using Backup DVD-ROM:

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

C:¥Users¥administrator>Slmgr -ipk <Product key on COA label>

Using Windows Server 2019 DVD-ROM:

You do not need to change the product key.

Go to the next step

3. Perform license authentication.

The server connects to the Internet:

License authentication is performed via the Internet.

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

C:¥Users¥administrator>slmgr -ato

This completes authentication.

The server does not connect to the Internet:

Use telephone for license authentication.

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

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

Acquire the installation ID required for license activation.

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

Call Microsoft Licensing Center and tell them your Install ID.

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

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

The authentication is now complete.

3.8 Setup of Windows Server 2019 NIC Teaming (LBFO)

Set up the network adapter teaming feature as shown below.

3.8.1 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 /server .", and then pressing <Enter> key.

3.8.2 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 then starts.
- 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 set			
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.

3.8.3 Removing a team

Remove a team by using the NIC teaming setup tool.

1. 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, select the team to remove.
- 3. In the Teams section, under Tasks, select Delete.
- 4. The message box to confirm appears, then click Delete team.

3.8.4 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.
- When teaming is configured in a Network Load Balancing (NLB) environment, you should select multicast mode on the NLB cluster.
- When a team is removed, the following error message may be logged in the system event log.

You can safely ignore this error message.

Level	Error
Source	Microsoft-Windows-NDIS
Event ID	10317
Task Category	PnP
Message	Miniport Microsoft Network Adapter Multiplexor Driver, {xxxxxxxx-xxxx- xxxx-xxxx-xxxxxxxxxx}, had event Network Interface deleted while PNP Device
	still exists. Note that this event is provided for informational purpose and might not
	be an error always (Eg: In case of vSwitch which was recently un-installed or a
	LBFO team was removed)

In a Windows Server Failover Cluster environment, heartbeat interruption or failover may occur if you
configure Active-Standby teaming. To avoid this, you should configure multiple NICs in Active Mode in a
team so that all the NICs do not fail simultaneously.

• In a Hyper-V environment, the following warning message may appear when a teaming adapter is bound to a virtual switch. There is no problem for the operation unless this message is output multiple times at one time.

Level	Warning
Source	Microsoft-Windows-MsLbfoSysEvtProvider
Event ID	16945
Message	MAC conflict: A port on the virtual switch has the same MAC as one of the
	underlying team members on Team Nic Microsoft Network Adapter Multiplexor
	Driver

Refer to the following website for the latest information.

https://www.58support.nec.co.jp/global/download/w2019/index.html

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

3.9 Installing Applications

Some applications included in Starter Pack can be installed easily by performing the procedures described below. When installing these applications individually, see *the manual of each applications*. This feature is **only available on Desktop Experience**.

System reboot is required after installing applications.

Tips

Application can install using iLO remote console and iLO virtual media.

This function supports clean installation of applications only. If you re-install installed application, refer to *the manual of each applications*.

- 1. Sign-in to the Windows with an Administrators privilege.
- 2. Insert the Starter Pack DVD into the optical disk drive.
- 3. Run the **start_up.bat** under the root folder on DVD.
- 4. Click Integrated Installation on the menu.

Starter Pack		NEC
	Instruction Manuals	
Í	Versions	
F	Integrated Installation	
	Applications	
	Exit	
		Version S8.10-001.01(001)

5. On the following screen, choose the check boxes corresponding to the applications you want to install, and then click **Install**. The chosen applications are automatically installed.

Starter Pack				
Starter		NEC		
	Integrated Installation			
	Install the following software. – Install Standard Program Package prior to ins – Uninstall the application prior to reinstalling t			
()	Octande di Hogrammackage O Applications VEC ESMPRO ServerAgentService	Rev2.0	Not installed	
	Express Report Service	Rev3.5E	Not installed	
	 Express Report Service (HTTPS) 	Rev3.8	Not installed	
	RAID Report Service	Rev1.00 (3459)	Not installed	
	Product Info Collection Utility	Rev3.0.5	Not installed	
	RESTful Interface Tool	Rev2.0.0.0	Not installed	
Bal			Insta	
]

Note	Applications available for installation are chosen by default.					
	• If your system environment does not satisfy the prerequisite for an application,					
	you cannot install it. For details, see the on-screen information and the manual					
	of each applications.					
	• To collect product information using a device information collection utility,					
	RESTful interface tool needs to be installed. If it is not installed, some logs					
	required for the maintenance may not be gathered.					
	• If the following message displayed during installing applications, click No					
	continue process.					
	Other muscless this excited					
	Stop running this script?					
	A script on this page is causing your web browser to run slowly.					
	If it continues to run, your computer might become unresponsive.					

- 6. When a message indicating restart appears, click **OK** to restart the server.
- 7. See *the manual of each applications* to install the bundled software or confirm that the software is appropriate to your operating environment.

Now installation of applications is complete.

4. Setting up for Maintenance

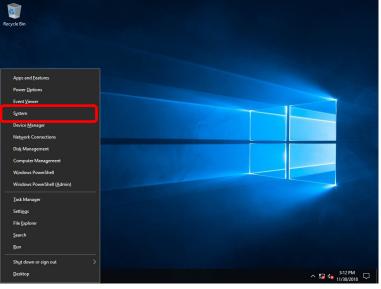
We recommend setting up the following features for maintenance.

4.1 Specifying Memory Dump Settings (Debug Information)

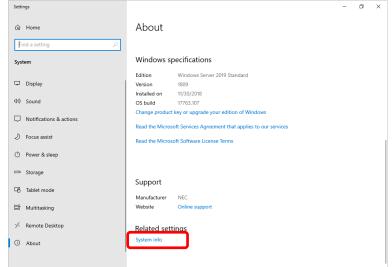
This section explains the procedures for collecting a memory dump (debug information) in the server.

ImportantWhen you restart the system to save the memory dump, a message
informing you that the system is short of virtual memory might appear.
Ignore this message and proceed with the restart. If you reset or restart the
system again, the memory dump might not be saved normally.

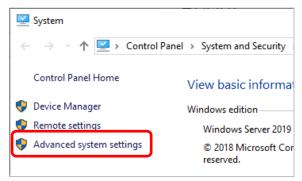
1. Right-click the left bottom of screen, and click System from the menu displayed.



2. Click System info.



3. Click Advanced system settings.



4. In Startup and Recovery, click Settings....

System Properties X
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
Enviro <u>n</u> ment Variables
OK Cancel Apply

5. Type a file name to store the debug information in the **Dump file** text box, and then click **OK**.

Startup and Recovery	×
System startup	
Default operating <u>s</u> ystem:	
Windows Server \checkmark	
∑ 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 Kernel memory dump	
Dump file:	
D:\MEMORY.DMP	
Overwrite any existing file Disable <u>a</u> utomatic deletion of memory dumps when disk space is low	
OK Cancel	

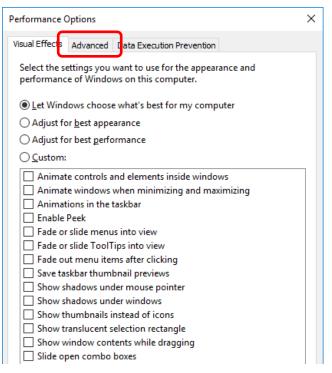
Note the following when specifying a dump file:

- We recommend specifying Kernel memory dump for Write debugging information.
- Specify a drive that has a free space of at least "the memory capacity mounted on the server 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 store the debug information (memory dump) is sufficient.

6. In Performance, click Settings.

System Properties			×
Computer Name Han	dware Advanced	Remote	
You must be logged Performance Visual effects, proc		tor to make most of the most o	
			<u>S</u> ettings
User Profiles Desktop settings re	elated to your sign-in		S <u>e</u> ttings
Startup and Recov	ery		
System startup, sys	tem failure, and deb	ugging information	
			Settings
		Environm	ent Variables
	ОК	Cancel	<u>A</u> pply

7. Click the Advanced tab on the Performance Options window.



8. In Virtual memory, click Change....

Performance (Options			×
Visual Effects	Advanced	Data Execution Preven	ntion	
Choose h		ate processor resourc	es.	
Adjust fo	r best perfo	rmance of:		
⊖ <u>P</u> rogra	○ Programs			
were RAN	file is an ar A.	ea on the hard disk th for all drives:	at Windows uses 8192 MB	

9. Clear the Automatically manage paging file size for all drives check box, and then click Custom

size.

Virtual Memory	×
Automatically manage Paging file size for each o Drive [Volume Label] C:	e paging file size for all drives drive Paging File Size (MB) System managed
Selected drive: Space available: © <u>C</u> ustom size: <u>initial size (MB)</u> : Ma <u>x</u> imum size (MB): O S <u>v</u> stem managed size O <u>N</u> o paging file	C: 366520 MB
	all drives 16 MB 1889 MB 8192 MB
	OK Cancel

10. In **Paging file size for each drive**, enter the value equal or larger than the recommended value for **Initial size**, and the value larger than **Initial size** for **Maximum size**, and then click **Set**.

Virtual Memory	Х
Automatically manac Paging file size for each Drive [Volume Label] C:	ge paging file size for all drives drive Paging File Size (MB) System managed
Selected drive: Space available:	C: 366520 MB
① <u>C</u> ustom size: <u>Initial size</u> (MB):	
Ma <u>x</u> imum size (MB):	
○ System managed siz	re Contraction of the second sec
○ <u>N</u> o paging file	<u>S</u> et
Total paging file size for	all drives
Minimum allowed:	16 MB
Recommended:	1889 MB
Currently allocated:	8192 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 (total size of physical memory + 1,100MB when the total size is 4 TB or more) is enough to store the dump file. Make sure to specify a sufficient paging file size.
- See "System Partition Size" in Chapter 1 (3.1 Precautions of Windows Server 2019 Installation) for recommended value.
- When DIMM is added, re-specify the paging file according to the increased memory size.
- If an error occurs in setting the paging file to a drive exceeding 2TB, close [Virtual memory] and [Performance Options], and then set in the following way.

ex. Setting the paging file in drive C with 4096 MB as Initial size, 8192MB as Maximum size.

- Start command prompt as Administrator and execute the following command. wmic computersystem set AutomaticManagedPagefile=false wmic pagefileset delete
- 2. Restart the Windows system.
- 3. Start command prompt as Administrator and execute the following command. wmic pagefileset create name="C:\pagefile.sys" wmic pagefileset set InitialSize=4096, MaximumSize=8192
- 4. Restart the Windows system.

11. Click OK.

If a message to restart Windows appears, restart the system according to on-screen message.

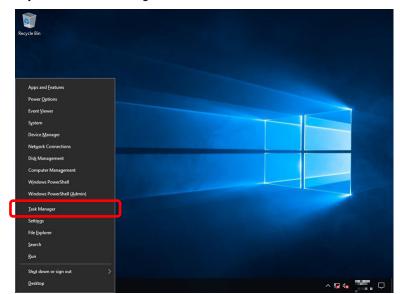
Specification of the memory dump settings is now complete.

4.2 How to Create a User-mode Process Dump File

The user-mode process dump file records information when an application error occurs.

If an application error occurs, get user-mode process dump information using the following procedures without closing the pop-up window that reported the error:

1. Right-click an empty area of the taskbar and then click **Task Manager** or press <Ctrl> + <Shift> + <Esc> keys to start Task Manager.



2. Click More details.

🕎 Task Manager	-		×
	There are no running apps		
⊘ More <u>d</u> etails		<u>E</u> nd	task

- 3. Click the **Processes** tab.
- Right-click the name of the process that you want to get dump 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

Tips	If the folder is not displayed, open Explorer, select Hidden items in the View						
	tab.						
	📙 📝 📙 🖛 Administrator	- 0	×				
	File Home Share View		-> 🕐				
	Image: Preview pane Image: Large icons □	ide selected items	Ŭ Options ▼				
	Danar Lavout Current view summide						

Get the user-mode process dump file from the folder shown in step 5.

5. Backup of system information

After environment building, back up the setting information of the system in advance of any troubles.

- Back up system settings contained in system utility.
 See User's Guide (2. Description on System Utility) for details of system utility.
- Back up detail information of iLO 5.
 See " *iLO 5 User's Guide*" for details of procedure.



NEC Express5800 Series

Maintenance

This chapter explains maintenance of server, and what actions are to be taken in case of trouble when operating this server.

1. Failure Information

Describes how to collect the failure information. See this section in case of a failure.

2. Troubleshooting

Describes how to troubleshoot the server. See this section if you suspect a failure.

3. Windows System Recovery

Describes Windows recovery setup. See this section if the Windows is corrupt.

I. Failure Information

If the server does not work normally, you can collect failure information by using the following way.

The failure information to be described is to be collected only at the request of your sales representative.

Important Do not reset during dumping memory or restarting the server even if the message of virtual memory shortage appears.

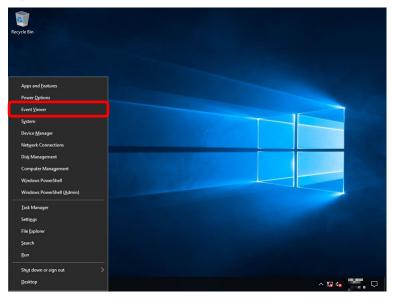
I.I Collecting Event Logs

To collect the various event logs of the server, follow the steps below.

Tips

If a STOP error, system error, or stall occurs, restart the system and then follow the steps below.

1. Right-click the left bottom of screen, and click Event Viewer from the menu displayed.



2. Select the type of log in Windows Logs.

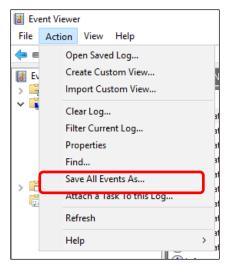
Application records events related to running applications.

Security records events related to security.

System records events that occur in Windows system components.

🛃 Event Viewer						-	٥	×
File Action View Help								
🗢 🔿 🙋 📰								
🛃 Event Viewer (Local)	Windows Logs				Actio	ins		
> 📑 Custom Views 🗸 👔 Windows Logs	Name	Туре	Number of Events	Size		lows Logs		•
Application	Application	Administrative	403	1.07 MB	<i>i</i>	Open Saved L	.og	
E Security	Security	Administrative	1,337	1.07 MB	7	Create Custo	m View	
Setup	Setup	Operational	0	68 KB	1	Import Custo	m View	
System	System Forwarded Events	Administrative	1,394	1.07 MB		View		•
> Porwarded Events > Porwarded Events > Porwarded Events		Operational	0	0 Bytes		Refresh		- ·
Subscriptions								
					?	Help		•
					Appl	ication		•
						Open		
						Properties		
					?	Help		

3. Click Save All Events As... from Action menu.



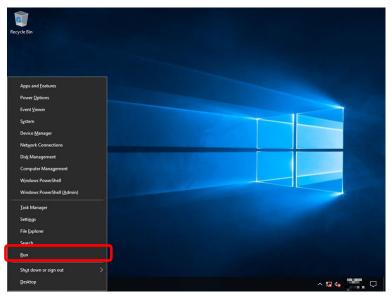
- 4. Type the file name of the archived log in **File name**.
- 5. Select the type of the log file you want to save in **Save as type**, and then click **Save**.

1.2 Collecting Configuration Information

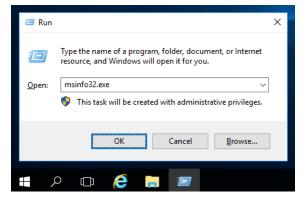
This section describes how to collect hardware information or configuration.

TipsIf a STOP error, system error, or stall occurs, restart the system and then follow
the steps below.

1. Right-click the left bottom of screen, and click **Run** from the menu displayed.



2. Type msinfo32.exe, and then press <Enter> key.



System Information starts.

- 3. Click **Export** from **File** menu.
- 4. Type a file name to save in File Name, and then Click Save.

1.3 Collecting User-Mode Process Dump

The user-mode process dump is the failure information related to application errors.

For details, see Chapter 1 (4.2 How to Create a User-Mode Process Dump File).

I.4 Collecting Memory Dump

If an error occurs, the dump file will be saved to get necessary information. You can specify any location for saving the diagnostic information. For details, see *Chapter 1 (4.1 Specifying Memory Dump Settings (Debug Information)*).

Consult with your sales representative before dumping the memory. Dumping the memory while the server is in operating normally will affect the system operation.

Important Do not reset during dumping memory or resetting the server even if the message of virtual memory shortage appears.

2. Troubleshooting

If this system does not operate as intended, check it according to the contents of your document before sending it for repair. If an item in the checklist corresponds with a problem you are experiencing, follow the processing instructions. The other contents check Maintenance Guide.

3. Windows System Recovery

Recover the Windows system by using the following instructions if the system does not work normally.

Note

- After recovering Windows, install drivers and the Starter Pack referring to Chapter 1 (3.6 Setup of Device Drivers) and Chapter1 (3.4 Standard Program Package Installation).
- If the Windows system cannot find hard disk drives, you cannot recover the Windows system.

3. I Recovery of Windows Server 2019

Note

If the Windows does not start normally, you can recover it using the feature of the Windows installation media. To run this feature, start the installation media, and then choose **Repair your computer** in the setup wizard. We recommend that this option is performed by the system administrator.

If the RAID controller driver is required, take the following steps:

When the server configures an on-board RAID controller and an internal optical
disk drive, load the driver from a removable media.
Copy the following folder from Starter Pack DVD to a removable media in
advance.
<starter pack="">:\software\010\drivers\sw_raid1_driver</starter>

- 1. After turning on the server or restarting the server, insert the OS installation media into the server.
- 2. Press <F11> key during POST to start Boot Menu.

In **One-Time Boot Menu**, select the optical disk drive to which OS installation media is set by Step 1, and then exit the menu.

 When the message "Press any key to boot from CD or DVD..." appears on the upper of the screen, press <Enter> key to boot from the media.

While boot-up proceeds, the message "Loading files..." appears.

- 4. Choose Repair your computer in the setup wizard.
- 5. Click Troubleshoot.
- 6. Click Command Prompt.

 After setting Starter Pack DVD to the drive, run the following command to load the driver: ("D:" means a drive name of DVD and this name depends on your system)

For on-board RAID controller:

drvload D:\software\010\drivers\sw_raid1_driver\ws2016_ws2019\SmartDQ.inf

Tips	•	When the server configures an on-board RAID controller and an internal
		optical disk drive, load the driver from a removable media. ("E:" means a drive
		name of removable media and this name depends on your system)
		drvload E:\sw_raid1_driver\ws2016_ws2019\SmartDQ.inf
	•	The volume label for each drive can be checked from the display result of the
		dir command.
		Example: dir C:\

8. Exit the command prompt.

The driver installation is completed.

NEC Express5800 Series



1. List of Windows Event Logs Shows a list of Windows event logs.

1. List of Windows Event Logs

ID	Source	Level	Message (Description)
U	Timing when an event is logge	d	Action

All Windows OS

"System Log"

1	VDS Basic Provider	Error	Unexpected failure. Error code : 32@01000004
	At the time of a USB Device of	onnection	When it's at the time of a USB Device connection, it's no problem.
10	Smart Update Manager System Log	Warning	The description for Event ID 10 from source Smart Update Manager System Log cannot be found. Either the component that raises this event is not installed on your local computer or the installation is corrupted. You can install or repair the component on the local computer. If the event originated on another computer, the display information had to be saved with the event. The following information was included with the event: Disabling blocked firewall rules
	When applying Standard Program Package	•	This event may be registered when Firefall is enabled, but this does not affect system operation.
11	Elxfc	Error	The driver detected a controller error on Device\RaidPortX. (X is any number)
	When applying Standard Program Package		This event does not affect system operation.
51	Cdrom	Warning	Error detected on the device \Device\CdRom0 during the paging operation.
	When installing an OS		This event may be registered in the event viewer, but this does not affect system operation.
56	Application Popup	Error	The description for Event ID 56 from source Application Popup cannot be found. Either the component that raises this event is not installed on your local computer or the installation is corrupted. You can install or repair the component on the local computer. If the event originated on another computer, the display information had to be saved with the event. The following information was included with the event: PCI XXXXXXXXXXXXXXXXXXXX The message resource is present but the message was not found in the message table. * A different number replaces X depending on the connection status of LAN controller.
	When installing an OS, starting system, or applying Starter Pack		When multiple LAN controller are loaded it is registered, but does not affect system operation.

ID	Source	Level	Message (Description)
. –	Timing when an event is logged		Action

All Windows OS "System Log"

56	Application Popup When installing an OS, startin applying Starter Pack SmartDQa	Error ng system, or Warning	information had to be saved with the event. The following information was included with the event: SCSI XXXXXXXXXXXXXXXXXXXX The message resource is present but the message was not found in the message table. * A different number replaces X depending on the connection status of RAID controller and SAS controller. When multiple RAID controller or SAS controller are loaded it is registered, but does not affect system operation. Reset was issued to the device \Device\RaidPort(x). (x is any number)
129	While the system is running		If this message has been registered as a log during heavy I/O, there is no problem since the OS has succeeded in retry. Continue using.
	SmartPqi	Warning	Reset was issued to the device \Device\RaidPort(x). (x is any number)
129	While the system is running		Even if the message is registered in the log, there is no problem because the OS has successfully completed the retry. You don't need any changes.
	Disk	Warning	Disk x is suddenly removed.
157	When creating a RAID		If you create new RAID on Windows, this event can be registered, but this does not affect the system operation.
1407	ESMCommonService	Error	This is the event which occurred between this system start-up and the last system stop or system shutdown. Date : YYYY-MM-DD hh:mm:ss Event Class : 0x11 Event Code : 0x0A Status : Critical Description : xxxxx Connectivity status changed to xxxxx for adapter in slot x, port x
	When starting system,	1	This event does not affect system operation.

ID	Source	Level	Message (Description)
U	Timing when an event is logged		Action

All Windows OS "System Log"

1407	ESMCommonService	Error	This is the event which occurred between this system start-up and the last system stop or system shutdown. Date : YYYY-MM-DD hh:mm:ss Event Class : 0x11 Event Code : 0x0C Status : Critical Description : Redundancy status changed to xxxxx by adapter in slot x, port x
	When starting system, or applying Standard Program	Package	This event does not affect system operation.
1407	ESMCommonService	Error	This is the event which occurred between this system start-up and the last system stop or system shutdown. Date : YYYY-MM-DD hh:mm:ss Event Class : 0x11 Event Code : 0x0D Status : Critical Description : All links are down in adapter xxxxx in slot x
	When starting system, or applying Standard Program Package		This event does not affect system operation.
4367	Agentless Management Service	Error	Description of Event ID 4367, IML Class Code 17, Event Code 13: All links are down in adapter xxxxx in slot xCheck the connection to the adapter and validate the connectivity from the server to any external device, including the cabling. If no problems are found, the adapter or other connectivity device may need replacement.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
4367	Agentless Management Service	Error	Description of IML Event ID 4367, Class Code 17, Event Code 12: Redundancy status changed to decreased by adapter in slot x, port xlf redundancy decreased, check the connection to the adapter and validate the connectivity from the server to any external device, including the cabling. If no problems are found, the adapter or other connectivity device may need replacement
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
4367	Agentless Management Service	Error	Description of IML Event ID 4367, Class Code 17, Event Code 10: xxxxx Connectivity status changed to Link Failure for adapter in slot x, port xlf the connection is lost, then check the physical connection from the server to its destination device such as interconnect, blade, switch etc, including any cables. Refer to the NIC issues flowchart in the Troubleshooting Guide for more information.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.

ID	Source	Level	Message (Description)
U	Timing when an event is logged		Action

All Windows OS "System Log"

7000	Service Control Manager Applying Standard Program P	Error	QLogic Fibre Channel Service service failed to start due to the following error: the system cannot find the file specified This event does not affect system operation.
37130	ESMCommonService	Error	Date : YYYY-MM-DD hh:mm:ss Event Class : 0x11 Event Code : 0x0A Status : Critical Description : xxxxx Connectivity status changed to xxxxx for adapter in slot x, port x
	When starting system, or applying Standard Program Package		This event does not affect system operation.
37132	ESMCommonService	Error	Date : YYYY-MM-DD hh:mm:ss Event Class : 0x11 Event Code : 0x0C Status : Critical Description : Redundancy status changed to xxxxx by adapter in slot x, port x
	When starting system, or applying Standard Program Package		This event does not affect system operation.
37133	ESMCommonService	Error	Date : YYYY-MM-DD hh:mm:ss Event Class : 0x11 Event Code : 0x0D Status : Critical Description : All links are down in adapter xxxxx in slot x
	When starting system, or applying Standard Program Package		This event does not affect system operation.

D	Source	Level	Message (Description)
ID	Timing when an event is logged		Action

2	bnxtnd	Warning	xxxxx #xx : The network link is down. Check to make sure the network cable is properly connected. * x is a different display name depending on the LAN board.
	When installing an OS, startin applying Standard Program Pa		This event does not affect system operation.
4	b57nd60a	Warning	Broadcom NetXtreme Gigabit Ethernet #xx: The network link is down. Check to make sure the network cable is properly connected.
4	When installing an OS, startin applying Standard Program Pa		This event does not affect system operation.
4	l2nd	Warning	xxxxx #xx : The network link is down. Check to make sure the network cable is properly connected.* x is a different display name depending on the LAN board.
	When installing an OS, startin applying Standard Program Pa	• •	This event does not affect system operation.
4	I2nd2	Warning	xxxxx #xx : The network link is down. Check to make sure the network cable is properly connected.* x is a different display name depending on the LAN board.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
4	q57nd60a	Warning	 xxxxx #xx : The network link is down. Check to make sure the network cable is properly connected. * x is a different display name depending on the LAN board.
	When installing an OS, startin applying Standard Program Pa		This event does not affect system operation.
9	bxfcoe	Warning	The SAN link is down for port WWN XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
9	qefcoe	Warning	The SAN link is down for port WWN XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:XX:
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
	bnxtnd	Error	xxxxx #xx : Firmware returned failure status. * x is a different display name depending on the LAN board.
23	About N8104-213/215/217/219 when changing the link speed the LAN cable and switchi connected, or when you resta in the state after changing applying Standard Program Pa	d setting with ing hub not rt the system the settings	This event does not affect system operation.

ID	IJ	Source	Level	Message (Description)
	D	Timing when an event is logged		Action

	bnxtnd	Warning	 xxxxx #xx : Adapter Incompatible speed selection between Port 1 and Port 2. Reported link speeds are correct and might not match Speed and Duplex setting. * x is a different display name depending on the LAN board.
26	About N8104-213/215/217/219, when changing the link speed setting with the LAN cable and switching hub not connected, or when you restart the system in the state after changing the settings applying Standard Program Package		This event does not affect system operation.
27	e1rexpress	Warning	xxxxx #xx Network link is disconnected. * x is a different display name depending on the LAN board.
	When installing an OS, startin applying Standard Program Pa		This event does not affect system operation.
27	e1iexpress	Warning	xxxxx #xx Network link is disconnected. * x is a different display name depending on the LAN board.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
27	ixgbs	Warning	xxxxx #xx Network link is disconnected. * x is a different display name depending on the LAN board.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
27	ixgbi	Warning	xxxxx #xx Network link is disconnected. * x is a different display name depending on the LAN board.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
27	i40ea	Warning	xxxxx #xx Network link is disconnected. * x is a different display name depending on the LAN board.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
27	i40eb	Warning	xxxxx #xx Network link is disconnected. * x is a different display name depending on the LAN board.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.

Source	Level	Message (Description)
Timing when an event is logged		Action

27	i40ei65	Warning	The description for Event ID 27 from source i40ei65 cannot be found. Either the component that raises this event is not installed on your local computer or the installation is corrupted. You can install or repair the component on the local computer.
	When installing an OS, startin applying Standard Program Pa		This event does not affect system operation.
27	icea	Warning	xxxxx #xx Network link is disconnected. * x is a different display name depending on the LAN board.
	When installing an OS, startin applying Standard Program Pa		This event does not affect system operation.
38	l2nd2	Warning	xxxxx #xx : NDIS-Miniport is not compatible(older or newer) with bus driver. Hence only basic L2 functionality is available. * "x" depends on the system environment.
	When installing an OS, starting applying Standard Program Pa		This event does not affect system operation.
56	qebdrv	Warning	NTPNP_PCIxxxx: RDMA has been implicitly disabled due to RDMA interface incompatibility between NDIS Miniport (ver x.xx.xx.x) and VBD (ver x.xx.x.x) drivers. VBD driver upgrade is required. * "x" depends on the system environment.
	When applying Standard Program Package		This event does not affect system operation.
57	qebdrv	Warning	NTPNP_PCIxxxx: RDMA has been implicitly disabled due to RDMA interface incompatibility between NDIS Miniport (ver x.xx.xx.x) and VBD (ver x.xx.x.x) drivers. NDIS Miniport upgrade is required. * "x" depends on the system environment.
	When applying Standard Program Package		This event does not affect system operation.
69	i40ea	Warning	HPE Ethernet xGb x-port xxxx Adapter The driver for the device detected a newer version of the NVM image than expected. Please install the most recent version of the network driver. * "x" depends on the system environment.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
69	i40eb	Warning	HPE Ethernet xGb x-port xxxx Adapter The driver for the device detected a newer version of the NVM image than expected. Please install the most recent version of the network driver. * "x" depends on the system environment.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.

	D	Source	Level	Message (Description)
ID	U	Timing when an event is logged		Action

69	i40ei65	Warning	The description for Event ID 69 from source "i40ei65" cannot be found. Either the component that raises this event is not installed on your local computer or the installation is corrupted. You can install or repair the component on the local computer.
	When installing an OS, startir applying Standard Program Pa		This event does not affect system operation.
89	icea	Error	xxxxx #xx PROBLEM: An unknown error occurred when loading the DDF package. Entering Safe Mode. ACTION: Restart the Adapter. If the problem persists, install the latest driver from "http://www.intel.com/support/go/network/adapter/home.htm". * x is a different display name depending on the LAN board.
	When installing an OS, startir applying Standard Program Pa		This event does not affect system operation.
91	icea	Error	xxxxx #xx PROBLEM: The DDP package signature is not valid and cannot be loaded. Entering Safe Mode. ACTION: Install the latest driver from "http://www.intel.com/support/go/network/adapter/home.htm. * x is a different display name depending on the LAN board.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
101	i40eb	Warning	HPE Ethernet xGb x-port xxxx Adapter PROBLEM: Flow Control disabled on this interface. For RDM/ traffic, it is recommended that flow control be enabled end to end or all network interfaces and switches to avoid performance degradation from dropped packets. ACTION: Enable link level flow control or priority flow control fo network direct port 445 on this interface. * "x" depends on the system environment.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation. After Standard Program Package is applied, this log will no longer be registered.
101	icea	Warning	Intel(R) Ethernet Network Adapter E810-XXV-2 xxxxx PROBLEM: Flow Control disabled on this interface. For RDMA traffic, it is recommended that flow control be enabled end to end or all network interfaces and switches to avoid performance degradation from dropped packets. ACTION: Enable link level flow control or priority flow control fo network direct port 445 on this interface. * "x" depends on the system environment.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation. After Standard Program Package is applied, this log will no longer be registered.

ID	Source	Level	Message (Description)
	Timing when an event is logged		Action

129	SmartDQa	Warning	Reset was issued to the device \Device\RaidPort(x). (x is any number)
125	While the system is running		If this message has been registered as a log during heavy I/O, there is no problem since the OS has succeeded in retry. Continue using.
	SmartPqi	Warning	Reset was issued to the device \Device\RaidPort(x). (x is any number)
129	While the system is running		Even if the message is registered in the log, there is no problem because the OS has successfully completed the retry. You don' need any changes.
134	Microsoft-Windows-Time- Service	Warning	NtpClient was unable to set a manual peer to use as a time source because of DNS resolution error on 'time.windows.com,0x1'. NtpClient will try again in 15 minutes and double the reattemp interval thereafter. The error was: No such host is known. (0x80072AF9)
	While the system is running	-	This event does not affect system operation if it is not recorded after connecting to the internet.
	Disk	Warning	Disk x is suddenly removed.
157	When creating a RAID		If you create new RAID on Windows, this event can be registered but this does not affect the system operation.
225	Kernel-PnP	Warning	The application YYY with process id XXX stopped the removal of ejection for the device ZZZ. * ZZZ : Instance name of the device YYY : Name of the process that was using the device XXX : ID of the process that was using the device
	When applying Standard Program Package		This event does not affect system operation.
262	icea	Error	Intel(R) Ethernet Network Adapter E810-XXV-2 xxx PROBLEM: Module is not present. Possible Solution(s): Manually set the speed/duplex or use Intel(R) Ethernet Po Configuration Tool to change the port option. If the problem persists, use a cable/module that is found in th supported modules and cables list for this device. * "x" depends on the optional LAN board environment.
	When SFP+/SFP28 module (N8104-189/ 190) or DA cable disconnected from optional LAN board (N8104-208/212).		Confirm the SFP+/SFP28 module (N8104-189/190) or DA cable.
1284	icea	Error	xxxxx #xx PROBLEM: DDP package failed. Possible Solution: Update to latest base driver and DDP package. * x is a different display name depending on the LAN board.
	When installing an OS, starting system, or applying Standard Program Package		This event does not affect system operation.
	Service Control Manager	Error	"xxxxxxx service terminated with the following error: A device attached to the system is not functioning."
7023	When running an OS for the first time		

ID	Source	Level	Message (Description)
U	Timing when an event is logged		Action

	Service Control Manager	Error	The Spooler service terminated with the following error: Ran out of memory
7023	When installing an OS		 There is no problem when it occurs at following conditions. Occurs once during OS installation, and it does not register continuously. After sign-in to the system, the service started normally.
7030	Service Control Manager	Error	The Printer Extensions and Notifications service is marked as an interactive service. However, the system is configured to not allow interactive services. This service may not function properly.
	When running an OS for the first time		This event does not affect system operation if it is recorded only on the first startup and not recorded repeatedly.
10010	Microsoft-Windows- DistributedCOM	Error	The server {XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
	While the system is running		This event does not affect system operation.
	Microsoft-Windows- WinRM	Warning	The WinRM service is not listening for WS-Management requests.
10149	When restarting an OS		There is no problem to ignore it when WinRM event 10148 (The WinRM service is not listening for WS-Management requests.) is registered after soon.

	ID	Source	Level	Message (Description)
U	U	Timing when an event is logged		Action

Windows Server 2019 "Application Event Log"

86	Microsoft-Windows-Certificate ServicesClient-CertEnroll	Error	SCEP Certificate enrollment initialization for XXXXXXXX via https://STM-Keyld-1adb994ab58be57a0cc9b900e7851e1a43c0866 0.microsoftaik.azure.net/templates/Aik/scep
	When running an OS.		This event does not affect system operation. This event may be registered on the system that TPM is installed and has no connectivity to the internet.
1015	Microsoft-Windows- Security-SPP	Error	Detailed HRESULT. Returned hr=0xC004F022, Original hr=0x******
1013	When restarting an OS		This event does not affect system operation if it is not recorded repeatedly after activating the Windows.
3007	EvntAgnt	Warning	Error opening event log file Parameters. Log will not be processed. Return code from OpenEventLog is 87.
	When SNMP is effective		Every restarting it's registered, it's no problem.
3007	EvntAgnt	Warning	Error opening event log file State. Log will not be processed. Return code from OpenEventLog is 87.
	When SNMP is effective		Every restarting it's registered, it's no problem.
8198	Microsoft-Windows- Security-SPP	Error	License Activation (slui.exe) failed with the following error code: hr=0x****** Command-line arguments: RuleId=*******************
	When restarting an OS		This event does not affect system operation if it is not recorded repeatedly after activating the Windows.

	ID	Source	Level	Message (Description)
U	U	Timing when an event is logged		Action

Windows Server 2019 "Applications and Services Logs"

	Microsoft-Windows- SMBWitnessClient	Error	Witness Client initialization failed with error (The system cannot find the file specified.)
1	When installing an OS		This event does not affect system operation if it is recorded only on the first startup and not recorded repeatedly.
69	Microsoft-Windows- AppModel-Runtime	Error	Failed with 0x490 modifying AppModel Runtime status for package ************************************
	When running an OS for the firs	time	This event does not affect system operation if it is recorded only on the first startup and not recorded repeatedly.
200	Microsoft-Windows- DeviceSetupManager	Warning	A connection to the Windows Update service could not be established.
200	While the system is running		This event does not affect system operation if it is not recorded after connecting to the internet.
004	Microsoft-Windows- DeviceSetupManager	Warning	A connection to the Windows Metadata and Internet Services (WMIS) could not be established.
201	While the system is running		This event does not affect system operation if it is not recorded after connecting to the internet.
202	Microsoft-Windows- DeviceSetupManager	Warning	The Network List Manager reports no connectivity to the internet.
202	While the system is running		This event does not affect system operation if it is not recorded after connecting to the internet.
215	AppReadiness	Error	'ART:UserFirstLogon' failed for <user>. Error:'Illegal operation attempted on a registry key that has been marked for deletion.' (0 seconds)</user>
	When installing an OS		This event does not affect system operation if it is not recorded repeatedly.
360	Microsoft-Windows-User Device Registration	Warning	Windows Hello for Business provisioning will not be launched. Device is AAD joined (AADJ or DJ++): Not Tested User has logged on with AAD credentials: No Windows Hello for Business policy is enabled: Not Tested Windows Hello for Business post-logon provisioning is enabled: Not Tested Local computer meets Windows hello for business hardware requirements: Not Tested User is not connected to the machine via Remote Desktop: Yes User certificate for on premise auth policy is enabled: Not Tested Machine is governed by none policy.
	When restarting an OS		There is no problem when it occurs at the environment that is not registered to Microsoft Azure AD.

Revision Record

Document Number	Date	Notes
CBZ-002473-274-00	May 2022	The first edition