Windows Server 2019 Installation Guide

NEC Express Server
Express5800 Series

Express5800/D120h

Chapter 1 Installing Windows

Chapter 2 Maintenance

Chapter 3 Appendix

CBZ-002473-144-00
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Notations 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 refers to the following.

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

Removable media

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

- USB flash drive
- Flash FDD

Abbreviations of Operating Systems

Windows Operating Systems are referred to as follows.

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

Notations in this document	Official names of Windows
Windows Server 2019	Windows Server 2019 Standard
	Windows Server 2019 Datacenter
Windows Server 2016	Windows Server 2016 Standard
	Windows Server 2016 Datacenter

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Keep this document for future reference.

Latest editions

This document was created based on the information available at the time of its creation. The screen images, messages and procedures are subject to change without notice. Substitute as appropriate when content has been modified.

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

https://www.nec.com/

NEC Express5800 Series
Express5800/D120h

1

Installing Windows

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

1. **Before Starting Setup**
   Describes applicable server models, installable Windows operating systems and supported upgrade methods.

2. **Installing Windows Server 2019**
   Describes how to install Windows Server 2019.

3. **Applying Starter Pack**
   Describes how to apply Starter Pack.

4. **Setting Up Device Drivers**
   Describes how to install and set up Device Drivers.

5. **Activating Windows**
   Describes how to Activating Windows to continue to use the system.

6. **Setup of Windows Server 2019 NIC Teaming (LBFO)**
   Describes how to Setup of Windows Server 2019 NIC Teaming (LBFO).

7. **Setting Up for Solving Problems**
   Describes the features that must be set up in advance so that the server can recover from any trouble early and precisely.

1. Before Starting Setup

This section lists the confirmation items for setting up the Windows operating system.

1.1 Supported Models

The following models are supported by this document.

Model Names	**Express5800/D120h**

1.2 Supported Windows OS

You can install the following editions of Windows operating system. Windows Server 2019 is 64-bit(x64) only.

Windows OS		**Boot mode**	
		UEFI	**Legacy**
Windows Server 2019	Standard	✓	N/A
	Datacenter	✓	N/A

✓: supported

1.3 Install Options

In this guide, the installation options of Windows Server 2019 are written as below.

- GUI-based installation option

  Written as “Desktop Experience” in this guide.

- CUI-based installation option

  Written as “Server Core” in this guide.

Important **“Nano Server” is not supported on Express 5800 series servers.**

1.4 Supported Mass Storage Controllers

The Starter Pack supports the following mass storage controllers.

	D120h
Controllers supported on an operating system by applying the Starter Pack	
N8103-176/176A RAID Controller (1GB, RAID 0/1)	✓
N8103-177/177A RAID Controller (1GB, RAID 0/1/5/6)	✓
N8103-178/178A RAID Controller (2GB, RAID 0/1/5/6)	✓
N8103-188 RAID Controller (RAID 0/1)	✓
Other Options	
N8103-184 SAS Controller	✓
N8190-157A Fibre Channel Controller (1ch)	✓
N8190-158A Fibre Channel Controller (2ch)	✓
N8190-161 Fibre Channel Controller (1ch)	✓
N8190-162 Fibre Channel Controller (2ch)	✓

✓: supported

1.5 Supported Optional LAN boards

The Starter Pack supports the following LAN boards.

	D120h
LAN boards **supported on an operating system by applying the Starter Pack**	
None	N/A
Other Options	
N8104-149 10GBASE Adapter (SFP+/2ch)	✓
N8104-150 1000BASE-T Adapter	✓
N8104-151 Dual Port 1000BASE-T Adapter	✓
N8104-152 Quad Port 1000BASE-T Adapter	✓
N8104-157 Dual Port 10GBASE-T Adapter	✓
N8104-158 10GBASE Adapter (SFP+/2ch)	✓
N8104-168 Quad Port 1000BASE-T Card	✓
N8104-170 Dual Port 10GBASE-SFP+ Card	✓

✓: supported

1.6 In-place Upgrade to Windows Server 2019

Performing an in-place upgrade from Windows Server 2016 to Windows Server 2019 is not recommended because this may adversely affect files and the registry.

If you want to use Windows Server 2019, please read this document (Chapter1 “2. Installing Windows Server 2019”) and back-up necessary user files prior to installation.

Tips

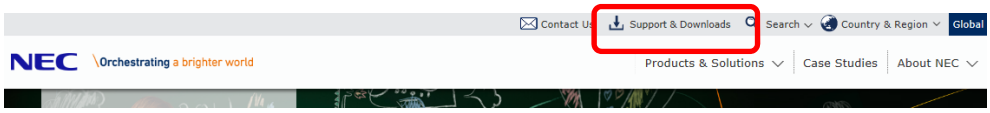
- An In-place Upgrade refers to upgrading the operating system to Windows Server 2019 by overwriting the existing operating system, Windows Server 2016, on the same server hardware.
- Performing upgrade from evaluation version to release version is not recommended since this may unexpectedly affect to system or applications.

1.7 Downloads

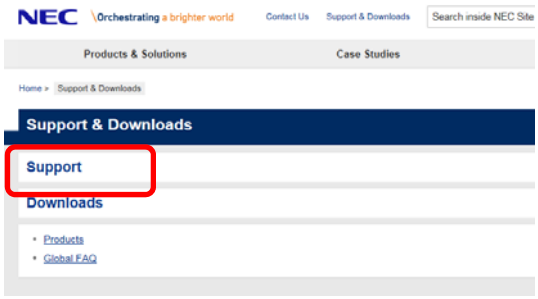
First of all, download the Starter Pack for the applicable model.

1. Downloading the Starter Pack.

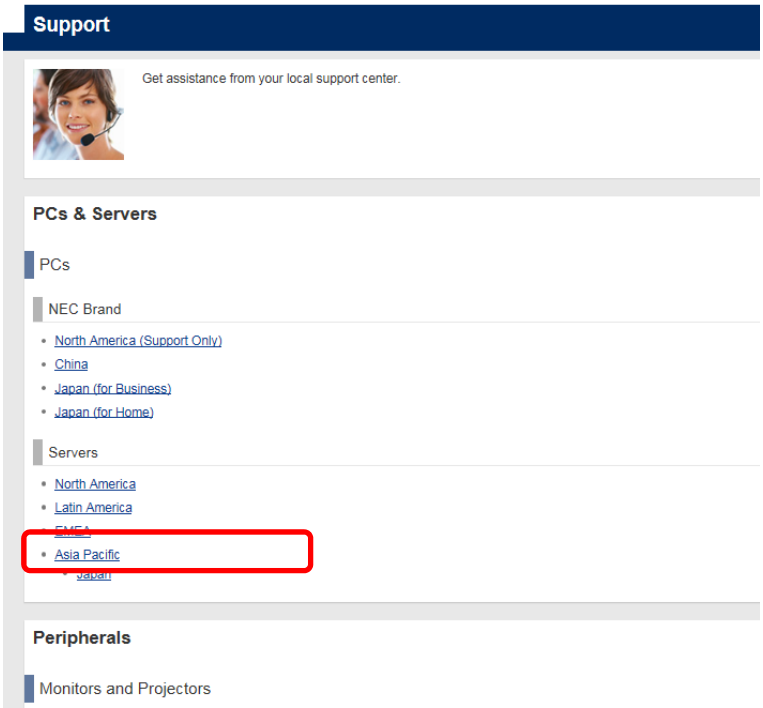
   (1) Go to NEC Corporation Web site at https://www.nec.com/.
   Click **Support & Downloads**.



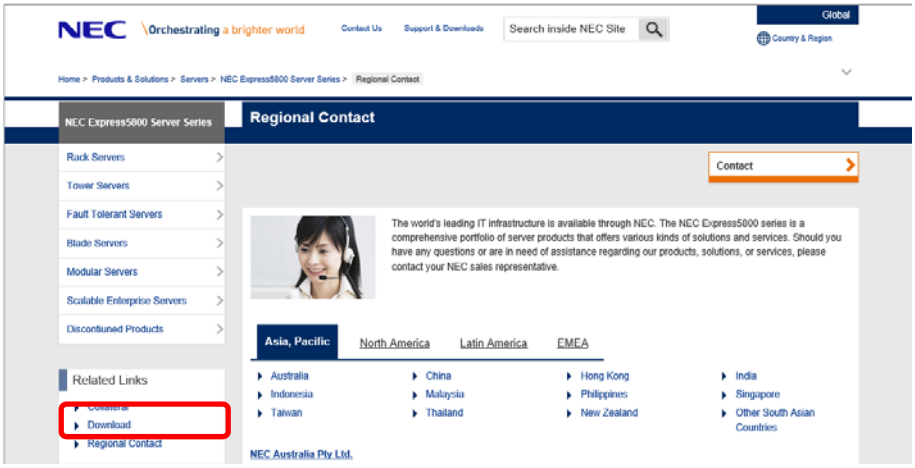
   (2) Click **Support**.



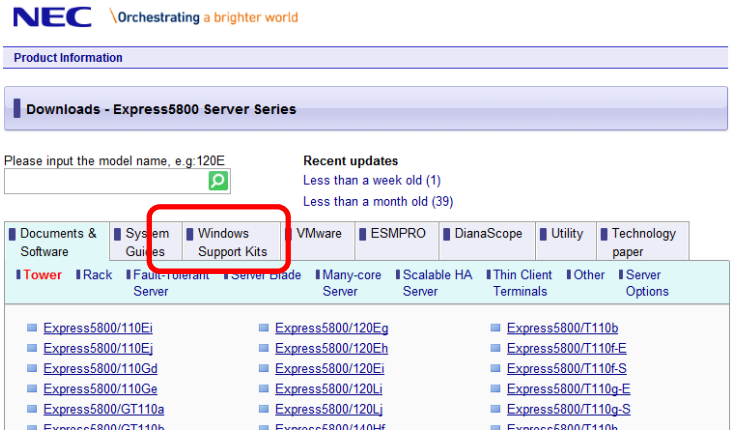
   (3) Under “PCs & Servers”, find “Servers” and click **Asia Pacific**.



(4) On “Regional Contact” page, and “Related Links” and click **Download**.



(5) On “Downloads - Express5800 Server Series” page, click Windows Support Kits tab.



(6) On “NEC Express5800 Server Series Microsoft® Windows Server® 2019 Support Kit” page, select the appropriate model name on the list of supported models.

(7) Scroll down to Windows Server 2019 Support Kit section and download the module.

2. After downloading the Starter Pack, unzip the file in any folder (e.g. C:\TEMP) on the hardware.
Folders which include double-byte characters or spaces in their names cannot be specified.

Tips

If folder hierarchy is too deep, extraction of setup programs may not be performed correctly.

If you copy the Starter Pack to an optical disk such as a DVD, copy all the files and folders without changing the structure.

Tips

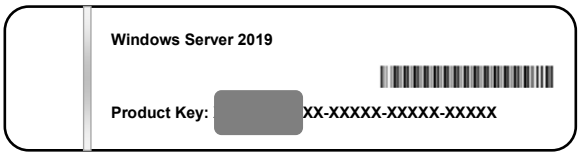
If you use a DVD, write the data in a format compatible with Windows operating system.
The DVD copying the modules is written as “Starter Pack DVD” in this guide.

3. After copying the modules, delete all the files and unzipped folders on the hardware.
Download is now complete.

2. Installing Windows Server 2019

2.1 Before Starting Setup

Before you install Windows Server 2019, read this chapter carefully.

COA label
Scrape off with a coin or the like lightly the scratch that covers a part of the product key on the Certificate of Authenticity (COA) label. When you scrape, be careful not to break the part that the product key is printed on. 
Windows Activation
To activate Windows Server 2019, enter the Product Key written on the COA label. The COA label of Windows Server 2019 is attached to the operating system media package or the server. See *Chapter 1(5. License Authentication)*, for details.
Starter Pack Application
Starter Pack installs necessary drivers to Express5800 series servers. Be sure to apply the Starter Pack.
BIOS Update
A BIOS update may be required to install Windows Server 2019. To know if a BIOS update is required, check if there are applicable modules; go to [Windows Server 2019 Support kits] (shown in [1.7 Downloads]). For the update procedure, refer to “Readme.txt” included in the downloaded data or instructions shown on the above web site when downloading the module.
BMC Firmware Updates
BMC Firmware updates may be required to install Windows Server 2019. To know if BMC Firmware updates are required, check if there are applicable modules; go to [Windows Server 2019 Support Kits] (shown in [1.7 Downloads]). For the update procedures, refer to “Readme.txt” included in the downloaded data or instructions shown on the above web site shown when downloading the modules.
BIOS setting
Change **Boot Mode** to **UEFI Mode**. See *Chapter 2 (1. System BIOS)* in *Maintenance Guide* for details. **Boot → Boot mode select → UEFI**

Hardware configuration

The following hardware configurations require special procedures.

Using RAID controller

Before you install Windows Server 2019, if using a RAID controller, build the RAID system in advance according to the User's Guide. The latest product manuals are available on NEC's corporate website (https://www.nec.com/).

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.

Reinstalling to a mirrored volume

Remove an MO device before installing an OS. Some peripheral devices need to be halted before installation. Refer to the manual provided with the peripheral devices for how to set a device appropriate to installation.

Peripheral devices such as RDX/MO

Remove an MO device before installing an OS. Some peripheral devices need to be halted before installation. Refer to the manual provided with the peripheral devices for how to set a device appropriate to installation.

DAT, LTO, and similar media

Do not set media that is unnecessary to installation during setup.

Reinstalling to hard disk drives that have been upgraded to dynamic disks

If the hard disk drive has been upgraded to a dynamic disk, the operating system cannot be reinstalled to it with the existing partitions.

Set up the operating system with the Windows standard installer.

Setup when mass memory is installed

If mass memory is installed in your system, the large size of paging file is required at installation. Thus, the partition size for storing debug information (dump file) may not be secured.
If you fail to secure the dump file size, allocate the required file space to multiple disks by performing the following steps.

1. Set the system partition size to a size sufficient to install the OS and paging file.
2. Specify another disk as the destination to store the debug information (required dump file size) by referring to *Chapter 1 (7. Setup for Solving Problems)*.

If the hard disk drive does not have enough space to write the debug information, set the partition size to a size sufficient to install the OS and paging file, and then add another hard disk drive for the dump file.

Note If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.

If sufficient space cannot be secured for the paging file, perform either of the following after installing Windows.

— **Specify a hard disk drive other than the system drive as the location to store the paging file for collecting memory dump**

Create a paging file of the installed memory size + 400 MB or more in a drive other than the system drive.

The paging file that exists in the first drive (in the order of drive letter C, D, E, ...) is used as the temporary memory dump location. Therefore, the size of the paging file must be "installed memory size + 400 MB" or more. Paging files in dynamic volumes are not used for dumping memory. The setting is applied after restarting the system.

Example of correct setting
C: No paging file exists **D: Paging file whose size is "installed memory size + 400 MB" or more** → The paging file in drive D can be used for collecting memory dump because its size satisfies the requirement.

Example of incorrect setting 1
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 × 0.5" **D: Paging file whose size is "installed memory size × 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.

— **Specify a drive other than the system drive for "Dedicated Dump File".**

Create the registry shown below by using the Registry Editor and specify the name of Dedicated Dump File.

<When specifying the file named "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:

- Pay strict attention to edit the registry.
- The setting is applied after restarting the system.
- Specify a drive that has free space of "installed memory size + 400 MB" or more.
- Dedicated Dump File cannot be placed in dynamic volumes.
- Dedicated Dump File is only used for collecting memory dump, and is not used as virtual memory. Specify the paging file size so that sufficient virtual memory can be allocated in the entire system.

System partition size

The system partition size can be calculated by using the following formula.

Size required to install the OS + paging file size + dump file size + application size

Desktop Experience

Size required to install the OS	= 12,400MB
Paging file size (recommended)	= installed memory size + 400MB
Dump file size	= installed memory size + 400MB
Application size	= as required by the application

Server Core

Size required to install the OS	= 8,600MB
Paging file size (recommended)	= installed memory size + 400MB
Dump file size	= installed memory size + 400MB
Application size	= as required by the application

For example, if the installed memory size is 2GB(2,048MB), application size is 100MB, the partition size is calculated as follows:

12,400MB ＋ (2,048MB + 400MB) ＋ 2,048MB ＋ 400MB ＋ 100MB

＝ 17,396 MB

The above mentioned partition size is the minimum partition size required for system installation. Ensure that the partition size is sufficient for system operations.

The following partition sizes are recommended.

Desktop Experience : **32,768MB(32GB) or more**

Server Core : **32,768MB(32GB) or more**

*1GB = 1,024MB

Note

- The above paging file sizes are recommended for collecting debug information (dump file). The initial size of the Windows partition paging file must be large enough to store dump files.
  Make sure you set a sufficient paging file size. If the paging file is insufficient, there will be a virtual memory shortage that may result in an inability to collect correct debug information.
- Regardless of the sizes of internal memory and write debug information, the maximum size of the dump file is "size of internal memory + 400 MB".
- When installing other applications or other items, add the amount of space needed by the application to the partition.

If the partition size for installing Windows is smaller than the recommended size, expand the partition size or add another hard disk drive.

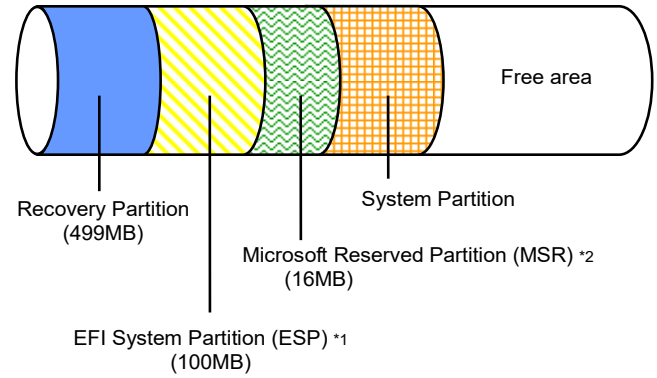
Tips

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

- Recovery Partition: 499MB
- EFI System Partition (ESP): 100MB *1
- Microsoft Reserved Partition (MSR): 16MB *2

615MB is allocated for these three partitions out of the specified partition size.
For example, when 61,440MB is specified for partition size, the area available free area is calculated as follows:

61,440MB – (499MB + 100MB + 16MB) = 60,825MB



*1 May be 300MB in size depending on hard disk drive type.

*2 MSR is not displayed on **Disk Management**.

Windows Server 2019 Hyper-V support

Refer to the following web site for information related to Windows Server 2019 Hyper-V.
http://www.58support.nec.co.jp/global/download/w2019/hyper-v/hyper-v-ws2019.html

Using BitLocker

If using BitLocker, note the following.

- Be sure to keep the recovery password secure. Do not keep it near a server running BitLocker.

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) ***

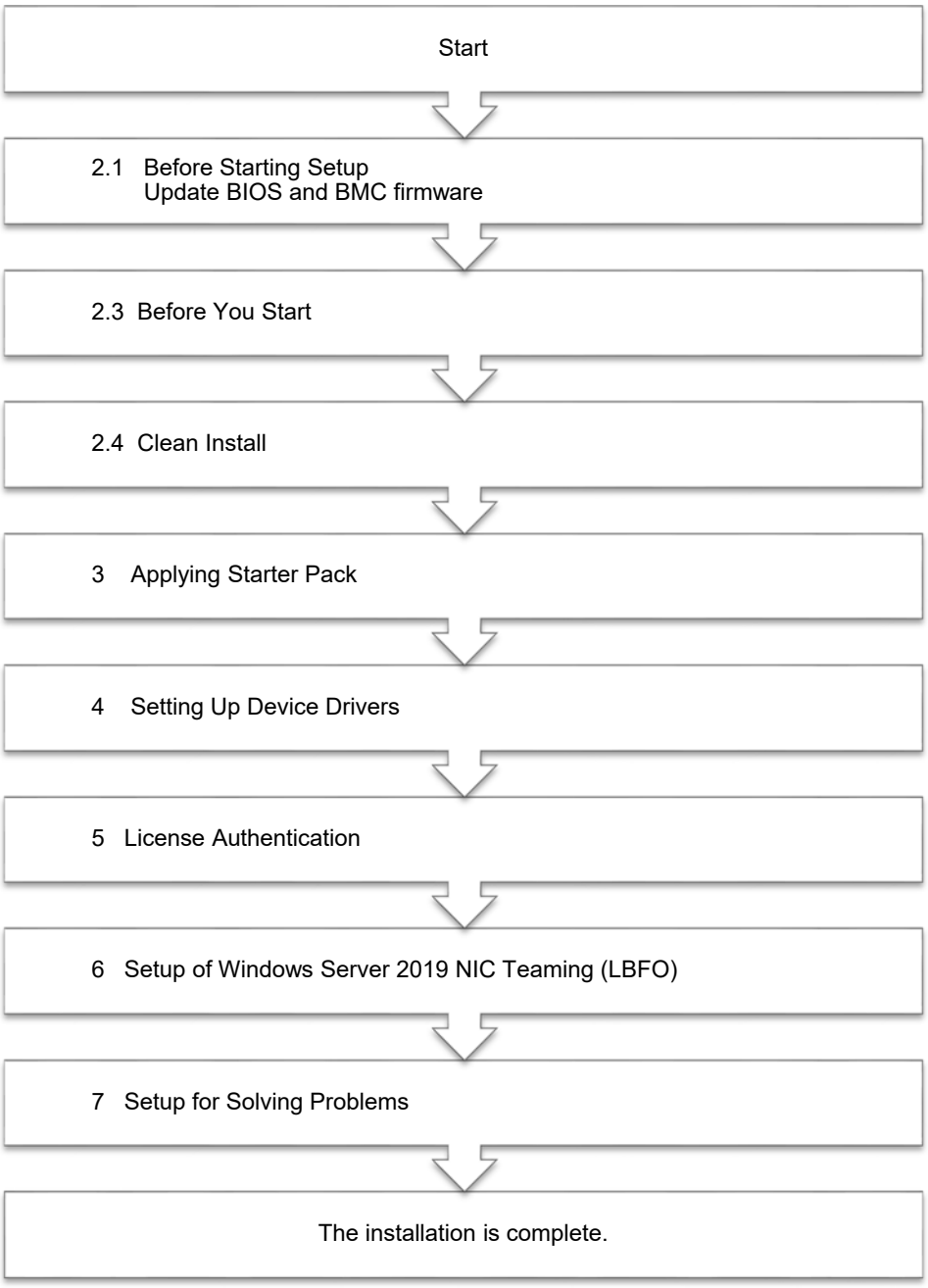
*** Depending on your system, it may not be supported. Refer to the document about hardware.**

- To reinstall the operating system into a partition that is encrypted with BitLocker, delete the BitLocker-encrypted partition prior to reinstallation.

Support for NIC teaming in Windows Server 2019

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 Chapter 1 (6. Setup of Windows Server 2019 NIC Teaming (LBFO)) and specify any required settings.

2.2 Setting Up the Operating System



If you need to install applications after installing the operating system, refer to the application installation guides.

2.3 Before You Start

Before you install Windows Server 2019, check the BIOS settings and hard disk environment (disk array configuration, etc.) of your server referring to a product manual (users' guide, etc.). The latest product manuals are available on NEC's corporate website (https://www.nec.com/).

2.3.1 Preparation for Operating System Installation

Prepare the following media and instruction manuals before starting setup.

Items to necessary to prepare

- ☐ **OS installation media** *need to purchase one of the following.
  - **Microsoft operating system installation media** (hereafter referred to as *Windows Server 2019 DVD-ROM*)
  - **NEC operating system installation media** (hereafter referred to as *Backup DVD-ROM*)
- ☐ **Starter Pack for Windows Server 2019**

Module Name	WS2019.10-002.0x.zip * A different number replaces x. Apply the latest module.

Tips For the details about the Starter Pack, see Chapter 1(*1.7 Downloads*) section.
For copying the Starter Pack, prepare an optical disk.

Important **After installing Windows Server 2019, do not apply EXPRESSBUILDER or Starter Packs for Windows Server 2016 that we provide on our website. Starter Pack for Windows Server 2016 is not available on Windows Server 2019. Be sure to apply Starter Pack for Windows Server 2019 that suitable to purchased system.**

- ☐ **Windows Server 2019 Installation Guide** (this document)

2.4 Clean Install

This section shows the steps to clean install Windows Server 2019.

Note that existing old version of Windows will be deleted.

1. Turn on your display and server in that order.

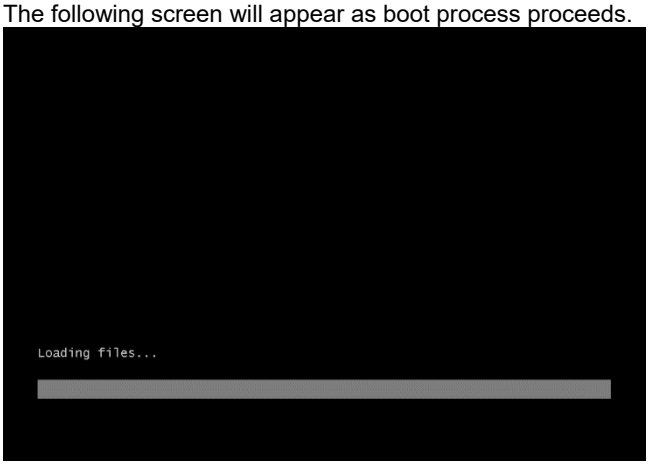
Important **Update the BIOS as needed referring to "BIOS Update" in "*Chapter 1 (2.1 Before Starting Setup)*.**

2. Boot from a backup DVD or Windows Server 2019 DVD-ROM.

   The message "Press any key to boot from CD or DVD…" is displayed on the top of the screen.

   Press <Enter> key to start the system from the installation media.

   The following screen will appear as boot process proceeds.

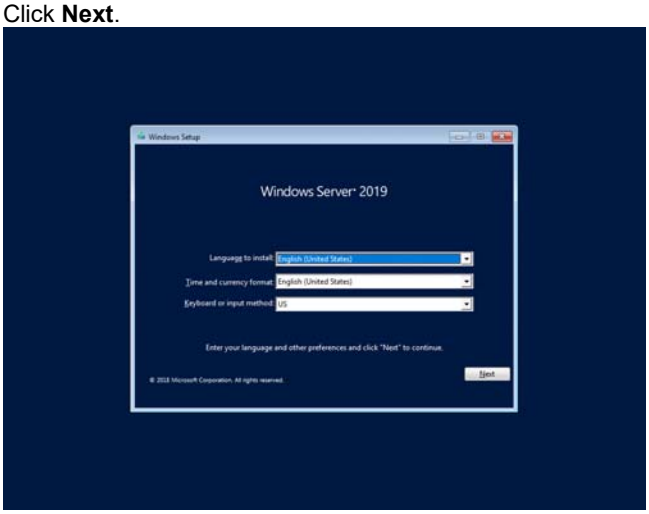


3. If you are using a backup DVD, the following screen will appear. Choose the Language you use.

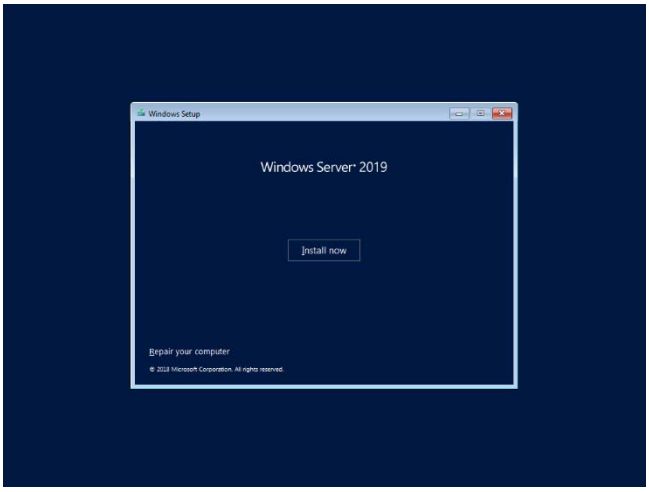
   In case that "Windows Setup" window does not appear, <Enter> key was not pressed correctly in Step 2.

   Reboot the server and go back to Step 2.

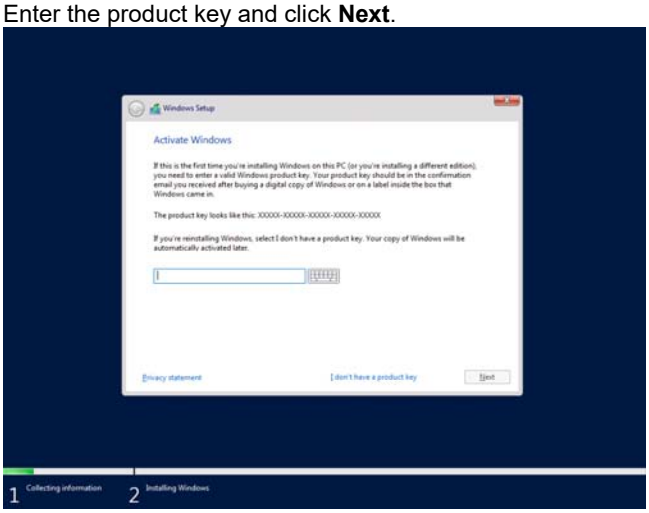
4. Click **Next**.



5. Click **Install now**.

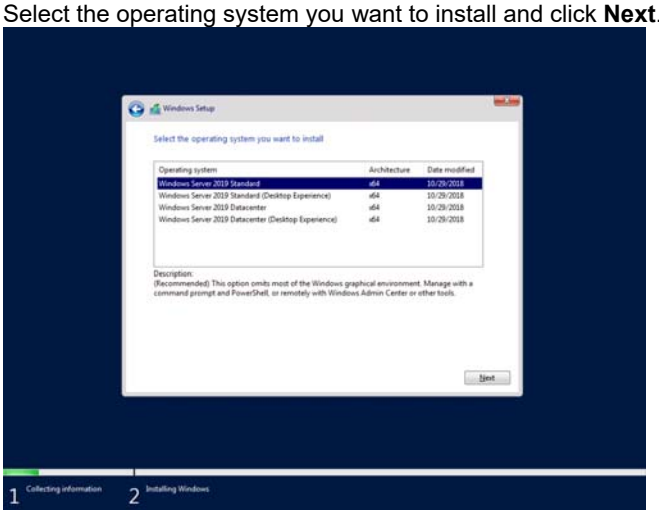


6. Enter the product key and click **Next**.



Tips If you are using a backup DVD-ROM, this screen does not appear.

7. Select the operating system you want to install and click **Next**.



The options listed on the screen vary depending on the installation media you are using.

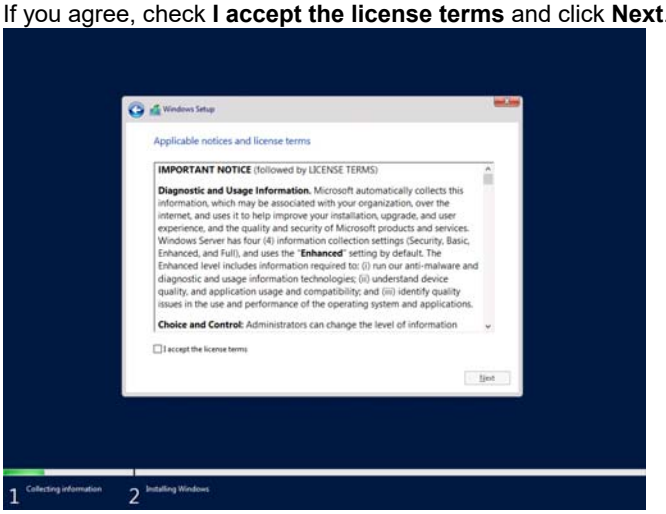
Tips

Read the description on the screen and choose an installation option.

- Windows Server 2019 Standard or Windows Server 2019 Datacenter
  → correspond to “Server Core” in this guide
- Windows Server 2019 Standard (Desktop Experience) or Windows Server 2019 Datacenter (Desktop Experience)
  → correspond to “Desktop Experience” in this guide.

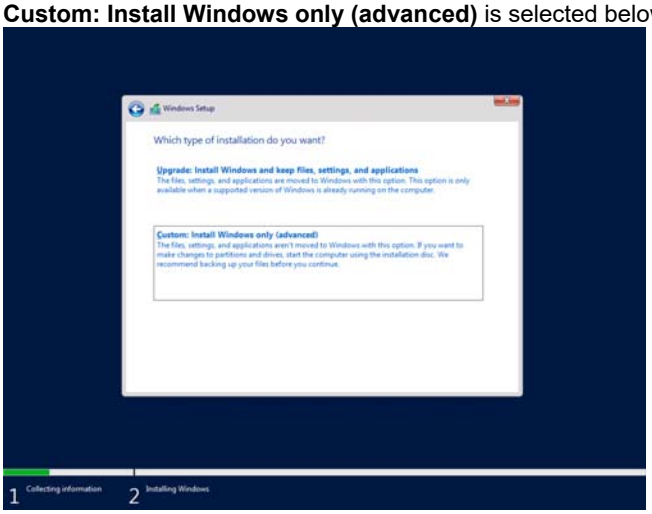
8. Read the license terms carefully.

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



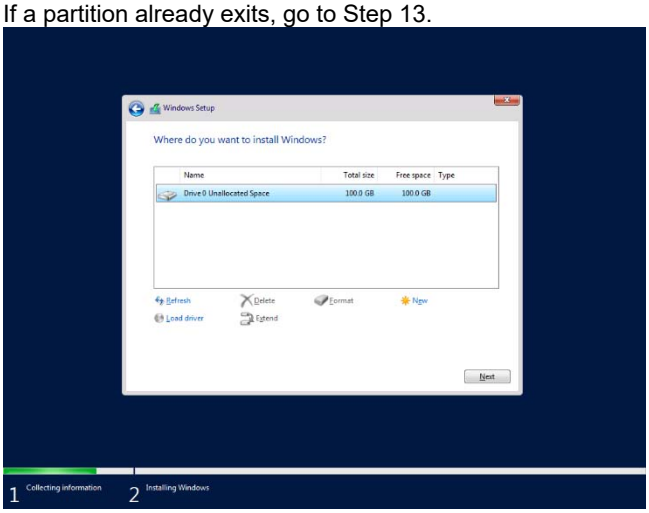
9. Select the type of installation you want.

   Custom: Install Windows only (advanced) is selected below.



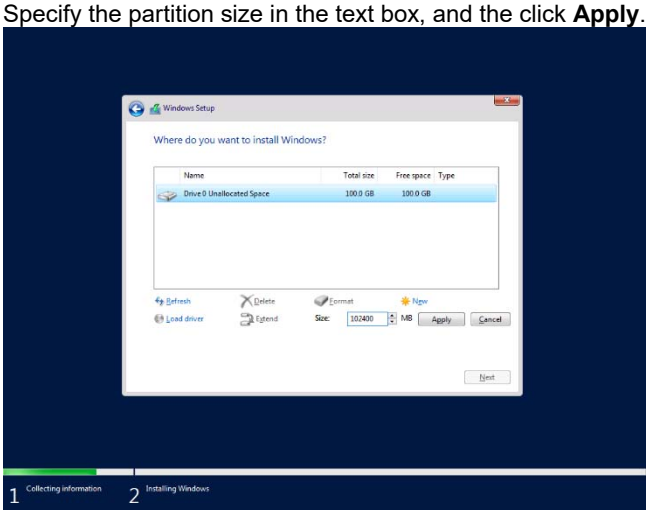
10. Click **New**.

    If a partition already exits, go to Step 13.

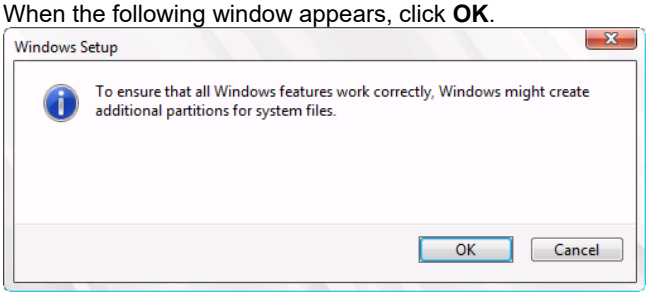


Tips It **NEW** is not displayed on the screen, click **Drive Options (advanced)**.

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



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



Tips

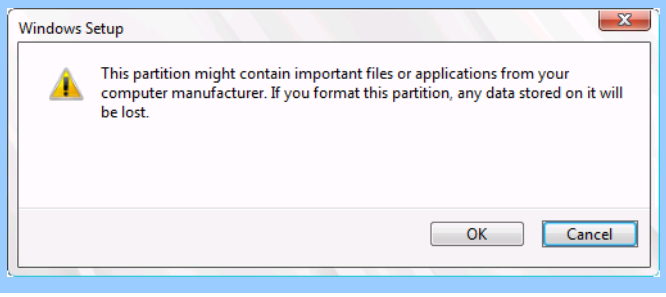
When you initially create a partition, the following three partitions are automatically created at the beginning of the hard disk.

- Recovery Partition
- EFI System Partition (ESP)
- Microsoft Reserved Partition (MSR)

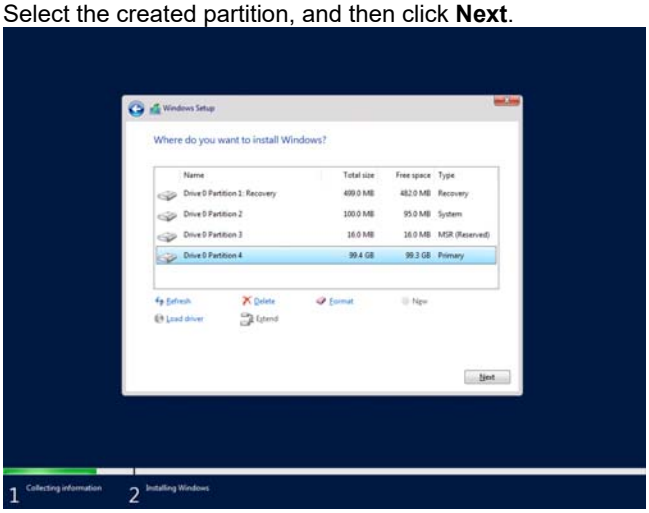
12. Select the partition created in step 11, and then click **Format**.

Important

If the following window appears, read the message carefully and click [OK]. Be careful to choose a partition to format because the data stored on the partition will be cleared.



13. Select the created partition, and then click **Next**.

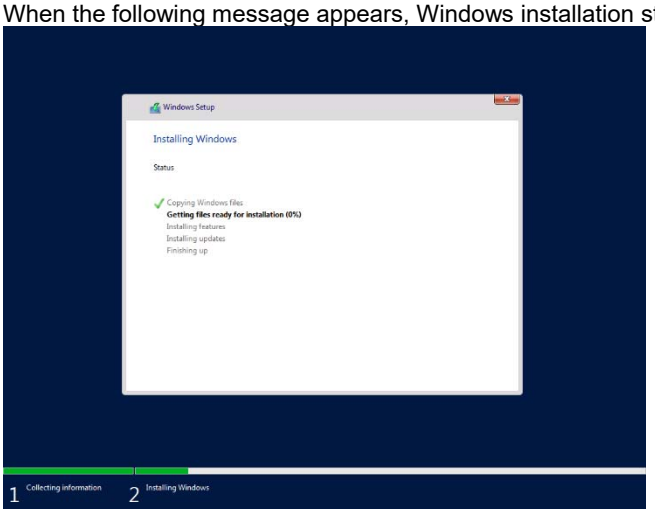


Tips

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

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.



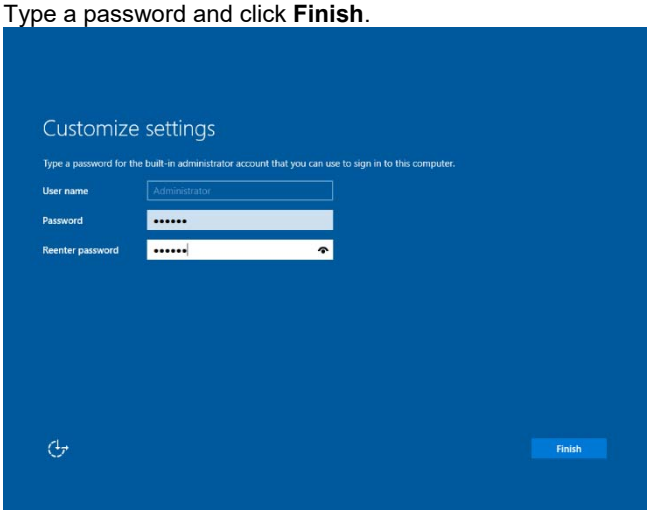
When the installation is done, the system will automatically restart.

After the system restart, continued the Windows Setup.

14. Set according to operating system selected in Step 7.

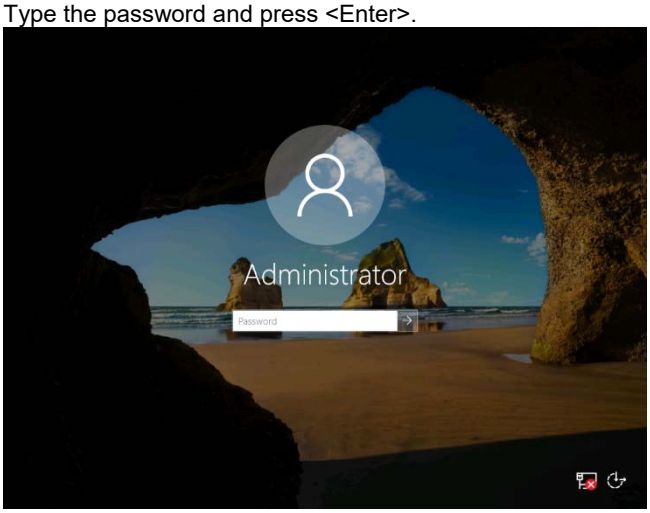
Desktop Experience

Type a password and click **Finish**.

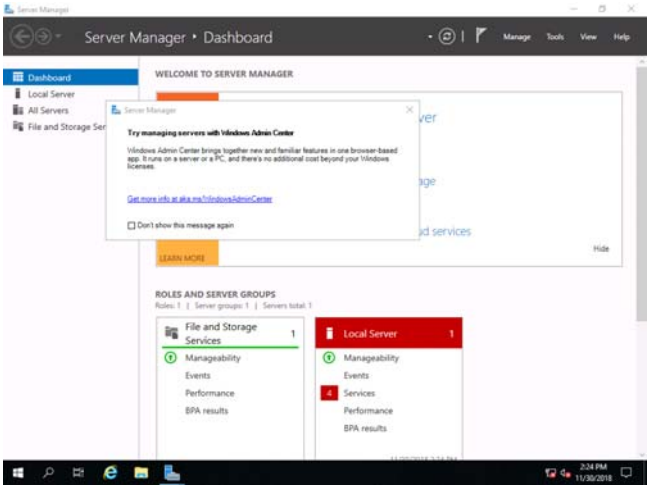


Press <Ctrl> + <Alt> + <Delete> to unlock.

Type the password and press <Enter>.

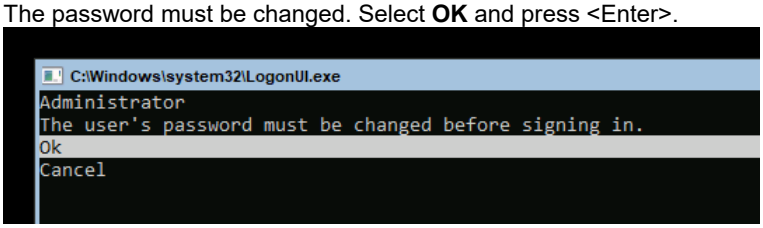


Windows Server 2019 starts.

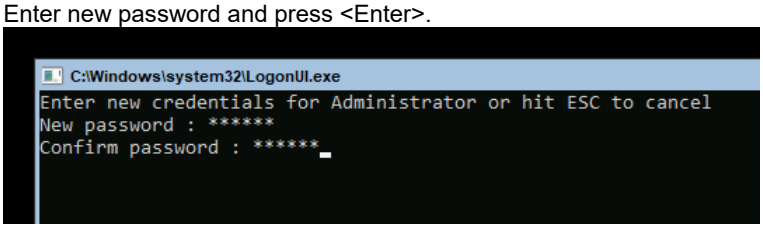


Server Core

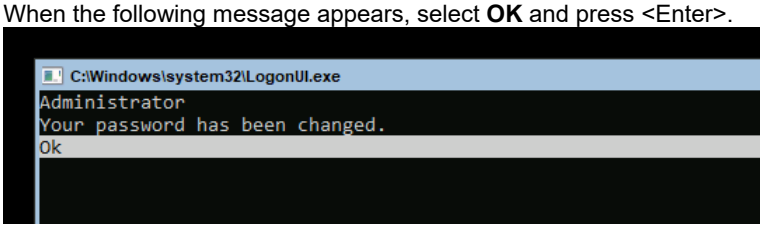
The password must be changed. Select **OK** and press <Enter>.



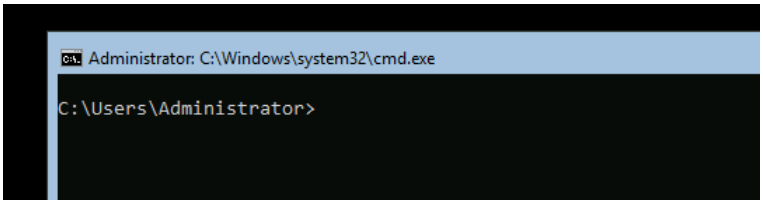
Enter new password and press <Enter>.



When the following message appears, select **OK** and press <Enter>.



Windows Server 2019 starts.



15. Apply the Starter Pack referring to *Chapter 1 (3. Applying Starter Pack)*.
16. Install and set up the drivers referring to *Chapter 1 (4. Setting Up Device Drivers)*.
17. Confirm if the Windows is activated referring to *Chapter 1 (5. License Authentication)*.
18. Set up the NIC Teaming as needed referring to *Chapter 1 (6. Setup of Windows Server 2019 NIC Teaming (LBFO))*.
19. Set up features referring to *Chapter 1 (7. Setup for Solving Problems)*.

After the OS installation is completed, install applications as needed referring to the installation guide of each product.

Setup is now completed.

3. Applying Starter Pack

The Starter Pack contains drivers customized for the Express5800 Series.
Before starting to use the system, apply the necessary modules for Windows Server 2019(Starter Pack) dedicated for the model of your server. A Starter Pack for other server models cannot be used.
If you have not downloaded the Starter Pack, *Go to Chapter 1(1.7 Downloads).*

Important

Also install Starter Pack in the following cases.

- **The motherboard of the server has been replaced**
  (If a dialog box prompting you to reboot the system is displayed, reboot the system according to the on-screen instructions, and then apply the Starter Pack.)
- **If the system was restored using a restore process**

1. Sign-in to Windows installed to the system using an account with administrative rights.
   If you use the Starter Pack copied on a DVD, place the media into the disk drive.
2. Click “Run,” or type the following path in the command prompt and press <Enter>.
   Wail for a while (1 to 3 minutes) until the screen in Step3 appears.

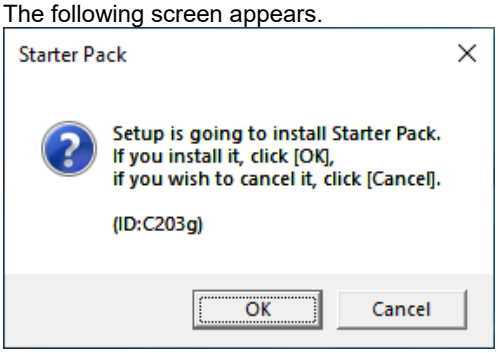
   <drive letter>:**\<*destination folder*>\winnt\bin\pkgsetup.vbs**

Tips

A path which includes double-byte characters or the space character cannot be used here.
For example, if the Starter Pack is placed in *temp* folder in *D* drive, type the following path and press <Enter>.

D:**\temp\winnt\bin\pkgsetup.vbs**

3. The following screen appears.

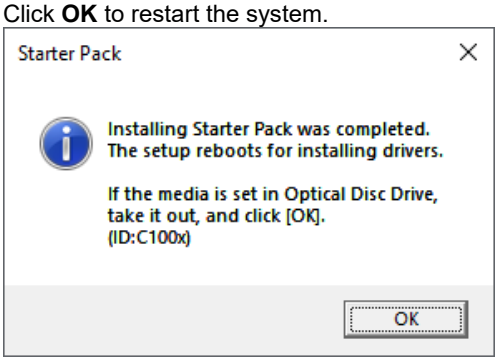


Wait until the installation of the Starter Pack is complete. (About 2 to 5 minutes)

Note

The screen may black out instantaneously or resolution may change while Starter Pack is installed, but it is not a failure.

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



Installation of Starter Pack is now complete.
Next, for the following settings.

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.

Server Core

Sign-in with the built-in Administrators privilege to Windows Server system which can recognize the Server Core Environment, 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.
(8) 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.

4. Setting Up Device Drivers

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

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

4.1 Installing the LAN drivers

4.1.1 LAN drivers

LAN drivers are installed by applying the Starter Pack.

Important

Wake On LAN (WOL) is supported by the standard network adapters only.
For Wake On LAN, refer to Chapter 1(4.2.5 Setting up Wake on LAN).
For BIOS settings, check the "User's 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.
- Be sure to select the Internet Protocol (TCP/IP) check box when specifying an IP address.

4.1.2 Optional LAN board

This server supports the following optional LAN boards.

N8104-149/150/151/152/157/158/168/170

If you additionally attach the controller N8104-157/158/168 to the target server, the corresponding LAN driver is automatically installed by Windows Plug-and-Play feature.

When you additionally attach the controller N8104-149/150/151/152/170 to the target server, the corresponding LAN driver is automatically installed by Windows Plug-and-Play feature if you have attached the same controller in advance.

If not, the driver is not installed.

In that case, install the LAN drivers by the following steps.

N8104-149/170

Note When **QLogic Driver Installer** is shown to **Programs and Features**, this step is unnecessary.

1. Open command prompt, and execute the following file.
   <drive letter>:\<***destination folder***>\winnt\drivers\02_network\1_as_06\install_ws2019.bat
2. When the following message appears, restart the system.

   QLOGIC Driver Installation Completed!

3. When LAN board is new addition, setting each LAN board by referring to *Chapter 1(4.2 Setting up LAN drivers)*.

Setup is now completed.

N8104-150/151/152

Note When **Broadcom Gigabit IntegratedController** is shown to **Programs and Features**, this step is unnecessary.

1. Open command prompt, and execute the following file.
   <drive letter>:\<***destination folder***>\winnt\drivers\02_network\1_ah_05\install_ws2019.bat
2. When the following message appears, restart the system.

   BCOM Driver Installation Completed!

3. When LAN board is new addition, setting each LAN board by referring to *Chapter 1(4.2 Setting up LAN drivers)*.

Setup is now completed.

4.1.3 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

Intel(R) Ethernet Controller X550 #xx *

If connecting with an optional LAN board:

[N8104-149/170]	QLogic BCM57810 10 Gigabit Ethernet (NDIS VBD Client) #xx *
[N8104-150/151/152]	Broadcom NetXtreme Gigabit Ethernet #xx *
[N8104-157]	Intel(R) Ethernet Controller X550 #xx *
[N8104-158]	Intel(R) Ethernet Converged Network Adapter X710 #xx *
	Intel(R) Ethernet Converged Network Adapter X710-2 #xx *
[N8104-168]	Intel(R) I350 Gigabit Network Connection #xx *

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

4.2 Setting up LAN drivers

4.2.1 Setting link speed

The transfer rate and duplex mode of the network adapter must be the same as those of the switching hub.

Follow the procedure below to specify the transfer rate and duplex mode.

Tips

When using N8104-149/170, you can specify "10 Gb Full" for network adapter and "Auto Negotiation" to switching hub.

1. Open the **Device Manager**.
2. Expand **Network adapters**, and then double-click the name of the network adapter you want to 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.
4. Click **OK**.
5. Restart the system.

Setup is now completed.

4.2.2 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 Transmit/Receive of the network adapter should match those of the destination device. For example, if Flow Control in the destination device is set as Receive only, that in the server should be set as Transmit only.

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 and click **Flow Control** to show **Value**.
4. The **Value** can be configures by the down-arrow button.
5. Click **OK**.
6. Restart the system.

Setup is now completed.

4.2.3 When using N8104-150/151/152

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

Note This procedure can be used when you replace a motherboard.

1. Execute the following file.

   <drive letter>:\<***destination folder***>\winnt\drivers\02_network\1_ah_05\pgdyavd_disable.vbs

2. When the following message appears, click OK.

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

   Tips The message “Action:Non” indicates that the LAN driver is already set.

3. Restart the system.

Setup is now completed.

4.2.4 When using N8104-168

When using N8104-168 with the server, follow the procedure below to set it.

1. Open command prompt, and execute the following file.

   <drive letter>:\<***destination folder***>\winnt\drivers\02_network\1_ag_07\e1rexpress.bat

2. When the following message appears, restart the system.

   ```
   Update Complete.
   ```

Setup is now completed.

4.2.5 Setting up Wake on LAN

Using Wake on LAN by standard network adapters, 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.
4. Change the value to **Enabled** by the down-arrow button.
5. Click **OK**, and restart the system.

Setup is now completed.

4.3 Graphics accelerator driver

Standard graphics accelerator driver is installed automatically at the time of OS installation.

To install drivers separately, take the following steps.

1. Double-click the install.bat icon in the following folder.
   *<drive letter>:***<destination folder>\winnt\drivers\03_graphics\1_aj_10\install.bat**
2. Restart the system.

Graphic accelerator driver installation is now complete.

When uninstalling the driver, please follow the next procedure.

1. "Uninstall a program" is started from a Control Panel.
2. "Windows Driver Package - ASPEED (ASTGRP) Dislay..." is chosen from a list and it's carried out.
3. Restart the system.

Graphic accelerator driver Uninstallation is now complete.

4.4 Using a SAS controller (N8103-184)

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

4.5 Using RAID Controller (N8103-176/176A/177/177A/178/178A/188)

The driver for RAID Controller N8103-176/176A/177/177A/178/178A/188 is automatically installed by Windows Plug-and-Play.
Driver customized for the Express5800 Series is installed by applying the Starter Pack.

4.6 Using Fibre Channel controller (N8190-157A/158A)

The driver for Fibre Channel controller N8190-157A/158A is automatically installed by Windows Plug-and-Play.
Driver customized for the Express5800 Series is installed by applying the Starter Pack.
However, if you additionally equip a Fibre Channel controller (N8190-157A/158A), run the following file.
*<drive letter>:***<destination folder>\winnt\drivers\01_storage\1_ao_05\utl\cli_inst.bat**

4.7 Using Fibre Channel controller (N8190-161/162)

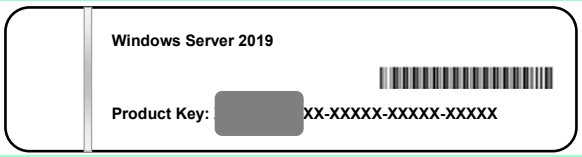
The driver for Fibre Channel controller N8190-161/162 is automatically installed by Windows Plug-and-Play.
Driver customized for the Express5800 Series is installed by applying the Starter Pack.
However, if you additionally equip a Fibre Channel controller (N8190-161/162), run the following file.
*<drive letter>:***<destination folder>\winnt\drivers\01_storage\1_au_04\utl\cli_inst.bat**

5. License Authentication

You need to activate Windows Server 2019 to use it. Follow the steps below to check if your operating system has been activated and perform the activation as needed.

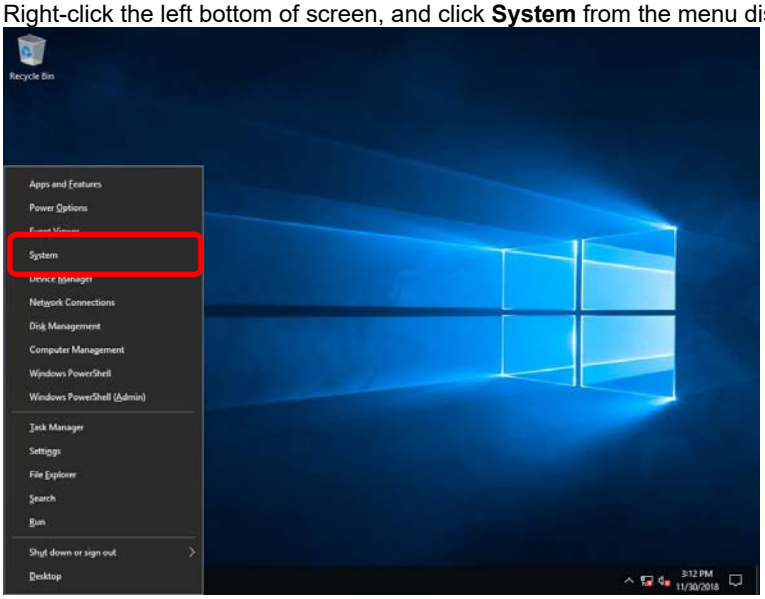
nNote

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.

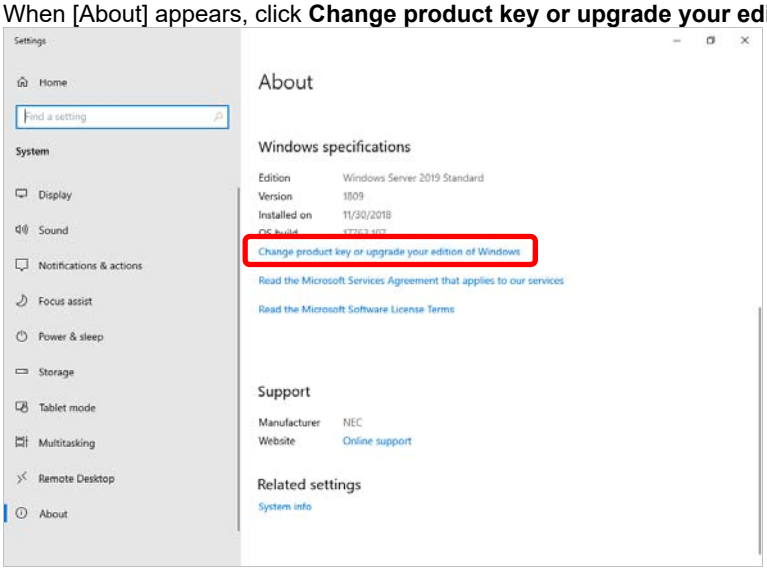


5.1 Desktop Experience

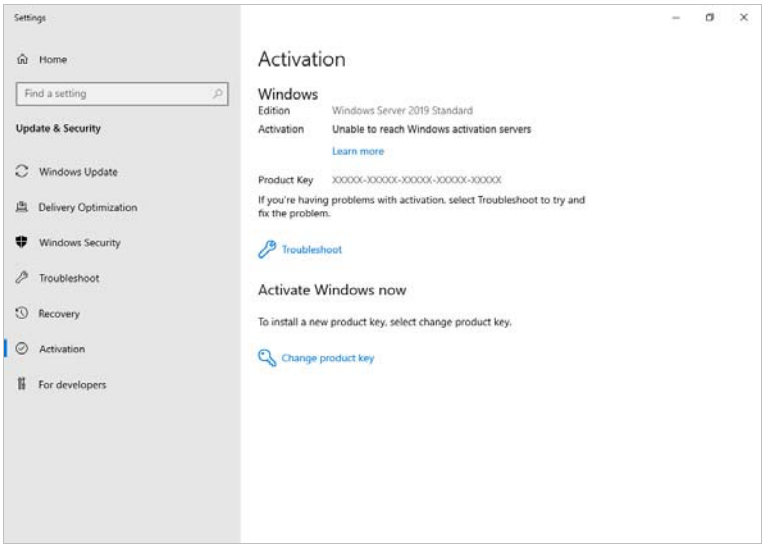
1. Right-click the left bottom of screen, and click **System** from the menu displayed.



2. When [About] appears, click **Change product key or upgrade your edition of Windows**.



3. Perform license authentication.



☐ When connected to 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 License Authentication via telephone.

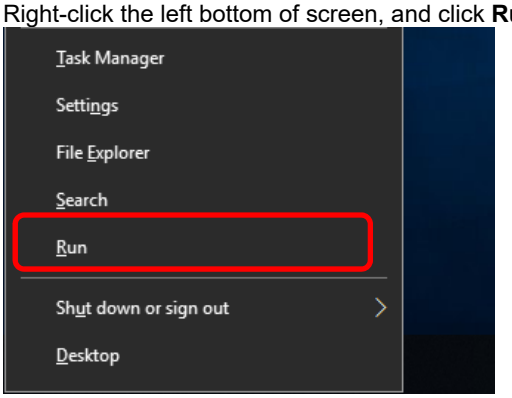
Go to the next step, which differs depending on the installation media you used.

☐ Backup DVD-ROM : Go to Step 5.

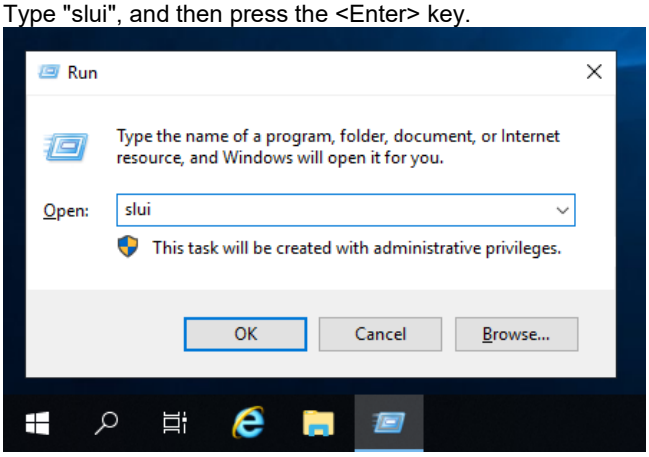
☐ Windows Server 2019 DVD-ROM

- Product key has been input : Go to Step 8.
- Product key has not been input : Go to Step 5.

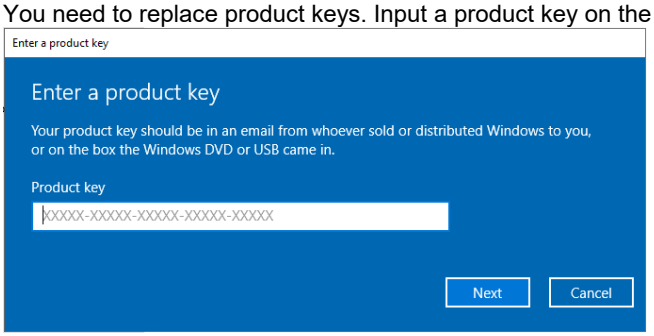
5. Right-click the left bottom of screen, and click **Run** from the menu displayed.



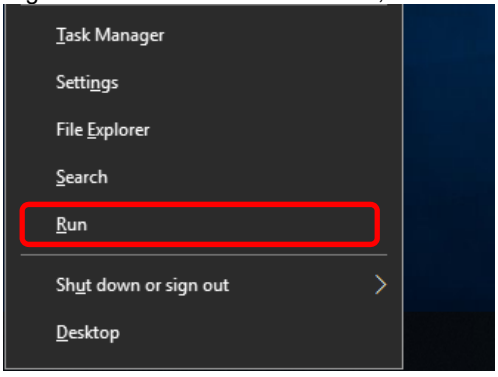
6. Type "slui", and then press the <Enter> key.



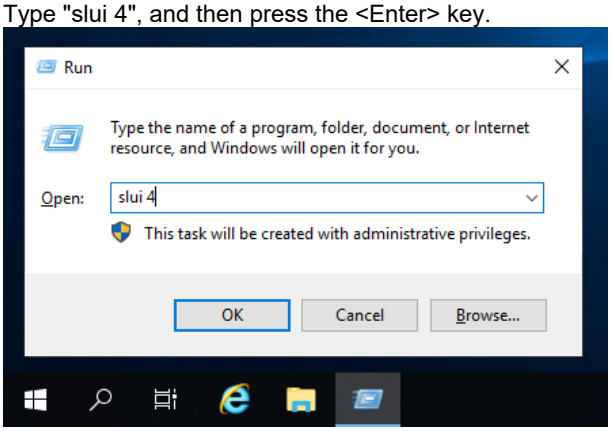
7. You need to replace product keys. Input a product key on the following screen.



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

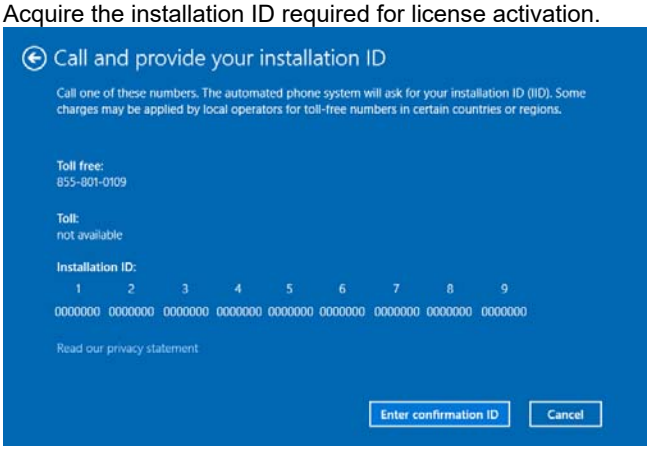


9. Type "slui 4", and then press the <Enter> key.



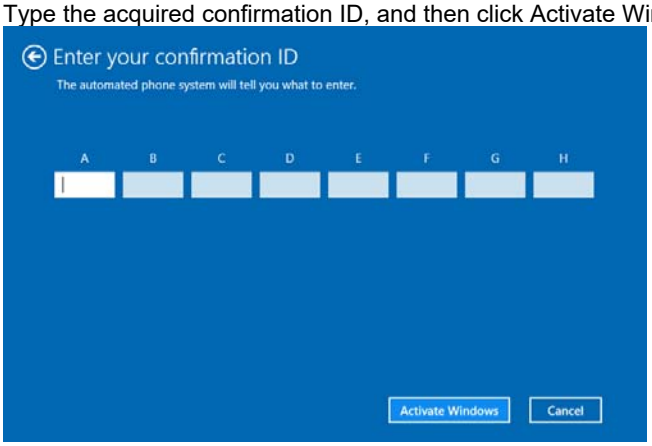
10. On the next screen, select your country or region, and then click **Next**.

Acquire the installation ID required for license activation.



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

    Type the acquired confirmation ID, and then click Activate Windows.



    This completes authentication.

5.2 Server Core

1. Confirm if your license is activated.

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

   ```
   C:\Users\administrator>slmgr –dli
   ```

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

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

2. Change the product key.

   When using Backup DVD-ROM:

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

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

   When using Windows Server 2019 DVD-ROM:

   You do not need to change the product key.

   Go to the next step.

3. Perform license authentication.

   When connected to the Internet:

   License authentication is performed via the Internet.

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

   ```
   C:\Users¥administrator>slmgr –ato
   ```

   This completes authentication.

   When not connected to the Internet:

   Use telephone for license authentication.

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

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

   Acquire the installation ID required for license activation.

6. Setup of Windows Server 2019 NIC Teaming (LBFO)

Set up the network adapter teaming feature as shown below.

6.1 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 the <Enter> key.

6.2 Creating a team

Create 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, 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 settings.
LACP	Configures dynamic aggregation between the NIC and switches.

Load balancing mode

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

Standby adapter

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

Setting all adapters to active mode is also possible.

Primary team interface

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

6.3 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.

6.4 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
Description	Miniport Microsoft Network Adapter Multiplexor Driver, {xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx}, 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
Description	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

For the latest technical information, go to [Windows Server 2019 Support Information] (shown in [1.7 Downloads]).

7. Setup for Solving Problems

We recommend installing the following features for solving the server failure quickly.

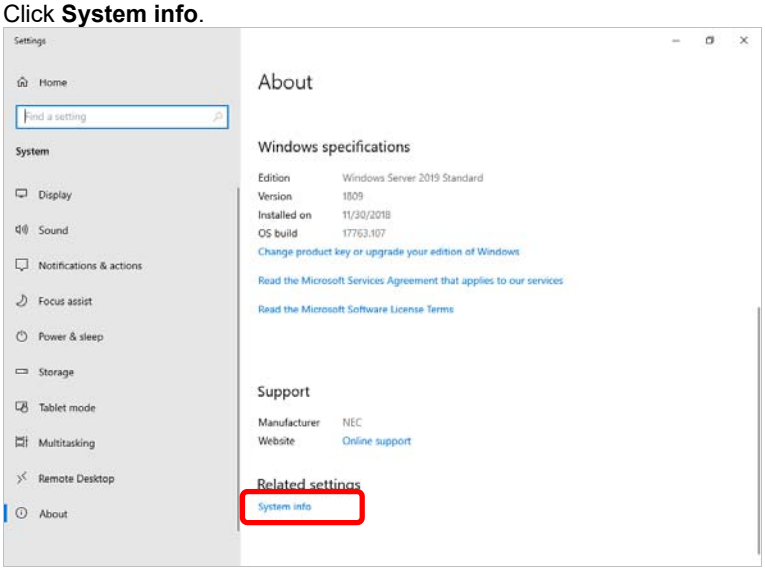
7.1 Specifying Memory Dump Settings (Debug Information)

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

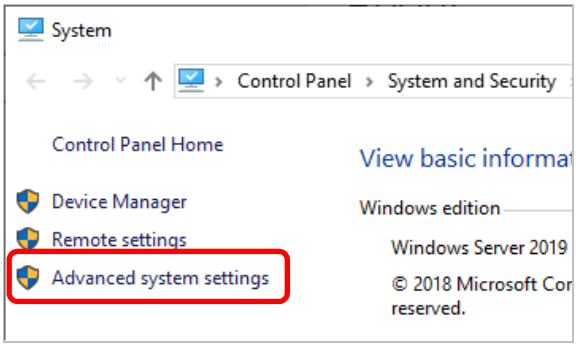
Important **When you restart the system to save the memory dump, a message informing you that the system is short of virtual memory might appear.**
Ignore this message and proceed with the restart. If you reset or restart the system again, the memory dump might not be saved normally.

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

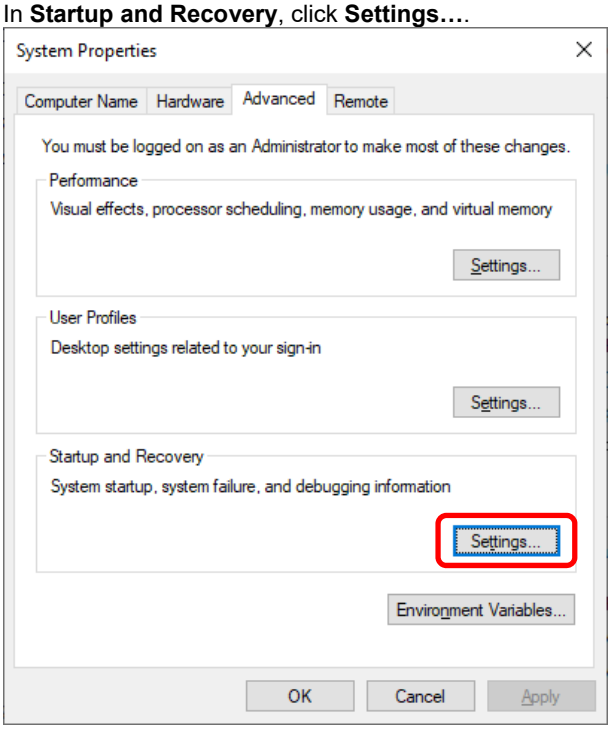
2. Click **System info**.



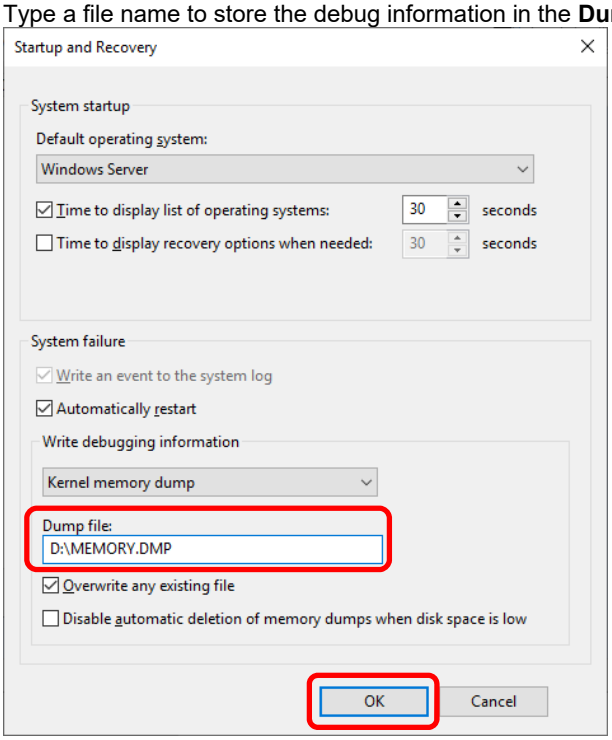
3. Click **Advanced system settings**.



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



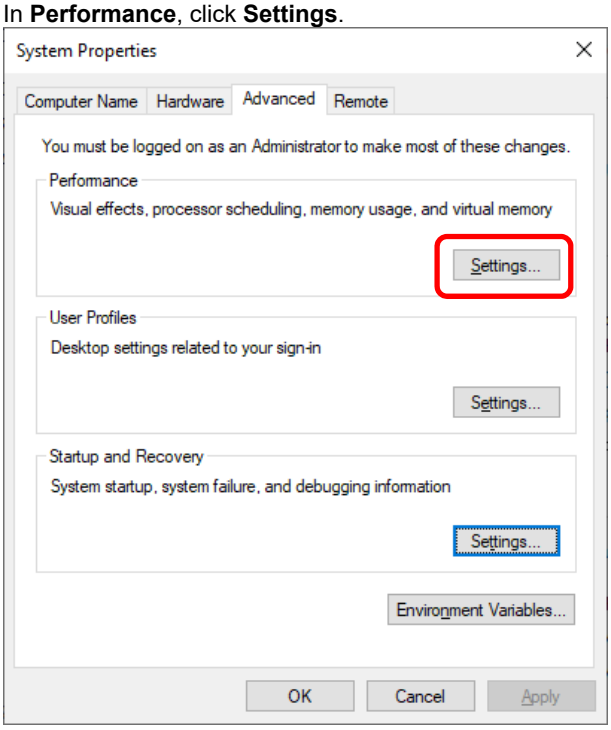
5. Type a file name to store the debug information in the **Dump file** text box, and then click **OK**.



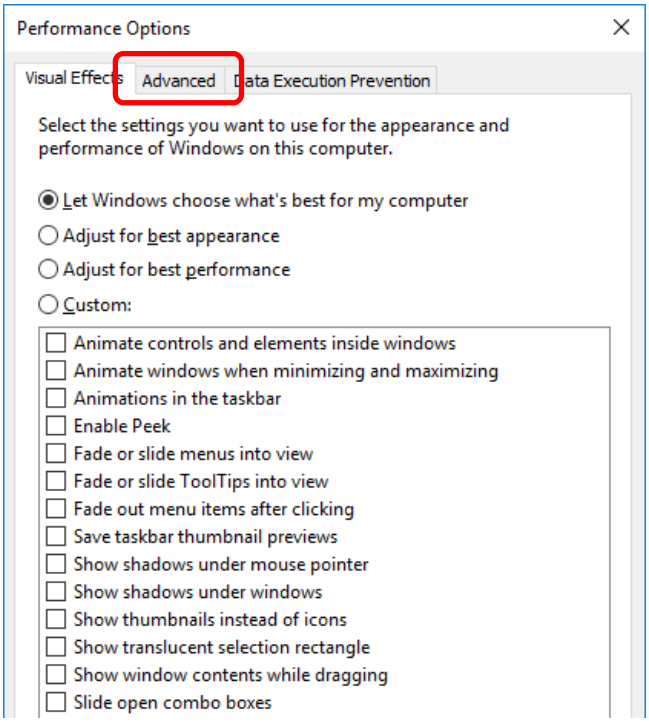
Note the following when specifying a dump file:

- 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.

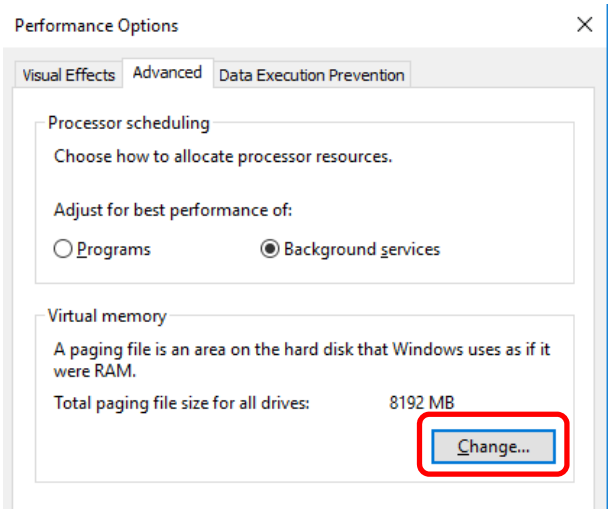
6. In **Performance**, click **Settings**.



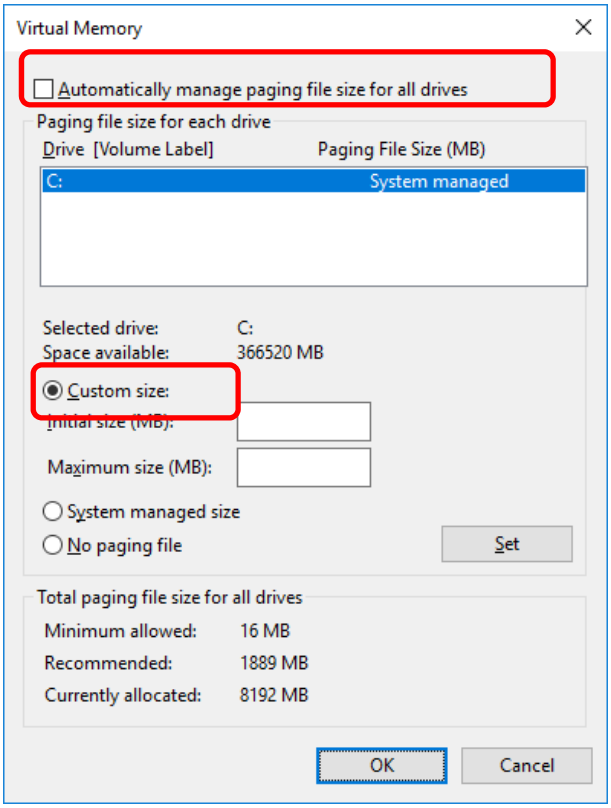
7. Click the **Advanced** tab on the **Performance Options** window.



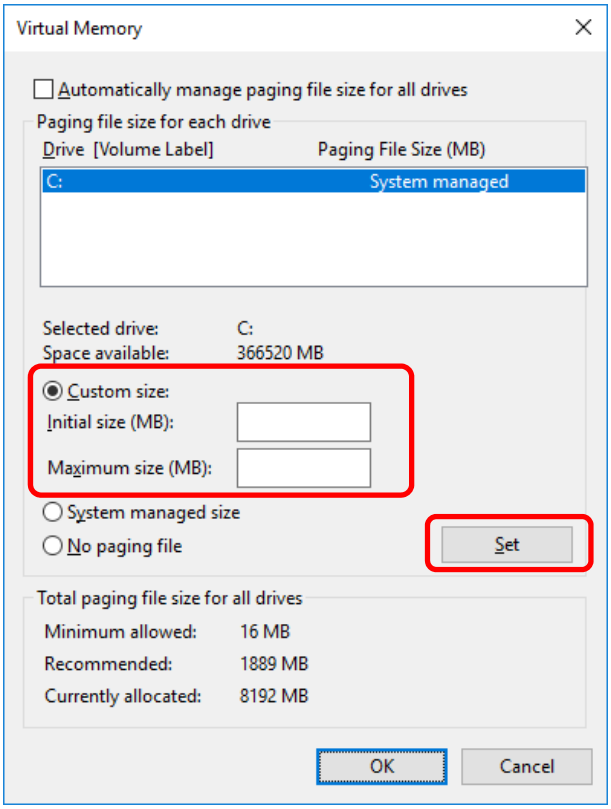
8. In **Virtual memory**, click **Change…**.



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



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**.



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 capacity of physical memory mounted + 400MB or larger) is enough to store the dump file. Make sure to specify a sufficient paging file size.
- See "System Partition Size" in Chapter 1 (2.1 Before Starting Setup) 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.

  1. 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.

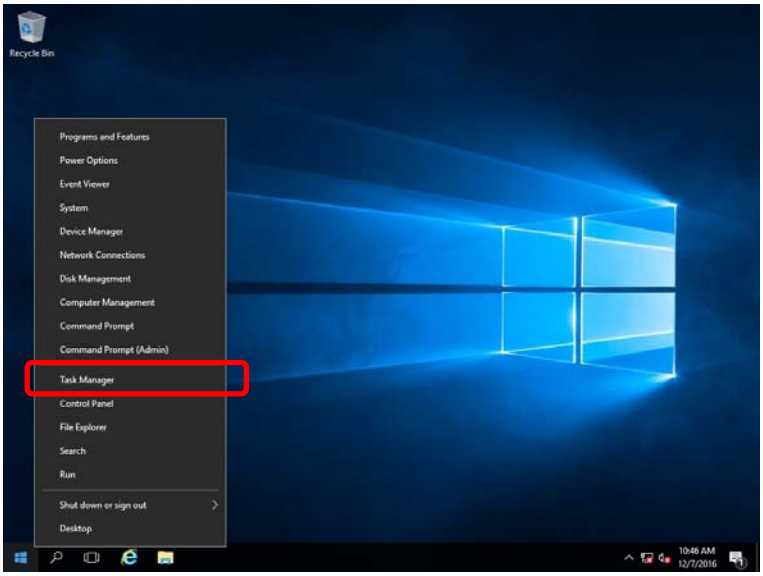
Specification of the memory dump settings is now complete.

7.2 How to Create a User-mode Process Dump File

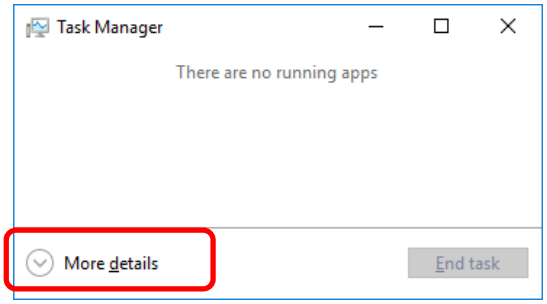
The user-mode process dump file records information when an application error occurs.

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**.

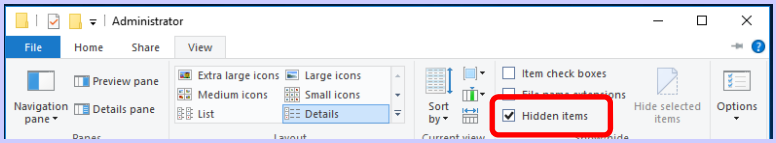


3. Click the **Processes** tab.
4. Right-click the name of the process that you want to get dump information for, and then click **Create Dump File**.
5. A dump file for the process is created in the following folder:

   C:\Users\user name\AppData\Local\Temp

Tips

If the folder is not displayed, open Explorer, select **Hidden items** in the **View** tab.



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

NEC Express5800 Series
Express5800/D120h

2 Maintenance

This chapter provides information for system inspection and maintenance, and how to troubleshoot the problems, which you might need to operate an Express5800 Series 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.

1. Failure Information

If the server is broken, you can collect failure information by using the following method.

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

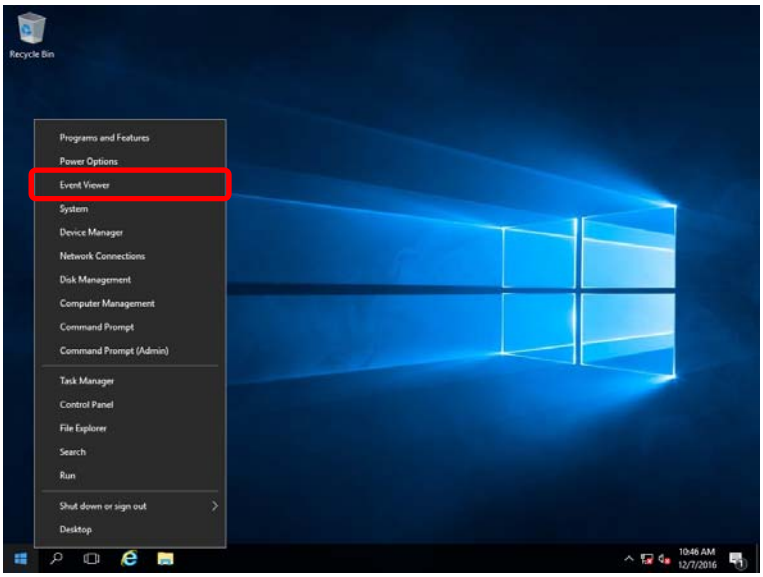
Important **When the system restarts after a failure has occurred, a message may appear indicating virtual memory shortage. Ignore this message and proceed with starting the system. Restarting the system may result in an inability to properly dump the data.**

1.1 Collecting Event Logs

Collection for various event logs that occurred on the server follows 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.

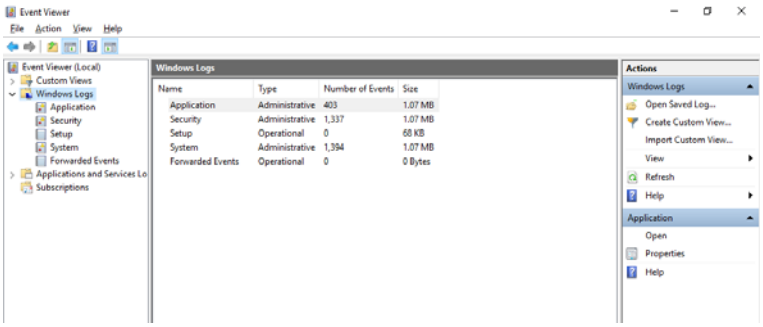


2. Select the type of log in **Windows Logs**.

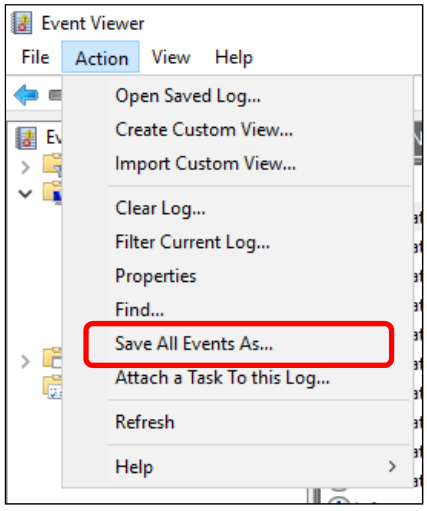
   Application records events related to running applications.

   Security records events related to security.

   System records events that occur in Windows system components.



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



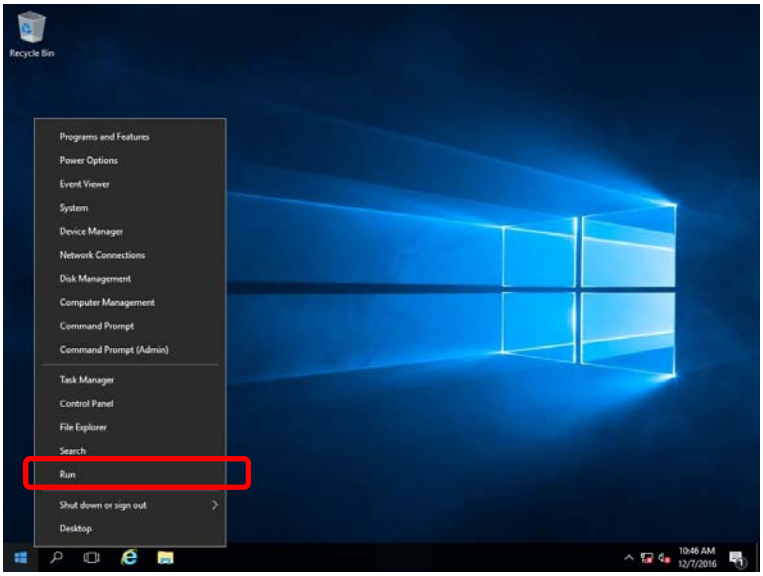
4. Type the file name of the archived log in **File name**.
5. Select the type of the log file you want to save in **Save as type**, and then click **Save**.

1.2 Collecting Configuration Information

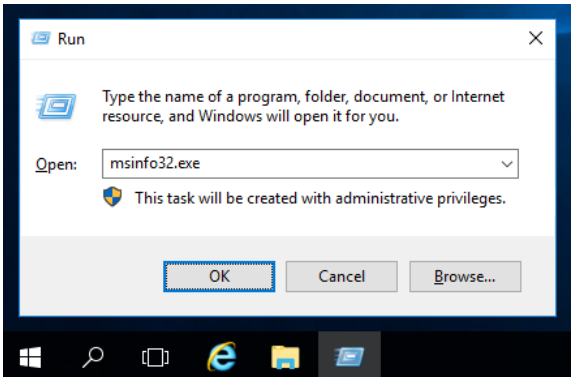
This section describes how to collect hardware information or configuration.

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 **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

Collects diagnostic information related to application errors.

For details, see *Chapter 1 (7.2 How to Create a User-Mode Process Dump File)*.

1.4 Collecting Memory Dump

If an error occurs, the dump file should be saved to acquire necessary information. You can specify any location for saving the diagnostic information. For details, see *Chapter 1 (7.1 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 may affect the system operation.

Important **A message indicating insufficient virtual memory may appear when restarting the system due to an error. Ignore this message and proceed. Restarting the system may result in an inability to properly dump the data.**

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.

2.1 Problem of Using Internal Devices and Other Hardware

[?] **Flow Control of LAN controller**

→ When the Flow Control is set as **Auto Negotiation**, **Rx & Tx Enabled**, **Tx Enabled or Transmit Enabled**, **Receive & Transmit Enabled** in case that the packet processing of the operating system stops due to some factors, such as a system hang, with a high transmission load, pause frames may be sent continuously.

In this case, the buffer in the switch runs out because a large amount of packets is stored in the switch, which may affect all the telecommunication devices connected to the server. To avoid this, set the Flow Control as **Disabled**.

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 (4. Setting Up Device Drivers)* and Chapter1 *(3. Applying Starter Pack)*
- If hard disk drives cannot be detected, you cannot recover the Windows system.

3.1 Recovery of Windows Server 2019

If the Windows does not start normally, you can recover it using the feature of the Windows installation disc.

To run this feature, start the installation disc, and then choose Repair your computer in Windows Setup wizard.

We recommend that this option is performed by the system administrator.

NEC Express5800 Series
Express5800/D120h

3

Appendix

1. **List of Windows Event Logs**

   Shows a list of Windows event logs.

I. List of Windows Event Logs

OS

Event Log

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

Windows Server 2019

System Log

1	VDS Basic Provider	Error	Unexpected failure. Error code : 32@01000004
	At the time of a USB Device connection		When it's at the time of a USB Device connection, it's no problem.
4	b57nd60a	Warning	Broadcom NetXtreme Gigabit Ethernet #xx: The network link is down. Check to make sure the network cable is properly connected.
	When installing an OS, starting system, or applying Starter Pack		This event does not affect system operation.
4	l2nd	Warning	QLogic BCM57810 10 Gigabit Ethernet (NDIS VBD Client) #xx: The network link is down. Check to make sure the network cable is properly connected.
	When installing an OS, starting system, or applying Starter Pack		This event does not affect system operation.
27	ixgbi	Warning	Intel(R) Ethernet Controller X550 #xx Network link is disconnected.
	When installing an OS, starting system, or applying Starter Pack		This event does not affect system operation.
27	Ixgbs	Warning	Intel(R) Ethernet Controller X550 #xx Network link is disconnected.
	When installing an OS, starting system, or applying Starter Pack		This event does not affect system operation.
27	e1iexpress	Warning	Intel(R) I350 Gigabit Network Connection #xx Network link is disconnected.
	When installing an OS, starting system, or applying Starter Pack		This event does not affect system operation.
27	e1rexpress	Warning	Intel(R) I350 Gigabit Network Connection #xx Network link is disconnected.
	When installing an OS, starting system, or applying Starter Pack		This event does not affect system operation.

27	i40ea	Warning	Intel(R) Ethernet Converged Network Adapter X710 #xx Intel(R) Ethernet Converged Network Adapter X710-2 #xx Network link is disconnected.
	When installing an OS, starting system, or applying Starter Pack		This event does not affect system operation.
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. 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: Intel(R) Ethernet Converged Network Ada... [24,0,0] The message resource is present but the message was not found in the message table
	When installing an OS, starting system, or applying Starter Pack		This event 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 XXXXXXXXXXXXXXXXXX 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 the LAN board.
	When installing an OS, starting system, or applying Starter Pack		When multiple N8104-157 are loaded it is registered, but does not affect system operation.
61	ebdrv	Warning	NTPNP_PCIXXXX: QinQ/VLAN filtering mode is NOT enabled for this adapter (lm_status 1). * A different number replaces X depending on the connection status of the LAN board.
	When starting system, or applying Starter Pack		This event does not affect system operation.
129	megasas2	Warning	Reset to device, \Device\RaidPort(x), was issued. (Any number replaces x)
	While the system is running		This event does not affect system operation. If this message is logged because OS has succeeded retry process.

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 reattempt 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.
153	Disk	Warning	The I/O operation at the logical block address 0xX for disk Y was retried. (Any number replaces X, Y)
	When creating or inithializing a logical drive by Universal RAID Utility		This event does not affect system operation.
225	Kernel-PnP	Warning	The application YYY with process id XXX stopped the removal or 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 Starter Pack		This event does not affect system operation if it is logged when applying Starter Pack.
7023	Service Control Manager	Error	xxxxxxxx service terminated with the following error: A device attached to the system is not functioning.
	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.
7023	Service Control Manager	Error	The Spooler service terminated with the following error: Ran out of memory
	When installing an OS,		There is no problem when it occurs at following conditions. 1. Occurs once during OS installation, and it does not register continuously. 2. 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 {XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX} did not register with DCOM within the required timeout.
	While the system is running		This event does not affect system operation.
10149	Microsoft-Windows-WinRM	Warning	The WinRM service is not listening for WS-Management requests.
	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.

44801	Megasas2	Warning	*This event can be displayed as follows, but this does not affect the system operation. " The description of event ID 44801 from the source "Megasas2" cannot be found. The component which causes this event is not installed on the local computer or the installation is damaged. Install the component on the local computer or repair it. If the event occurs on another computer, you must save the displayed information with it. The event contains the following information: \Device\RaidPort(x) VD 00/0 is now DEGRADED The message resource is present, but the messages can not be found in string table or message table.
	When RAID is degraded		This event does not affect system operation.

Application Log

1015	Microsoft-Windows-Security-SPP	Warning	Detailed HRESULT. Returned hr=0xC004F022, Original hr=0x80049E00
	When running 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 running an OS		This event does not affect system operation if it is not recorded repeatedly after activating the Windows.

Applications and Services Logs

1	Microsoft-Windows-SMBWitnessClient	Error	Witness Client initialization failed with error (The system cannot find the file specified.)
	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 ********** for user ********* (current status = 0x0, desired status = 0x20).
	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.
200	Microsoft-Windows-DeviceSetupManager	Warning	A connection to the Windows Update service could not be established.
	When starting system and installing Starter Pack		This event does not affect system operation if it is not recorded after connecting to the internet.
201	Microsoft-Windows-DeviceSetupManager	Warning	A connection to the Windows Metadata and Internet Services (WMIS) could not be established.
	When starting system and installing Starter Pack		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.
	When starting system and installing Starter Pack		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)
	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-002473-144-00	April 2019	The first edition