LAN Driver
Installation Guide
(Broadcom v20.8)

Contents

1. Preface

Thank you very much for purchasing our product.
This installation guide explains how to set up the LAN Drivers.

Note	The images shown in this Installation Guide could be different depending on the system.

1.1. The target server

Refer to the URL below and check the target server.
   http://www.58support.nec.co.jp/global/download/index.html
      -> Click model name(product name).
        -> Click "NEC Express5800/D120h LAN Driver Module(V20.8)" in "Other update".

1.2. Target software

Abbreviated designation	Software Production Name
Windows Server 2016	Microsoft® Windows Server® 2016 Standard Microsoft® Windows Server® 2016 Datacenter
Windows Server 2012 R2	Microsoft® Windows Server® 2012 R2 Standard Microsoft® Windows Server® 2012 R2 Datacenter

*1   Above information is based on 2018/01
     Refer the Server Configuration Guide for the latest information.
     The latest drivers, published on our NEC Express5800 Support Website.
*2   Refer to the Server Configuration Guide for correspondence Option LAN Board.

1.3. Target Driver Version

The target version is v17.2.0.2/v17.4.0.1. If your version is v20.8.0.0 and above, no driver update is required. Refer to [3.2 Confirmation of LAN driver version] for the method of checking driver version.

Software Production Name	Target driver version (b57nd60a.sys)	After update version (b57nd60a.sys)
Windows Server 2016	17.4.0.1	20.8.0.0
Windows Server 2012 R2	17.2.0.2	

1.4. Registration Trademark

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2. Workflow LAN driver update process

Important This document is based on using the Windows Server Failover Clustering (Afterward WSFC) and EXPRESSCLUSTER. If WSFC is not used, skip step [3.4 Stop the WSFC node service] and [5.4 Start the WSFC node]. If EXPRESSCLUSTER is not used, skip step [3.5 Stop the EXPRESSCLUSTER service] and [5.5 Start the EXPRESSCLUSTER].
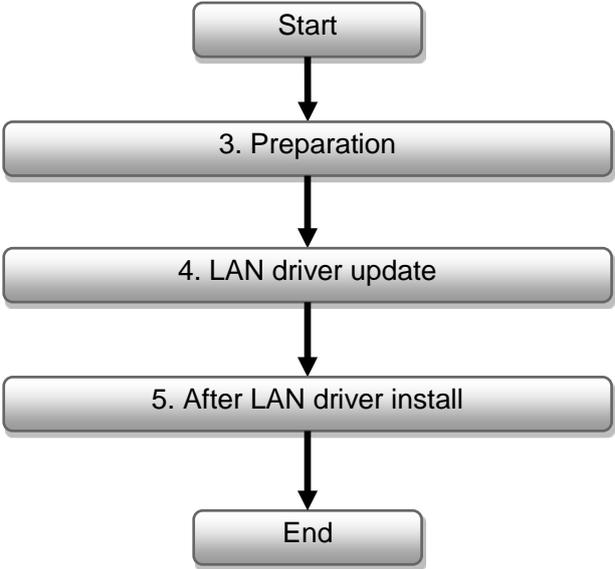
```
┌──────────────┐
│    Start     │
└──────────────┘
        │
        ▼
┌──────────────────────┐
│   3. Preparation      │
└──────────────────────┘
        │
        ▼
┌──────────────────────┐
│  4. LAN driver update │
└──────────────────────┘
        │
        ▼
┌──────────────────────────┐
│ 5. After LAN driver install │
└──────────────────────────┘
        │
        ▼
┌──────────────┐
│     End      │
└──────────────┘
```

3. Preparation

3.1. Workflow preparation process

```
                    ┌──────────────┐
                    │    Start     │
                    └──────┬───────┘
                           ▼
          ┌──────────────────────────────────┐
          │ 3.2. Confirmation of LAN driver version │
          └──────────────┬───────────────────┘
                           ▼
          ┌──────────────────────────────────┐
          │    3.3. Preparation of module     │
          └──────────────┬───────────────────┘
                           ▼
      ┌────────────────────────────────────────────┐
      │       Prepare a network specification.       │
      │  If not, write down the setting information  │
      │  of network(IP address, etc.) and team(if    │
      │              configured).                    │
      └────────────────────┬───────────────────────┘
                           ▼
          ┌──────────────────────────────────┐
          │  3.4. Stop the WSFC node service  │
          └──────────────┬───────────────────┘
                           ▼
          ┌──────────────────────────────────┐
          │ 3.5. Stop the EXPRESSCLUSTER service │
          └──────────────┬───────────────────┘
                           ▼
          ┌──────────────────────────────────┐
          │      3.6. Delete the team         │
          └──────────────┬───────────────────┘
                           ▼
                    ┌──────────────┐
                    │     End      │
                    └──────────────┘
```
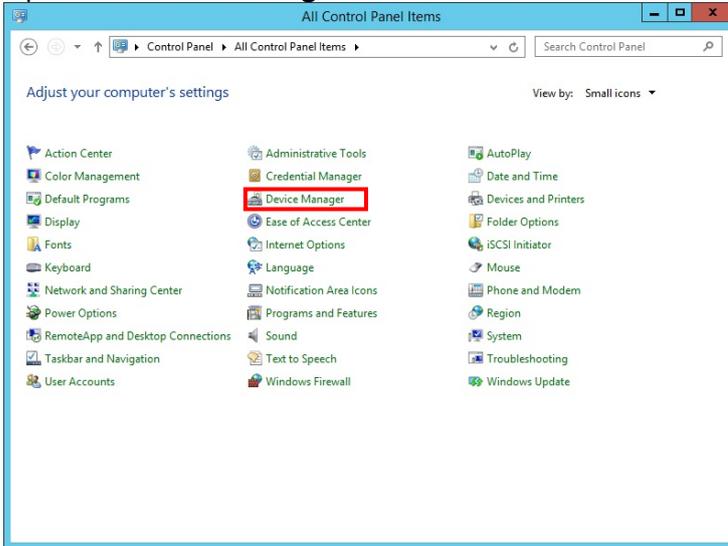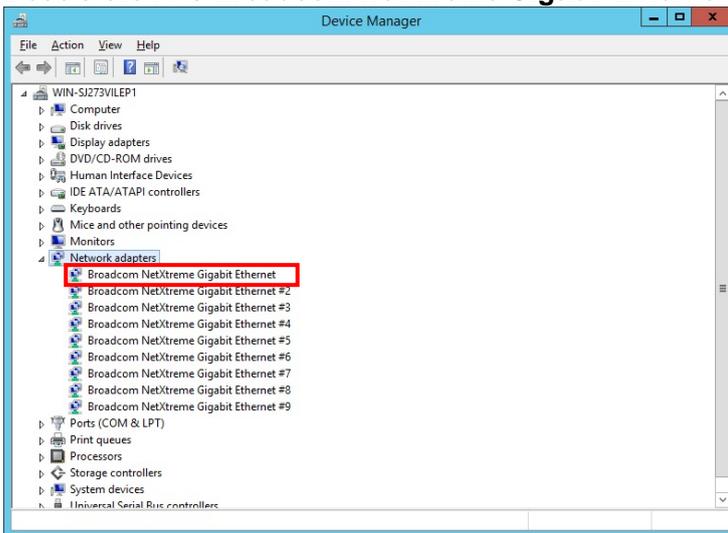
January 2018

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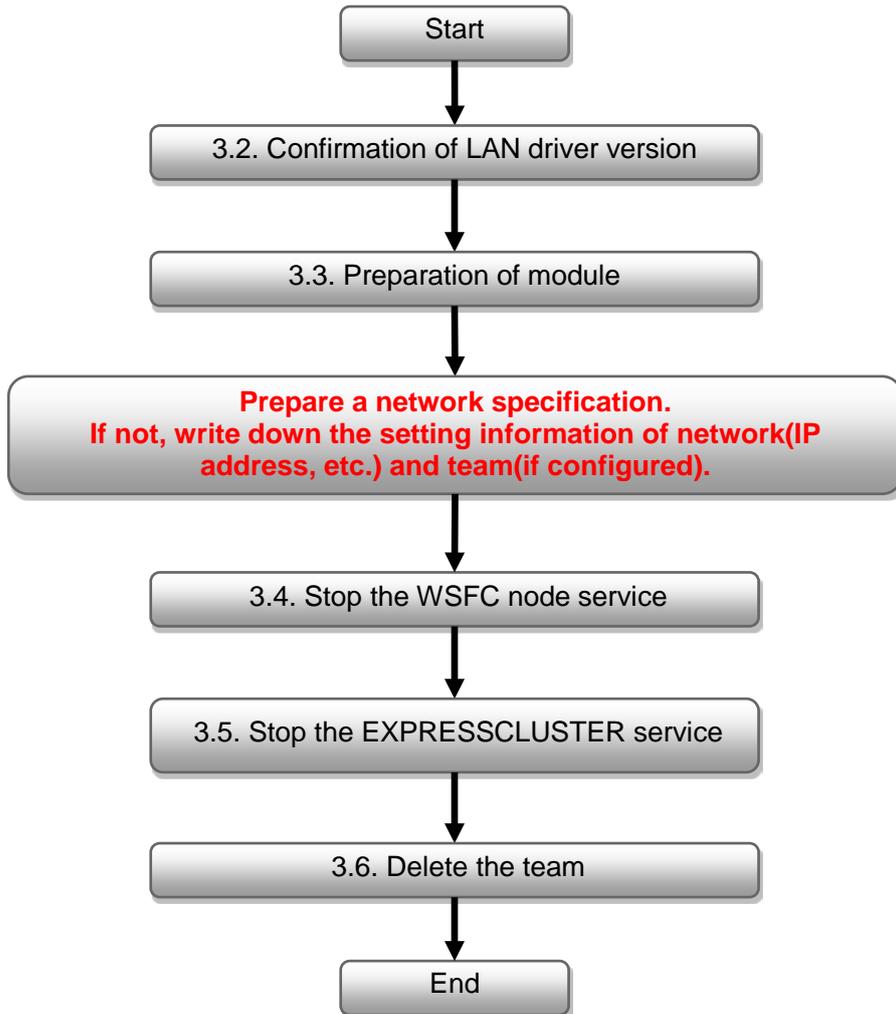
3.2. Confirmation of LAN driver version

Check the driver version by the procedure below. When the version is equal or newer than the following version, installation is not necessary.
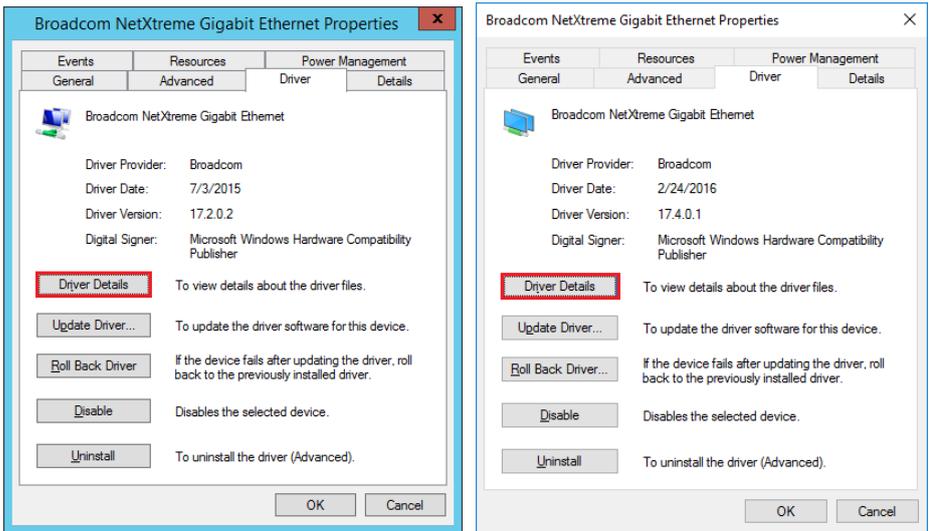
1. Open the **Device manager** icon on the Control Panel window.
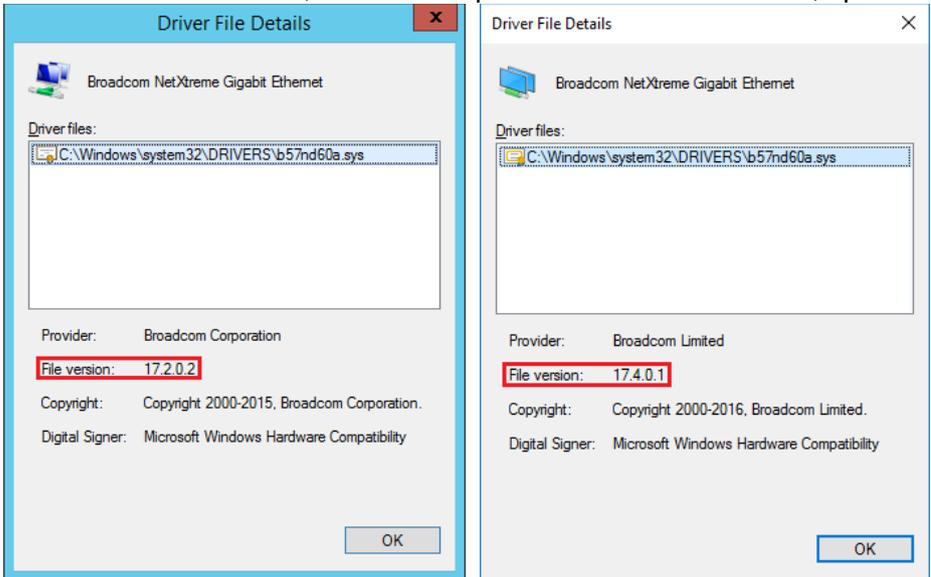

2. Double-click the **Broadcom NetXtreme Gigabit Ethernet** icon on the Device manager.

3. Click the **Driver Details** on the **Driver** tab.

4. Confirm the **File version**.
    If the version is 20.8.0.0, no need to update the driver. Otherwise, update it.

Software Production Name	Target driver version (b57nd60a.sys)	After update version (b57nd60a.sys)
Windows Server 2016	17.4.0.1	20.8.0.0
Windows Server 2012 R2	17.2.0.2	

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3.3. Preparation of module

3.3.1. Prepare the update module

1. Refer to the URL below and download the **GVO-034742-G01_xxxxxxxxxxxxxxxxxx.zip** (x is an expression of arbitrary numbers).
    http://www.58support.nec.co.jp/global/download/index.html
        -> Click model name(product name).
            -> Click "NEC Express5800/D120h LAN Driver Module(V20.8)" in "Other update".

2. Create a **temp** folder directly under the system drive.
        (e.g., **C:\temp**)

3. Unzip **GVO-034742-G01_xxxxxxxxxxxxxxxxxx.zip**, copy the **BCOM208** folder in the **temp** folder.
        (e.g., **C:\temp\BCOM208**)

3.3.2. Prepare the recovery module
Use the setup DVD of EXPRESSBUILDER for recovery. Please prepare it in advance.
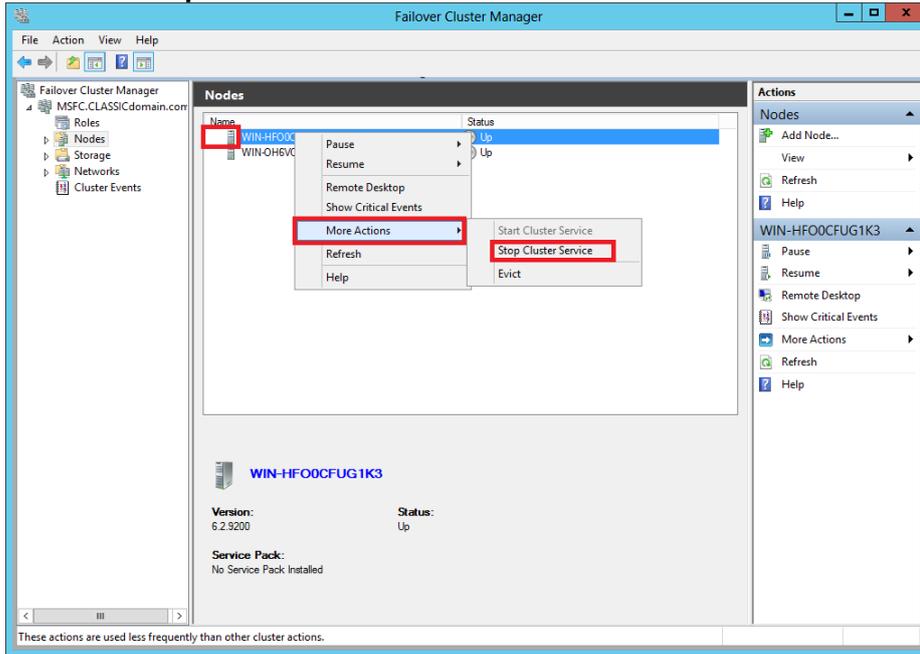
3.4. Stop the WSFC node service

1. Open the **Failover Cluster Manager** from Server Manager.

2. Move the all resource of target node to another node.

3. Select the **Nodes** displayed on the left of Failover Cluster Manager.
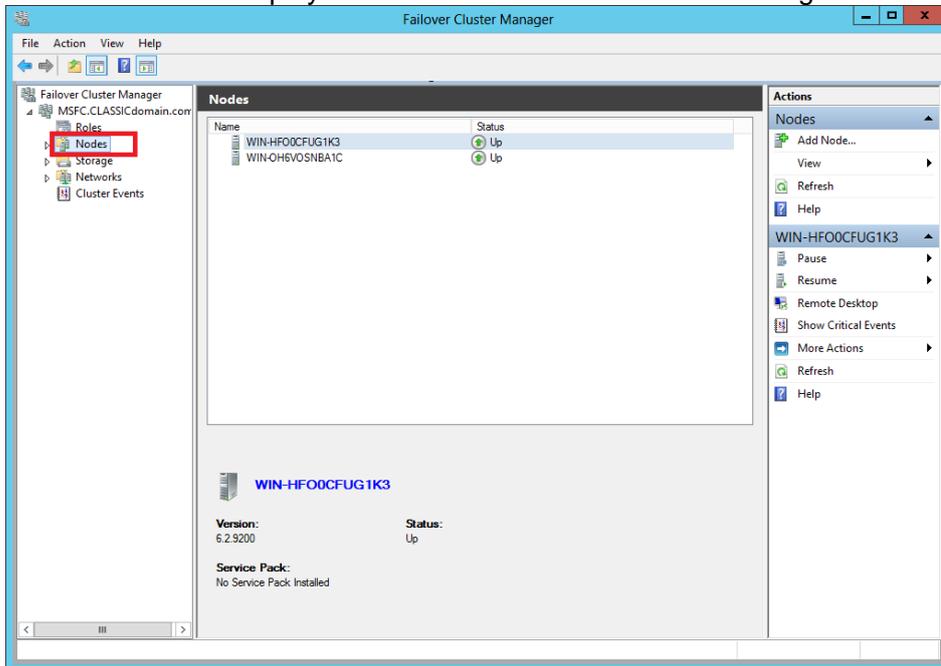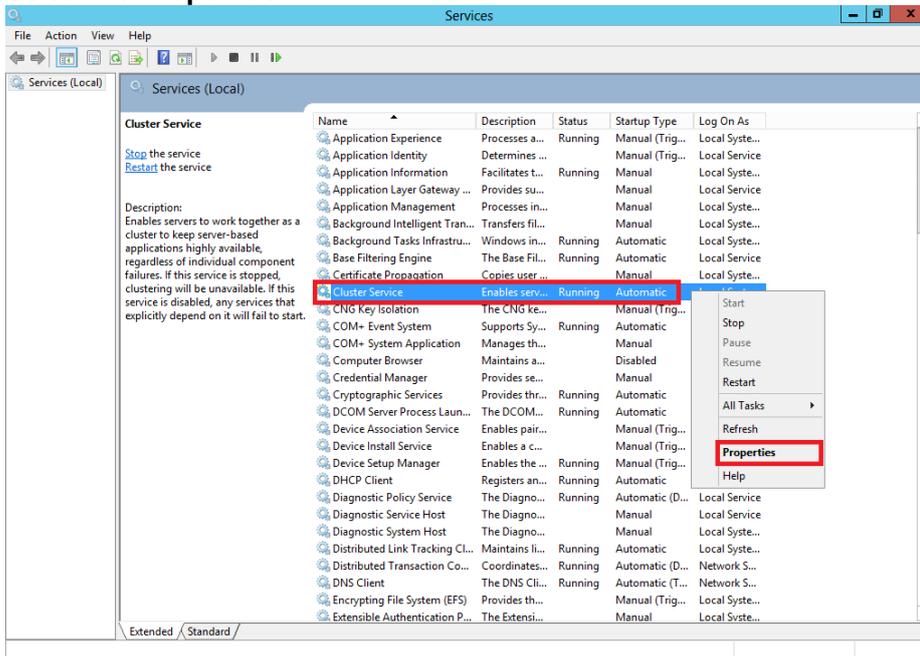

4. Right click the target **node** for driver update from the node list.
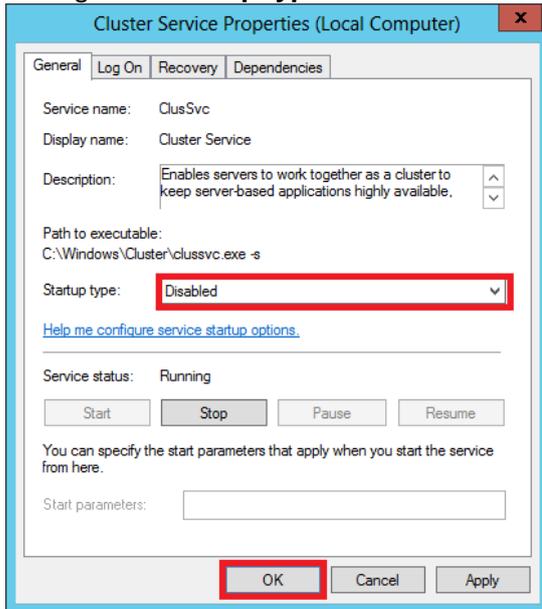
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5. Select the **Stop Cluster Service** from **More Actions**.

6. Open the **Services** from Server Manager.

7. Right click the **Cluster Service**.

8. Select the **Properties**.

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9. Change the **Startup type** on **General** Tab to **Disabled**. Select the **OK**.

3.5. Stop the EXPRESSCLUSTER service
Refer the following website for more information.

http://www.nec.com/en/global/prod/expresscluster/en/support/manuals.html
  -> Reference Guide
    -> Chapter 10 The system maintenance information
      -> Replacing the network card
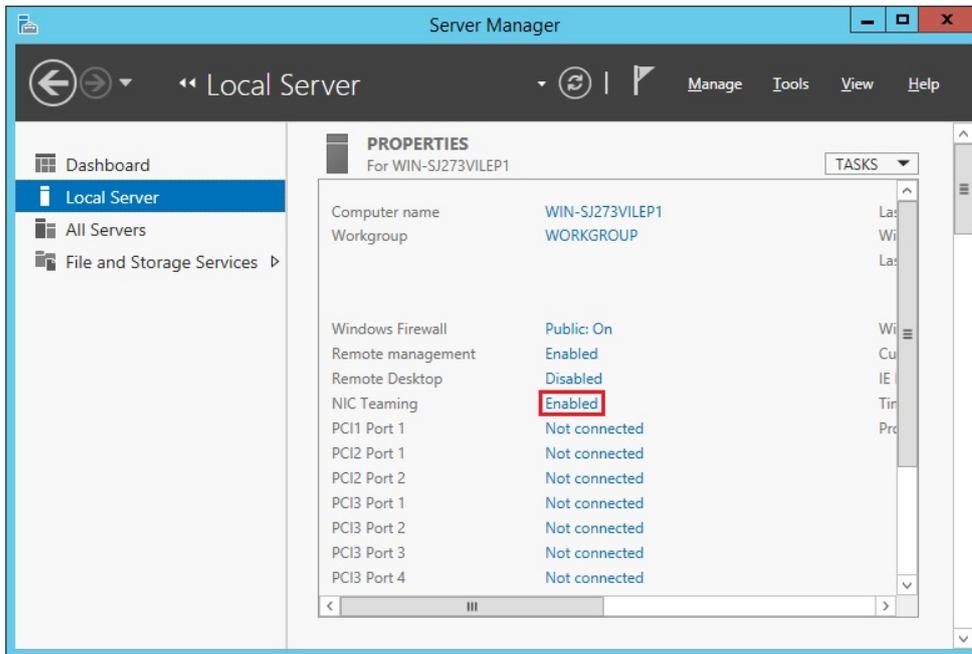   * Perform the procedures prior to the replace of network card.
          Shut down the system and then start up it again. After that, Go to [3.6 Delete the team].

3.6. Delete the team

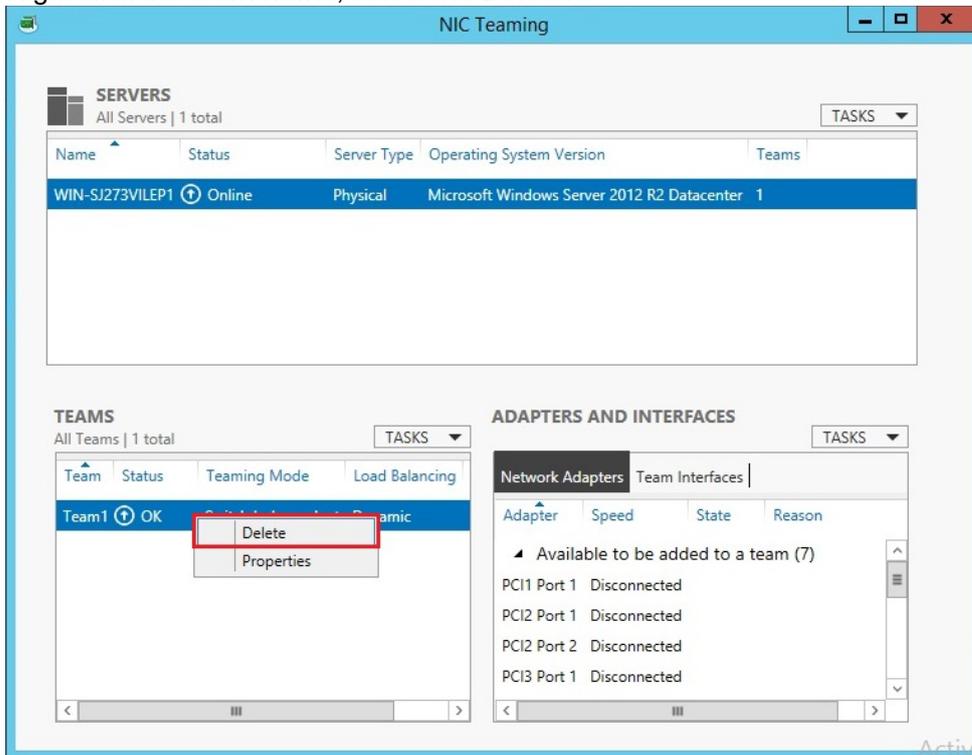| Important	**Please delete the team from [NIC teaming] screen. It cannot be deleted from Device Manager.**

1. Execute the **Sever Manager** and select the **Local Server**.

2. Select the **Disabled** or **Enabled** of NIC Teaming.

3. Right click the **team name**, select the **Delete**.

4. Restart the system.

4. LAN driver update

Refer the notice before driver update.

Important	**Sign in the system from local console by administrator account for executing the operation below.**

4.1. Existing LAN driver uninstallation

Important	**If team is existed, remove it first.**

1. Open the **Program and Function** icon on the Control Panel window.

2. Click the **Broadcom Gigabit Integrated Controller** in the list, right click it and select **Uninstall**. Continue the uninstallation according to the popup message.

3. Restart the system.

4.2. New LAN driver installation

1. Run a command prompt as administrator. Enter the following command at the command prompt.

   cd C:\temp\BCOM208\LAN\

   (For file info, refer the [3.3.1 Prepare the update module])

2. Enter the following, and then press **Enter** key.

   ➢ Windows Server 2012 R2

   INSTALL_WS2012R2.bat
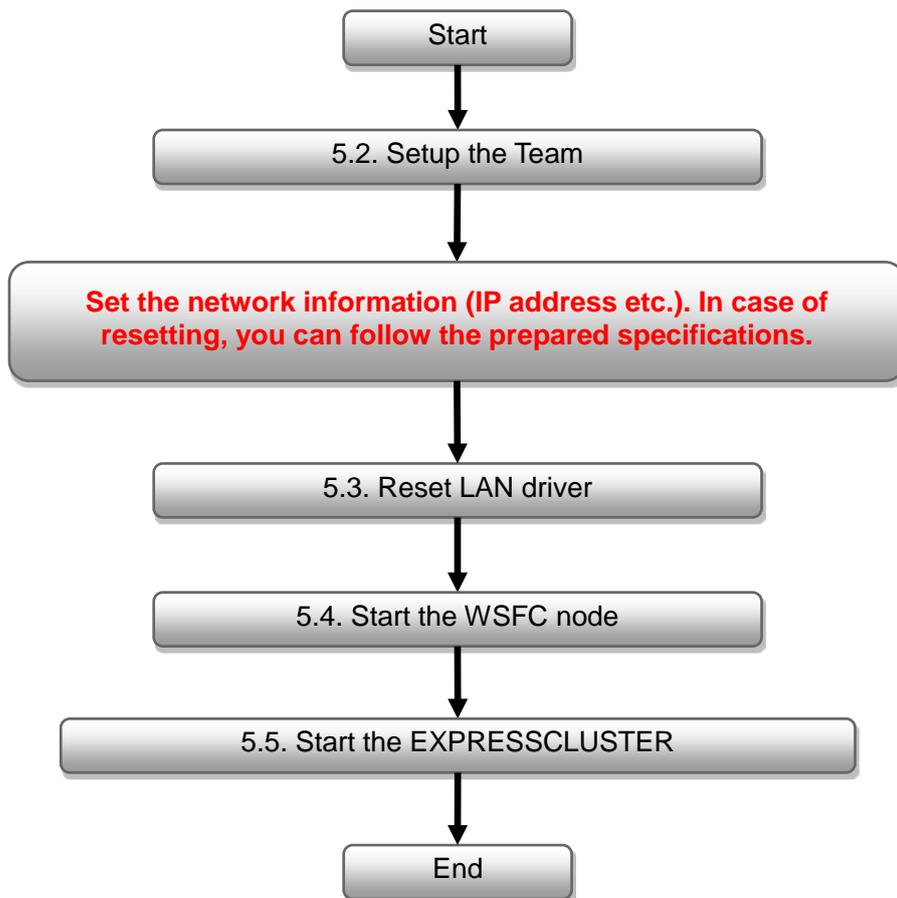
   ➢ Windows Server 2016

   INSTALL_WS2016.bat

3. When the following message is displayed, restart the system.
   Installation Completed!

4. Check that the driver version is 20.8.0.0 by following [3.2 Confirmation of LAN driver version].

# 5. After LAN driver install

Important	・Sign in the system from local console by administrator account for executing the operation below. ・If physical network adapter or teaming adapter is bound into Hyper-V Virtual Switch, rebind it after [5.2 Setup the Team]. ・If using Hyper-V and not using WSFC or EXPRESSCLUSTER, shutdown all the Guest OS if necessary and reset the system to auto boot up after this chapter.

5.1. Workflow after LAN driver install

```
              Start
                │
                ▼
        5.2. Setup the Team
                │
                ▼
  Set the network information (IP address etc.). In case of
  resetting, you can follow the prepared specifications.
                │
                ▼
        5.3. Reset LAN driver
                │
                ▼
        5.4. Start the WSFC node
                │
                ▼
        5.5. Start the EXPRESSCLUSTER
                │
                ▼
              End
```

5.2. Setup the Team

1. Execute the **Sever Manager** and select the **Local Server**.

2. Select the **Disabled** or **Enabled** of NIC Teaming.

3. Select the **TASKS** of **TEAMS** tab and select the **New Team**.
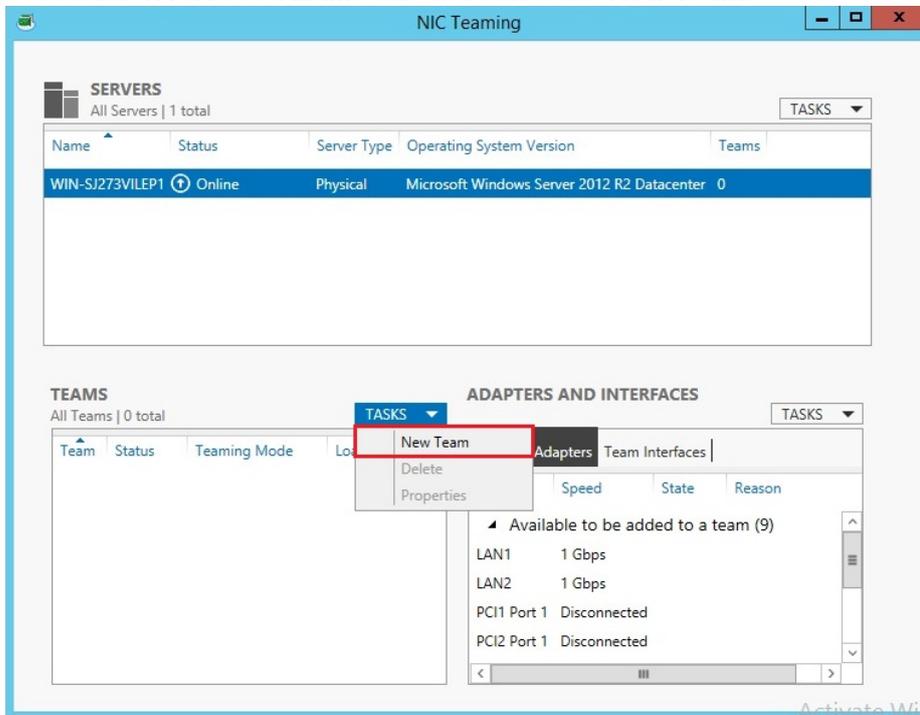
4. Setup the team referring to teaming information which had noted in advance.

5.3. Reset LAN driver
Refer the following steps for resetting the parameter of LAN driver.

Important	・**When you changed the parameter of LAN driver, you have to restart the system.** ・**Do not change the setting of [Virtual Machine Queues] from Disabled to Enabled.**

1. Open the **Device manager** icon on the Control Panel window.

2. Double-click the **Broadcom NetXtreme Gigabit Ethernet** icon on the Device manager.

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3. Select the **Advanced** tab and change the value of property which you need to set by referring to the LAN driver setting which had noted in advance.
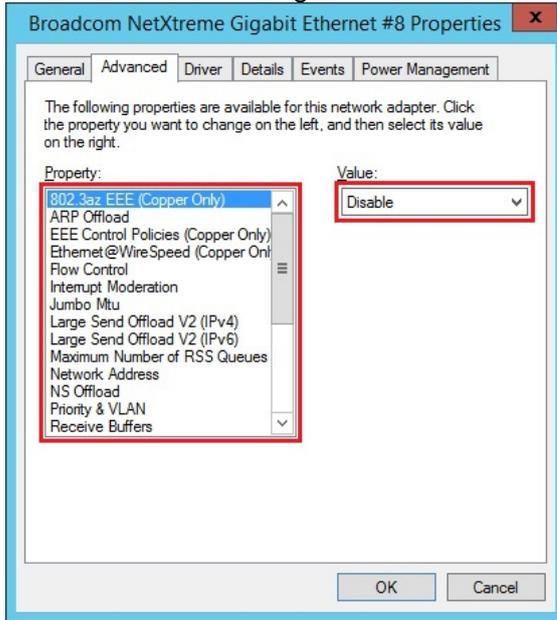

5.4. Start the WSFC node service
Refer the following steps for starting the service of node which has been stopped in [3.4 Stop the WSFC node service].

1. Open the **Services** from Server Manager in the node which LAN driver updated.

2. Right-click the **Cluster Service** in service screen and select the **Properties**.
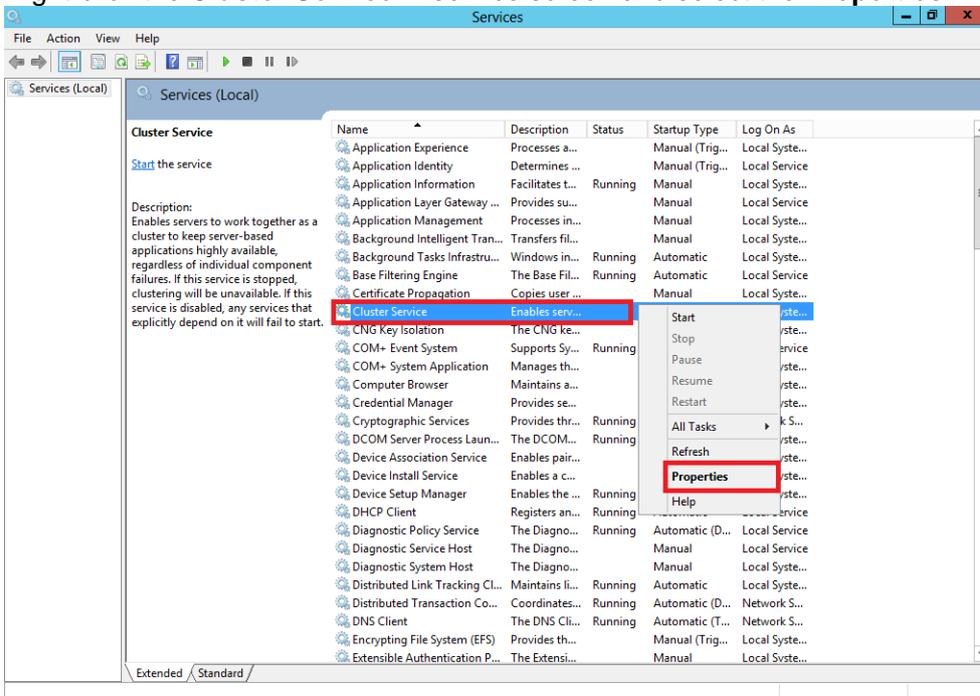
3. Change the **Startup type** to **Automatic** on **General** Tab then select **OK**.
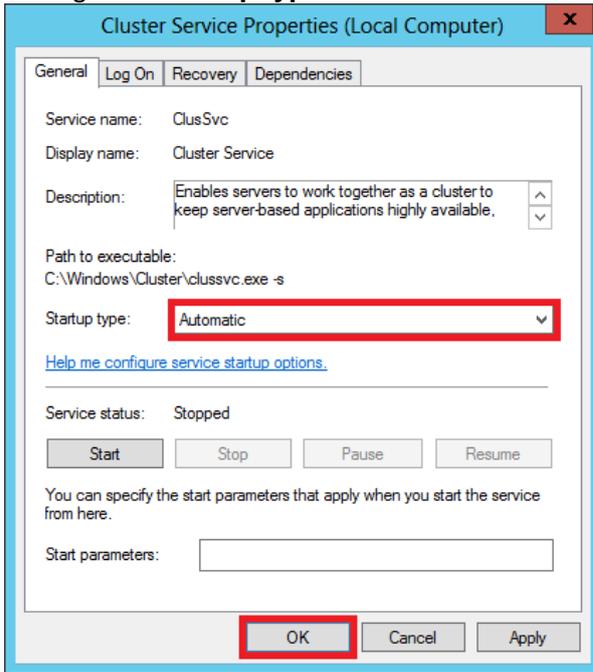
4. Right click the **Cluster Service** at service screen and select the **Start**.

5. Open the **Failover Cluster Manager** from Server Manager.

6. Select the **node** from the left side of **Failover Cluster Manager**.

7. Right click the target **node** for driver update from the node list. Select the **Start Cluster Service** from **More Actions**.
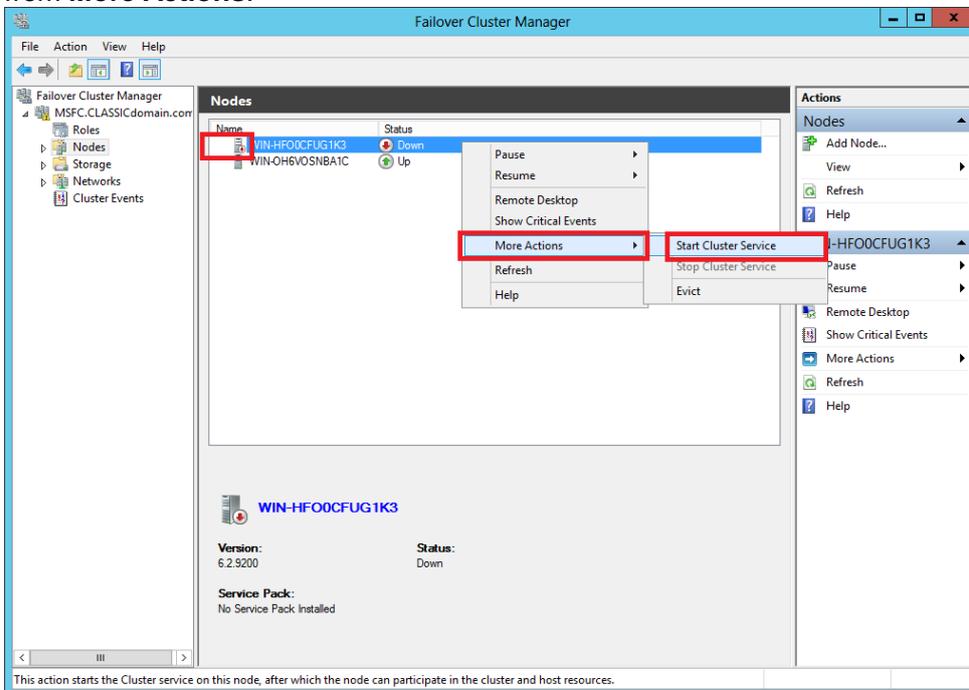
5.5. Start the EXPRESSCLUSTER service

Refer to the following URL.

http://www.nec.com/en/global/prod/expresscluster/en/support/manuals.html
  -> Reference Guide
    -> Chapter 10 The system maintenance information
      -> Replacing the network card
        * Perform the procedures beyond replacing network card procedure.
          In addition, no need to reset the network configuration.

6. Procedure of rewinding LAN driver

Important	・ Logon or sign in the system from local console by administrator account for executing the operation below. ・ If necessary, execute [3.4 Stop the WSFC node service], [3.5 Stop the EXPRESSCLUSTER service] and [3.6 Delete the team] in advance. ・ If physical network adapter or teaming adapter is bound into Hyper-V Virtual Switch, stop the guest OS and remove the binding before [3.6 Delete the team]. ・ After rewinding, execute [5 After LAN driver install] and reset the network setting.

6.1. New LAN driver uninstallation

Important	If team is already existed, refer to [3.6 Delete the team] for deleting all the teams before uninstallation.

1. Open the **Program and Function** icon on the Control Panel window.

2. Click the **Broadcom Gigabit Integrated Controller** in the list, right click it and select the **Uninstall**.
    Continue the uninstallation according to the popup message.

3. Restart the system.

6.2. Old LAN driver installation

1. Refer to the **installation guide** for installing **StarterPack**. After the installation, restart the system.

2. Check that the driver version is 17.2.0.0 or 17.4.0.1 by following [3.2 Confirmation of LAN driver version].

7. Notice

This section describes notice of LAN driver. Read the following notes or information before installation.

7.1. About the operation by remote desktop

For all the operation described in this document, it has to be performed from the local console. Remote desktop of OS or remote operation tool is not supported.

7.2. Account of operation

For all the operation described in this document, it has to be performed by logging on with an administrator account. In addition, open command prompt as Administrator.

7.3. For removing an adapter teaming

If you want to uninstall the LAN driver in the teaming environment, please remove the team adapter before the uninstallation. In addition, if the team is bound into Hyper-V virtual adapter, remove the binding before the removal of team.

7.4. Uninstall the driver

Note the setting information of network(IP Address etc...) and teaming(when is team environment) and default gateway. After LAN driver install or teaming setup (when was team environment), set it again.