LAN Driver Installation Guide (Broadcom v17.2/QLogic T7.12)

Target OS : Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 R2

Contents

1. Pre	face	.3
1.1.	The target server	3
1.2.	Target software	3
1.3.	Target Driver Version	3
1.4.	Registration Trademark	4
2. Wo	kflow LAN driver update process	5
3. Pre	paration	6
3.1.	Workflow preparation process	6
3.2.	Confirmation of LAN driver version	7
3.2.	1. Confirmation of 1G LAN driver version	.7
3.2.	2. Confirmation of 10G LAN driver version	. 8
3.3.	Preparation of module	.10
3.3.	1. Prepare the update module	10
3.3.	2. Prepare the recovery module	10
3.4.	Stop the WSFC node service	. 11
3.5.	Stop the EXPRESSCLUSTER service	.13
3.6.	Delete the team	.13
4. LAN	I driver update	15
4.1.	Existing LAN driver uninstallation	.15
4.2.	New LAN driver installation	.15
5. Afte	r LAN driver install	17
5.1.	Workflow after LAN driver install	.17
5.2.	Setup the Team	.18
5.3.	Reset LAN driver	.27
5.3.	1. Setting up common	27
5.3.	2. Setting up Optional LAN boards	27
5.4.	Start the WSFC node service	.28
5.5.	Start the EXPRESSCLUSTER service	.30
6. Roll	back procedure of LAN driver	31
6.1.	New teaming driver uninstallation	.31
6.2.	New LAN driver uninstallation	.32
6.3.	Old LAN driver installation	.32
7. Not	ice	33
7.1.	About the operation by remote desktop	.33
7.2.	Account of operation	.33
7.3.	Notice of using Hyper-V	.33
7.4.	Notice of using Team	.33
7.5.	Uninstall the driver	.33
7.6.	Notice of update	.33
7.7.	About the affixed number at the end of the 10G LAN board name	33
7.8.	Notice of using N8104-128/134	.33
7.9.	Notice of using teaming utility(BACS/QCS)	.33
8. App	endix	34
8.1.	List of stored path of recovery driver	.34

1. Preface

Thank you very much for purchasing our product.

This installation guide explains how to update Broadcom LAN driver(1G LAN driver). Besides, for 10G LAN driver, since some assets of Broadcom are sold to QLogic, the update of QLogic driver is also necessary. Therefore, this document also describes the driver update from Broadcom to QLogic.

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 Express5800/100 Series LAN Driver Module(V17.2/T7.12) (Windows Server 2008 R2/Windows Server 2008)" in "Other update".

1.2. Target software

Abbreviated designation	Software Production Name
Windows Server 2008 x86	Microsoft® Windows Server® 2008 Standard (32-bit) Microsoft® Windows Server® 2008 Enterprise (32-bit)
Windows Server 2008 x64	Microsoft® Windows Server® 2008 Standard (64-bit) Microsoft® Windows Server® 2008 Enterprise (64-bit)
Windows Server 2008 R2	Microsoft® Windows Server® 2008 R2 Standard Microsoft® Windows Server® 2008 R2 Enterprise

*1 Above information is based on 2016/03

Refer the Server Configuration Guide for the latest information.

The latest drivers are 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 driver version before and after update are listed in the following. Refer to [3.2.1 Confirmation of 1G LAN driver version] for the method of checking 1G driver version.

	E at anter vereien ie net neededaaj
Target 1G driver version (b57nd60a.sys/b57nd60x.sys)	After update 1G driver version (b57nd60a.sys/b57nd60x.sys)
14.6.0.7	
15.0.0.21	
15.2.0.8	
15.6.0.3	17.2.0.2
15.6.0.10	
16.2.0.4	
16.4.0.2	

In addition, the confirmation of 10G LAN driver version is not necessary before update.

1.4. Registration Trademark Microsoft, Windows, Windows Server, Hyper-V are registered trademark or trademarks of the Microsoft in the U.S. and other countries. QLogic is a trademark or registered trademark of QLogic Corporation. Broadcom, the pulse logo, Connecting everything, the Connecting everything logo, NetXtreme, Ethernet@Wirespeed, LiveLink™, and Smart Load Balancing[™] are among the trademarks of Broadcom Corporation and/or its affiliates in the United States, certain other countries, and/or the EXPRESSCLUSTER is registered trademark of the NEC corporation. In addition, TM and an R mark are not specified in the test.

2. Workflow LAN driver update process



3. Preparation



3.1. Workflow preparation process



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.

3.2.1. Confirmation of 1G LAN driver version

- 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.

Broadcom NetXtreme Gig	abit Ethernet Properties		
General Advanced Driv	er Details Resources Power Management		
Broadcom NetX	reme Gigabit Ethernet		
Driver Provider:	Broadcom		
Driver Date:	12/19/2013		
Driver Version:	16.4.0.2		
Digital Signer:	Microsoft Windows Hardware Compatibility Publisher		
Driver Details	To view details about the driver files.		
U <u>p</u> date Driver	To update the driver software for this device.		
<u>R</u> oll Back Driver	If the device fails after updating the driver, roll back to the previously installed driver.		
Disable	Disables the selected device.		
Uninstall	To uninstall the driver (Advanced).		
	OK Cancel		

4. Confirm the **File version**.

If the version is 17.2.0.2, no need to update the driver. Otherwise, update it. (The drivers are b57nd60a.sys and b57nd60x.sys for 64-bit OS and 32-bit OS respectively.)

river File Detai	ils
Broader	om NetXtreme Gigabit Ethernet
<u>D</u> river files:	
C:\Windows	s\system32\DRIVERS\b57nd60a.sys
Describer	Deadars Comercia
Provider:	Broadcom Corporation
File version:	16.4.0.2
Copyright:	Copyright 2000-2013, Broadcom Corporation.
Digital Signer:	Microsoft Windows Hardware Compatibility

3.2.2. Confirmation of 10G LAN driver version

Note

The confirmation of 10G LAN driver version is not necessary before update. Confirm that the version is correct after updating LAN driver.

- 1. Open the **Device Manager** icon on the Control Panel window.
- 2. Double-click on the target device name from [Device Manager]-[Network Adapter].
- 3. Click the Driver Details on the Driver tab.
- 4. Confirm the version in **Driver** tab as well as that in **Details**. If the version of LAN driver in use is one of the versions listed in the following table, the update will be completed successfully.

Device name	Driver file name	After update version
Broadcom BCM5709C NetXtreme II GigE ※1 (QLogic BCM5709C Gigabit Ethernet)	bxvbda.sys (64-bit OS) bxvbdx.sys (32-bit OS)	7.12.0.0
Broadcom BCM57711 NetXtreme II 10 GigE (QLogic BCM57711 10 Gigabit Ethernet)		
Broadcom BCM57800 NetXtreme II GigE (QLogic BCM57800 Gigabit Ethernet)	evbda.sys (64-bit OS)	7 12 2 0
Broadcom BCM57800 NetXtreme II 10 GigE (QLogic BCM57800 10 Gigabit Ethernet)	evbdx.sys (32-bit OS)	7.12.3.0
Broadcom BCM57810 NetXtreme II 10 GigE (QLogic BCM57810 10 Gigabit Ethernet)		
Broadcom BCM5709C NetXtreme II GigE (NDIS VBD Client) ※1 (QLogic BCM5709C Gigabit Ethernet (NDIS VBD Client))		
Broadcom BCM57711 NetXtreme II 10 GigE (NDIS VBD Client) (QLogic BCM57711 10 Gigabit Ethernet (NDIS VBD Client))	bxnd60a.sys	
Broadcom BCM57800 NetXtreme II GigE (NDIS VBD Client) (QLogic BCM57800 Gigabit Ethernet (NDIS VBD Client))	(64-bit OS) bxnd60x.sys	7.12.3.0
Broadcom BCM57800 NetXtreme II 10 GigE (NDIS VBD Client) (QLogic BCM57800 10 Gigabit Ethernet (NDIS VBD Client))	(32-bit OS)	
Broadcom BCM57810 NetXtreme II 10 GigE (NDIS VBD Client) (QLogic BCM57810 10 Gigabit Ethernet (NDIS VBD Client))		
Broadcom BCM57711 NetXtreme II 10 GigE iSCSI Adapter ※2 (QLogic BCM57711 10 Gigabit Ethernet iSCSI Adapter)	bxois.sys	7.12.0.0

*1 Broadcom BCM5709C NetXtreme II GigE is 1000GBASE-T, but is included in 10G LAN driver.

*2 Broadcom BCM57711 NetXtreme II 10 GigE iSCSI Adapter is not displayed when you invalidate iSCSI Offload Engine.
*3 The device name will become the one in bracket after update.

3.3. Preparation of module

3.3.1.Prepare the update module

- Create a temp folder directly under the system drive. (e.g., C:\temp\)
- Unzip GVO-007598-G01_xxxxxxxxxxxxxxxzip, copy the BCOM172 folder and QLC712 folder in the temp folder. (e.g., C:\temp\BCOM172\) (e.g., C:\temp\QLC712\)

3.3.2. Prepare the recovery module

For recovering to the original module, please use the DVD of EXPRESSBUILDER, support kit or the released module in Website.

Regarding the source for obtaining the recovery module, please refer to [8.1 List of stored path of recovery driver] to prepare it in advance.

Besides, if the recovery module is downloaded from Website, please extract it to an arbitrary folder. * If you want to use the DVD of EXPRESSBUILDER, DVD device is necessary for reading the DVD.

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**.

🐻 Failover Cluster Manager				_	8 ×
<u>File Action View H</u> elp					
🗢 🔿 🖄 🖬 🔽 🗊					
Failover Cluster Manager	Nodes			Actions	
Wisic-duster e. test.iocal E Services and applications	Name	Status		Nodes	
🕀 📑 Nodes	WSFC-Server1-E	The second secon	_	P Add Node	
E Storage	WSFC-Server2-E	🛞 Up		View	•
Cluster Events				Refresh	
				🛛 Help	
	[]				
	Version: Sta	atus:			
	Service Pack:				
				1	

4. Right-click the target **node** for driver update from the node list.

File Action View Help				
Þ 🔿 🖄 📅 🛛 🖬				
Failover Cluster Manager	Nodes			Actions
g raiver Custer Manager j wsrc-Custer Ananger B wsrc-Custer e.test.Local B Services and applications B P Notworks Storage B Networks B Custer Events	Nodes	Status: Up	us p Pause Resure Show the critical events for this cluster node More Actions Help	Actions Nodes Nodes Add Node View Refresh Stop Cluster Service Evict B. Resume B. Show the critical events f More Actions Refresh Help

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.

le Action View	Help					
•	💁 📴 📰 🕨 🔳 🕪 🖿					
Services (Local)	🔅 Services (Local)					
	Cluster Service	Name 🔺	Description Status	Startup Type	Log On As	
		Application Experience	Processes Started	Manual	Local System	
	Stop the service	Application Identity	Determines	Manual	Local Service	
	Restart the service	Application Information	Facilitates Started	Manual	Local System	
		Application Layer Gateway Service	Provides s	Manual	Local Service	
	Description:	Application Management	Processes i	Manual	Local System	
	Enables servers to work together as a	Background Intelligent Transfer Service	Transfers f Started	Automatic (D	Local System	
	cluster to keep server-based applications	Base Filtering Engine	The Base F Started	Automatic	Local Service	
	component failures. If this service is	Certificate Propagation	Copies use	Manual	Local System	
	stopped, dustering will be unavailable. If	Cluster Service	Englise on Charley	Automatic	Local System	
	this service is disabled, any services that	CNG Key Isolation	Th Start	Manual	Local System	
	explicitly depend of it will fail to start.	COM+ Event System	SL Stop	Automatic	Local Service	
		COM+ System Application	Mi Pause	Manual	Local System	
		Computer Browser	Mi Resume	Disabled	Local System	
		Credential Manager	Pr	Manual	Local System	
		Cryptographic Services	Pr All Tasks	Automatic	Network S	
		OCOM Server Process Launcher	Th	Automatic	Local System	
		Desktop Window Manager Session Manager	Pr Refresh	Automatic	Local System	
		O DHCP Client	Rt Properties	Automatic	Local Service	
		Diagnostic Policy Service	T	Automatic (D	Local Service	
		Diagnostic Service Host	Th Help	Manual	Local Service	
		Diagnostic System Host	The Diagno	Manual	Local System	
		Osk Defragmenter	Provides Di	Manual	Local System	
		Distributed Link Tracking Client	Maintains li Started	Automatic	Local System	
		Distributed Transaction Coordinator	Coordinate Started	Automatic (D	Network S	
		O DNS Client	The DNS Cl Started	Automatic	Network S	
		Encrypting File System (EES)	Provides th	Manual	Local System	
		Extensible Authentication Protocol	The Extens	Manual	Local System	
		Eunction Discovery Provider Host	The FDPH	Manual	Local Service	
		Eunction Discovery Resource Publication	Publishes t	Manual	Local Service	
		Group Policy Client	The servic Started	Automatic	Local System	
		Health Key and Certificate Management	Provides X	Manual	Local System	
		Human Interface Device Access	Enables ge	Manual	Local System	
		O Hyper-V Data Exchange Service	Provides a Started	Automatic	Local Service	

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

luster Service Pr	operties (Local Computer)	×
General Log On	Recovery Dependencies	
Service name:	ClusSvc	
Display name:	Cluster Service	
Description:	Enables servers to work together as a cluster to keep server-based applications highly available.	
Path to executabl C:\Windows\Clus	e: ter\clussvc.exe -s	
Startup type:	Disabled	
Help me configure	e service startup options.	
Service status:	Stopped	
<u>S</u> tart	Stop <u>P</u> ause <u>R</u> esume	
You can specify t from here. Start para <u>m</u> eters:	he start parameters that apply when you start the service	
	OK Cancel <u>Apply</u>	

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



1. Open the **Broadcom Control Suite** icon on the Control Panel window. **Broadcom Advanced Control Suite** starts.

2. Set the **Filter** to **TEAM VIEW**, right-click the target team adapter, and then select **Delete Team** from the short-cut menu.

rer View 🗗	Information Statistics	
WD Hosts	Property	Value
🗄 🔝 R120d-1E	🖃 Team Properties	
E Teams	- Team Name	Team 1
	- Team Type	Smart Load Balancing(TM) and Failover
Edit Team	 Team Offload Capabilities 	LSO, CO
🕂 🜌 🛛 <u>D</u> elete Team 🔤 🔤	- Team MTU	1500
Eallback BASP Virtual Adapter)	- Driver Name	Baspxp32.sys
🖶 📂 I Add VLAN	- Driver Version	6.3.31
	Driver Date	6/15/2011
UUU/I Broadcom NetXtreme Gigabit Ethernet	- Probe Interval	2000
🏭 [0008] Broadcom NetXtreme Gigabit Ethernet #2	- Probe Max Retries	5
1.1 S.Z.	- Probe Vlan ID	0
	- Team Probe Target 1	
	Team Properties Displays information about the team.	
		· · · · · · · · · · · · · · · · · · ·

When the below message is displayed, select [Yes]. "The selected team will be deleted from system, do you want to proceed? NOTE: Applying the changes will temporarily interrupt the network connection. The process may take several minutes and the connection will resume afterwards."

3. Double-click the following file (this example is using the C drive)

C:\temp\BCOM172\lan\AddLVlanStats.vbs

Note

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

4. When the following message is displayed, click the **OK**

Registry Addition Completed, Reboot the system

5. Restart the system Team removal is now completed.

> Mar 2016 808-882328-317-A

4. LAN driver update

Refer the notice before driver update.



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.
- Click the Broadcom Gigabit Integrated Controller in the list, right-click it and select Uninstall. Continue the uninstallation according to the popup message.
- Click the Broadcom NetXtreme II Driver Installer in the list, right-click it and select Uninstall. Continue the uninstallation according to the popup message.
- 4. The dialogue of requesting the restart of system is displayed. Click on [Yes] to 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\BCOM172\

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

- 2. Enter the following, and then press **Enter** key.
 - Windows Server 2008 x86 INSTALL_WS2008x86.bat
 - Windows Server 2008 x64 INSTALL_WS2008x64.bat
 - Windows Server 2008 R2 INSTALL_WS2008R2.bat
- 3. When the following message is displayed, restart the system. Installation Completed!

4. Enter the following, and then press Enter key.

cd C:\temp\QLC712\

- 5. Enter the following, and then press **Enter** key.
 - Windows Server 2008 x86 INSTALL_WS2008x86.bat
 - Windows Server 2008 x64 INSTALL_WS2008x64.bat
 - Windows Server 2008 R2 INSTALL_WS2008R2.bat
- 6. When the following message is displayed, restart the system. **Installation Completed!**
- 7. Perform [3.2 Confirmation of LAN driver version] to confirm that the 1G LAN or 10G LAN driver version is correct after the update.

5. After LAN driver install

•Logon the system from local console by administrator account for executing the operation below.

Important

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



5.2. Setup the Team

Note

For 10G LAN board, if you want to create a team after updating the LAN driver, you have to do it from [QLogic Control Suite](QCS). The procedures of [Broadcom Advanced Control Suite] (BACS) and [Broadcom Control Suite] in the following are exactly same as [QLogic Control Suite] so you can create Team by the following procedures.

- 1. Open the **Broadcom Control Suite** icon on the Control Panel window. **Broadcom Advanced Control Suite** starts.
- 2. Set the **Filter** to **TEAM VIEW**, right-click the target team adapter, and then select **Create Team** from the short-cut menu.

File View Action Filter Control Julie 4			
Filter: TEAM VIEW	s 🔽 Driver Information		
Explorer View 6	Information Configurations	Diagnostics	Statistics
🗄 000 Hosts	Property		Value
→. s5000000000000000000000000000000000000	- Vital Signs		N
learne	MAC Address		50E54986AD60
	Permanent MAC Address		50E54986AD60
	IPv4 Address		169.254.156.174
UUU/] Broadcom NetXtreme Gigabit Ethernet	- Offload Capabilities		LS0,CO
- 📆 [0008] Broadcom Ne <u>Create Team</u> net #2	MTU		1500
Manage Teams	 Driver Information 		9.
<u>A</u> dd to a Team	- Driver Version		15.0.9
Create a <u>V</u> LAN	Driver Date		10/3/2011
	Driver Name		b57xp32.sys
	- Driver Status		Loaded
	Vital Signs The Vital Signs section of the network adapters that are inst adapter and general network co	Information tab h alled in your system nectivity.	as useful information about the em, such as the link status of the
Λ		/c	
BROADCOM.		1	

The Broadcom Teaming wizard appears.

3. Click the Next.





4. Enter the specified name in the team name textbox, and then click the Next.

Broadcom Teaming Wizard		<u>?×</u>
Creating/Modifying a Team: Team Nan You must assign your team a unique na	në Ime.	BROADCOM
Enter the name for the team:		
Team 1		
A team name has a maximu &&¥/#?◇ [™]	m length of 39 characters. The name can use any sy	mbolic character except
Cancel	< Back Next >	Preview 💼

Select the type of team that you want to create from Team Type, and then click the **Next**. 5.

Creating/Modifying a Team: Team Type Select the type of team you want to create.	BROADCOM.
Team Type	
Smart Load Balancing(TM) and Failover (SLB)	
C 802.3ad Link Aggregation using Link Aggregation Control Protocol (LACP)	
C FEC/GEC Generic Trunking	
Enable HyperV Mode TCP Offload Engine (TOE) support is supported only on a SLB team type. If a team type of connections will be offloaded.	her than SLB is selected, no TCP
Cancel < Back Next	Preview 💷

· If FEC/GEC Generic Trunking is selected, the following message will be displayed.

Note

- Then Click [OK]. "Verify that the network switch connected to the team members is configured correctly for the team type."
- •When using Hyper-V, check "Enable HyperV Mode" box.

6. Select the adapters that compose the team, click the **Add** to add them to the **Team Members** area, and then click the **Next**.

008] Broadcom NetXtreme Gigabit Ethernet #2 No Yes Yes No Yes 5.1 1500	
Add	Remove
Team Members TOE LSO CO RSS aamab NDIS MTU	J
0007] Broadcom NetXtreme Gigabit Ethernet No Yes Yes No Yes 5.1 1500	

Note When selecting FEC/GEC Generic Trunking, skip to step 15.

7. Proceed according to your desired team type.

Smart Load Balancing and Failover(without Standby Member)
 I. Select the Do not configure a standby member.

II. Click the Next.

Broadcom Teaming Wizard	<u>?×</u>
Creating/Modifying a Team: Designating a Standby Member Do you want to designate an available adapter as a standby member?	BROADCOM.
\circ Optionally select if you want a standby member for the team.	
© Do not configure a standby member.	
C Use the following member as a standby member:	
[0007] Broadcom NetXtreme Gigabit Ethernet	<u>_</u>
Enable Auto-Fallback Disable mode	
Qancel <back next=""></back>	Preview 可

Smart Load Balancing (Auto-Fallback Disable)(with Standby Member)

- I. Select the Use the following member as a standby member.
- II. Select the adapter as a standby member from the pull-down menu.
- III. Select the Enable Auto-Fallback Disable mode.
- IV. Click the Next.

reating/Modifying a leam: Designating a Standby Member Io you want to designate an available adapter as a standby member?	BROADCOM.
Optionally select if you want a standby member for the team.	
C Do not configure a standby member.	
Use the following member as a standby member: 1	
[0008] Broadcom NetXtreme Gigabit Ethernet #2	F
▼ Enable Auto-Fallback Disable mode 3	

Important

- Check "Enable Auto-Fallback Disable mode" box again while editing the team.
 Always select the Enable Auto-Failback Disable mode.
- 8. When configuring LiveLink, select the **Yes** and click the **Next** and go to step 9. When LiveLink is unnecessary, select the **No** and click the **Next** and then go to step 15.

Creating/Modifying a Team: Configuring LiveLink Do you want to configure LiveLink?	BROADCOM
Configure LiveLink?	
LiveLink detects loss of network connectivity beyond the switch and routes traffic only through that have a live link.	i team members
Cancel < Back Next >	Preview 🗾

9. You can use the default setting for **Probe interval** and **Probe maximum retries**. If you want to change these values, select a value from each pull-down menu, click the target probe (**Probe Target** *xx*), and then click the **Edit Target IP Address...**.

reating/Modifying a Team: Conf onfigure LiveLink(TM) attributes	iguring LiveLink (continued)		BROADCOM
robe Interval (seconds)	2		
robe Maximum Retries	5	_	
robe VLAN ID (Optional: 0-4094)	0		
Target		IP Address	
Probe Target 1			
Probe Target 3			*
 As based over 1 institute over 	Edit Target IP Address		

The setting range of Probe interval (link packet transmission interval) is 1 to 60(units: seconds).
 The setting range of Probe maximum retries (link packet retry count) is 1 to 10(times).
 For the time of switching the path by the detection of communication path error by LiveLink, the maximum value is (Probe maximum retries + 1) x Probe interval (seconds). However, If link-down is detected, failover will be happened immediately after link-down. The minimum recovery time after link-down is Probe interval (seconds).
 When using Tagged VLAN, input VLAN ID to "Probe VLAN ID".

10. In the **Target** *xx* text box, enter the IP address of the alive monitoring server, and then click the **OK**.

Team 1	
[
- [
[
1	
ner an IPv4 or IPv6 address for the prob	e targets IP address field.
en an 11 v4 or 11 vo audress tor the prop	
•	Team 1

 Target xx must be the same broadcast domain as that specified for the data communication IP and LiveLink communication IP (described in step 13).
 Specify and IP address that exists on the network and it can be communicated.

Important

 If the specified ID address in Target xx cannot be communicated, the team will also not be able to communicate. It is therefore recommended that you specify multiple IP addresses using Probe Target. Up to four IP addresses can be specified.

11. Click the Next

robe Interval (seconds)	2	•	
robe Maximum Retries	5	•	
robe VLAN ID (Optional: 0-4094)	0		
Target		IP Address	-
Probe Target 1 Probe Target 2			
Probe Target 3			<u>•</u>
	Edit Target IP A	Address	

12. Select an adapter from the **Team Members** area, and then click **Edit Member IP** Address....

configure the IP address for each team memb	per,	BROADCO
Target Members	IPv4 Address	IPv6 Address
0007] Broadcom NetXtreme Gigabit Ethernet		
0008] Broadcom NetXtreme Gigabit Ethernet #2		
Ľ		
 Every member must have a static IP a 	diffees	
Every member must have a static IP a	ddress.	

13. Enter the IP address used for LiveLink communication, and then click the OK.



Important

- Specify an IP address for LiveLink communication for all the adapter members of team. The address specified here is the IP address for LiveLink communication. Specify a different IP address for data communication.
- For Target xx, specify an unique and communicating IP address on the network.

14. Click the Next.

Target Members	IPv4 Address	IPv6 Address
007] Broadcom NetXtreme Gigabit Ethernet		
108] Broadcom NetXtreme Gigabit Ethernet #2		

15. Make sure that **Skip manage VLAN** is selected under **Manage VLAN**, and then click the **Next**.

It is an example of not using VLAN.

iii Broadcom Teaming Wizard	<u>? ×</u>
Greating/Modifying a VLAN: Configure VLAN Support Specify whether you want to create or delete a VLAN.	BROADCOM.
Manage VLAN	
C Add VLAN	
C Edit VLAN	
Skip Manage VLAN	
Cancel < Back Next	Preview 🗾

16. Make sure that **Commit changes to system and Exit the wizard** is selected under **Commit changes**, and then click the **Finish**.



17. Restart the system.

- After the system is started up, follow step 1 to start the Broadcom Control Suite(Open the Broadcom Control Suite icon from Control Panel) to confirm that the team is created. The team settings cab be confirmed on the right Information window.
 - Control Suite 4

 Even More Actor: File Control Tools Leans COSI Help

 File Control Tools Cost Help

 File Control Cost Help

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 File Control Cost Help

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 File Control Cost Help

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 File
 - Smart Load Balancing and Failover(Without Standby Member)

Smart Load Balancing (Auto-Fallback Disable)(With Standby Member)

B Here	Property - Team Properties	Value		
😑 🏬 Teams	 Team Properties 			
E Teams				
	- Team Name	Team 1		
Charles Transit	Team Type	SLB (Auto-Fallback Disable)		
	- Team Mode	Primary		
BASP Virtual Adapters	- Team Offload Capabilities	LSO, CO		
Team 1 ([0020] BASP Virtual Adapter)	- Team MTU	1500 Baspyp32.sys 6.3.31 6/16/2011 2000		
St. Cimero Adapters	- Driver Name			
C 10 Frinday Hudpiters	Driver Version			
ID007] Broadcom NetXtreme Gigabit Ethernet IStandby Adapters	Driver Date			
	- Probe Interval			
[10018] Browhom NetStreme Girabit Ethernet #2	- Probe Max Retries	5		
Konon reasons and the reasons and the reasons we	- Probe Vian ID	0		
	- Team Probe Target 1			
	Team Properties Displays information about the team.			

FEC/GEC Generic Trunking



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.

5.3.1.Setting up common

- 1. Open the **Device Manager** icon on the Control Panel window.
- 2. Spread [Network Adapter] to double-click on the target adapter. Then the property of the network adapter is displayed.
- 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.

C1	Advanced	Dime	Datatla	D	
General	Advanced	Driver	Details	Power Manager	ment
The foll the prop on the r	owing proper perty you war ight. v	ties are a t to char	vailable f nge on th	or this network ad e left, and then se Value:	lapter. Click elect its value
			_		
ARP C EEE C Ethern Row C Interruj Jumbo Large Large Maxim Netwo NS Off Priority Receiv	ffload ontrol Policie: @WireSpe ontrol pt Moderatior Mtu Send Offload Send Offload um Number o rk Address load & VLAN re Buffers	s v V2 (IPv4 V2 (IPv6 f RSS Qu	i) j) jeues		

4. Restart the system.

5.3.2. Setting up Optional LAN boards

Using N8104-128 with the server, **iSCSI Offload Engine** must be disabled. Follow the procedure below to set it.

Note

If these procedures are performed after [6 Rollback procedure of LAN driver], please consider [QLogic Control Suite] as [Broadcom Control Suite] or [Broadcom Advanced Control Suite], [Broadcom BCM57711 NetXtreme II 10 GigE #xx] as [QLogic BCM57711 10 Gigabit Ethernet #xx] in the following procedures.

- 1. Double-click the **QLogic Control Suite** icon on the Control Panel window. **QLogic Control Suite** starts.
- 2. Set Filter to ALL VIEW, select QLogic BCM57711 10 Gigabit Ethernet # xx under Explorer View the Adapter xx (BCM57711 A0) Port x.

- 3. Select **Configurations** tab at the right side screen and then expand **Resource Reservations**.
- 4. Click the [Configure] button on the **Click the button to configure**. The **Hardware and Resource Configuration Wizard** appears.
- 5. Remove a checkmark from [iSCSI] under **Protocols**, if checked. Select [Next], and then click the [Apply] button.
- When the following message appears, click [OK].
 Applying the changes will temporarily interrupt the network connection. The process may take several minutes and the connection will resume afterwards.
 Do you want to continue?
- 7. Complete steps 2 to 6 for each N8104-128 network adapter. Then, close the **QLogic Control Suite**.
- 8. Restart the system. Setup is now completed.

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**.

Services (Local)	🖏 Services (Local)						
	Cluster Service	Name 🔺	Description	Status	Startup Type	Log On As	
		Application Experience	Processes	Started	Manual	Local System	
	Description:	Application Identity	Determines		Manual	Local Service	
	Enables servers to work together as a	Application Information	Facilitates	Started	Manual	Local System	
	highly available, regardless of individual	Application Layer Gateway Service	Provides s		Manual	Local Service	
	component failures. If this service is	Application Management	Processes i		Manual	Local System	
	stopped, clustering will be unavailable. If	Background Intelligent Transfer Service	Transfers f	Started	Manual	Local System	
	this service is disabled, any services that	Base Filtering Engine	The Base F	Started	Automatic	Local Service	
	copied y depend on re will fail to start.	Certificate Propagation	Copies use		Manual	Local System	
		Cluster Service	Enables se		Disabled	Local Swatem	
		CNG Key Isolation	The CNG k		Manual Sta	art n	
		COM+ Event System	Supports S	Started	Automat Sto	PP e	
		COM+ System Application	Manages t		Manual Par	use m	
		Computer Browser	Maintains a		Disabled Re	sume m	
	Credential Manager	Provides s		Manual Re	start m		
		Cryptographic Services	Provides fo	Started	Automat All	Tasks	
		OCOM Server Process Launcher	The DCOM	Started	Automat	m	
		Desktop Window Manager Session Manager	Provides D	Started	Automat Re	fresh m	
		OLDHCP Client	Registers a	Started	Automat Pr	operties e	
		Diagnostic Policy Service	The Diagno	Started	Automat	e	
		Diagnostic Service Host	The Diagno		Manual He	lp e	
		Diagnostic System Host	The Diagno		Manual	Local System	
		Ok Disk Defragmenter	Provides Di		Manual	Local System	
		Distributed Link Tracking Client	Maintains li	Started	Automatic	Local System	
		Distributed Transaction Coordinator	Coordinate	Started	Automatic (D	Network S	
		ONS Client	The DNS Cl	Started	Automatic	Network S	
		Encrypting File System (EFS)	Provides th		Manual	Local System	
		Extensible Authentication Protocol	The Extens		Manual	Local System	
		Eunction Discovery Provider Host	The FDPH		Manual	Local Service	
		Eunction Discovery Resource Publication	Publishes t		Manual	Local Service	
		Group Policy Client	The servic	Started	Automatic	Local System	
		Health Key and Certificate Management	Provides X		Manual	Local System	
		Human Interface Device Access	Enables ge		Manual	Local System	
		Hyper-V Data Exchange Service	Provides a	Started	Automatic	Local Service	

3. Change the Startup type to Automatic on General Tab then select OK.

uster Service P	roperties (Local Computer)					
General Log On	Recovery Dependencies					
Service name:	ClusSvc					
Display name:	Cluster Service					
Description:	Enables servers to work together as a cluster to keep server-based applications highly available.					
Path to executat C:\Windows\Clu	ole: ster\clussvc.exe -s					
Startup type:	Automatic					
Help me configu	re service startup options.					
Service status:	Stopped					
<u>S</u> tart	Stop <u>P</u> ause <u>R</u> esume					
You can specify from here.	the start parameters that apply when you start the service					
Start parameters						

- 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. Rollback procedure of LAN driver

- Logon 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.

Important

- 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 rollback, execute [5 After LAN driver install] and reset the network setting.

6.1. New teaming 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 Management Programs** in the list, right-click it and select the **Uninstall**.

Continue the installation according to the popup message.

- 3. A popup message of restarting the system is displayed. Click OK.
- 4. Click the **QLogic Management Programs** in the list, right-click it and select the **Uninstall**. Continue the installation according to the popup message.
- 5. The following message is displayed. Choose Automatically close applications and attempt to restart them after setup is complete. and then click on [OK].

Automatically close application	s and attempt to restart them a
setup is complete.	
Do <u>n</u> ot close applications. (A F	Reboot may be required.)
	Cancel

- 6. A popup message of restarting the system is displayed. Click **OK**.
- 7. Go to [6.2 New LAN driver uninstallation] without restarting the system.

6.2. New LAN driver uninstallation

- 1. Open the **Program and Function** icon on the Control Panel window.
- Click the Broadcom Gigabit Integrated Controller in the list, right-click it and select Uninstall. Continue the uninstallation according to the popup message.
- 3. Click the **QLogic Driver Installer** in the list, right-click it and select **Uninstall**. Continue the uninstallation according to the popup message.
- 4. The dialogue of requesting the restart of system is displayed. Click on [Yes] to restart the system.

6.3. Old LAN driver installation

Install the LAN driver by following the below procedures and [8.1 List of stored path of recovery driver].

- > When the old version is the one at the time of shipment
 - 1. Insert the [EXPRESSBUILDER] DVD in the optical device.
 - 2. Refer to the **installation guide** for installing **Starter Pack**. After the installation, restart the system.
 - 3. After the system is restarted, confirm that the version is the one before update by following [3.2 Confirmation of LAN driver version].
 - 4. After the confirmation of version, perform [5 After LAN driver install].
- > When the old version is released from Website
 - 1. Refer the corresponding installation guide from website to install the driver. Restart the system after the installation.
 - After the system is restarted, confirm that the version is the one before update by following [3.2 Confirmation of LAN driver version].
 - 3. After the confirmation of version, perform [5 After LAN driver install].

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. Notice of using Hyper-V

If you use Hyper-V and not use WSFC or EXPRESSCLUSTER, shut down all the Guest OS before the LAN driver installation.

7.4. Notice of using Team

If you want to uninstall the LAN driver in 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.

7.5. Uninstall the driver

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

7.6. Notice of update

The network is disconnected when updating the LAN driver. Please stop all the jobs of using network before the update.

7.7. About the affixed number at the end of the 10G LAN board name

The affixed number at the end of the adapter name might be greater than two digits. There is no problem in the quality and operation as the network communication.

Example: QLogic BCM57711 10 Gigabit Ethernet (NDIS VBD Client) #54 QLogic BCM57810 10 Gigabit Ethernet (NDIS VBD Client) #297

7.8. Notice of using N8104-128/134

If the setting of Flow Control of N8104-128/134 is not Disabled, NEC recommends the below setting. For N8104-128, set Jumbo Mtu(Jumbo Packet) to be less than 4000 bytes. For N8104-134, set Jumbo Mtu(Jumbo Packet) to be less than 7000 bytes.

7.9. Notice of using teaming utility(BACS/QCS)

If you want to create or remove team from teaming utility, you have to login the system by the account with installed teaming utility.

8. Appendix

8.1. List of stored path of recovery driver

Target device	Target OS	Driver version	Source for obtaining driver
NEC Express5800/R120d-1M Wi NEC Express5800/R120d-2M Wi	NEC Express5800/R120d-1M Windows Server 2008 x86 NEC Express5800/R120d-2M Windows Server 2008 x64 Windows Server 2008 R2 Windows Server 2008 R2	14.6.0.7	EXPRESSBUILDER of server (Version at the time of shipment)
		15.2.0.8	http://www.58support.nec.co.jp/global/download/421049-B01/index.html
		15.6.0.10	http://www.58support.nec.co.jp/global/download/421575-B01/index.html
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html
NEC Express5800/R120e-1M Windows Server 2008 NEC Express5800/R120e-2M Windows Server 2008 Windows Server 2008	Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 R2	15.6.0.10	EXPRESSBUILDER of server (Version at the time of shipment)
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html

NEC Express5800/E110d-1 NEC Express5800/GT110d	Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 R2	14.6.0.7	EXPRESSBUILDER of server (Version at the time of shipment)
NEC Express5800/R110d-1E		15.2.0.8	http://www.58support.nec.co.jp/global/download/421049-B01/index.html
		15.6.0.10	http://www.58support.nec.co.jp/global/download/421575-B01/index.html
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html
NEC Express5800/GT110e NEC Express5800/GT110e-S	Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 P2	15.0.0.21	EXPRESSBUILDER of server (Version at the time of shipment)
		15.2.0.8	http://www.58support.nec.co.jp/global/download/421049-B01/index.html
		15.6.0.10	http://www.58support.nec.co.jp/global/download/421575-B01/index.html
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html

NEC Express5800/R120d-1E NEC Express5800/R120d-2E	Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 R2	15.0.0.21	EXPRESSBUILDER of server (Version at the time of shipment)
		15.2.0.8	http://www.58support.nec.co.jp/global/download/421049-B01/index.html
		15.6.0.10	http://www.58support.nec.co.jp/global/download/421575-B01/index.html
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html
NEC Express5800/R120e-1E NEC Express5800/R120e-2E	Windows Server 2008 x86 Windows Server 2008 x64	15.6.0.10	EXPRESSBUILDER of server (Version at the time of shipment)
windows Serve	Willdows Server 2000 K2	16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html
NEC Express5800/T120d	Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 R2	15.0.0.21	EXPRESSBUILDER of server (Version at the time of shipment)
		15.2.0.8	http://www.58support.nec.co.jp/global/download/421049-B01/index.html
		15.6.0.10	http://www.58support.nec.co.jp/global/download/421575-B01/index.html
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html
NEC Express5800/T120e	Windows Server 2008 x86 Windows Server 2008 x64	15.6.0.10	EXPRESSBUILDER of server (Version at the time of shipment)
	WINDOWS Server 2006 K2	16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html

NEC Express5800/E120d-1	Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 R2	15.2.0.8	EXPRESSBUILDER of server (Version at the time of shipment)
		15.6.0.10	http://www.58support.nec.co.jp/global/download/421575-B01/index.html
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html
NEC Express5800/E120d-M	Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 R2	15.2.0.8	EXPRESSBUILDER of server (Version at the time of shipment)
		15.6.0.10	http://www.58support.nec.co.jp/global/download/421575-B01/index.html
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html
NEC Express5800/E120e-M	Windows Server 2008 x86 Windows Server 2008 x64 Windows Server 2008 P2	15.6.0.10	EXPRESSBUILDER of server (Version at the time of shipment)
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html
NEC Express5800/T110f-E NEC Express5800/T110f-S	Windows Server 2008 x86 Windows Server 2008 R2	15.6.0.3	EXPRESSBUILDER of server (Version at the time of shipment)
		15.6.0.10	http://www.58support.nec.co.jp/global/download/421575-B01/index.html
		16.2.0.4	http://www.58support.nec.co.jp/global/download/421987-B01/index.html

NEC Express5800/T110g-E NEC Express5800/T110g-S NEC Express5800/R110g-1E	Windows Server 2008 x86 Windows Server 2008 R2	16.2.0.4	EXPRESSBUILDER of server (Version at the time of shipment)
NEC Express5800/R120f-1M NEC Express5800/R120f-2M	Windows Server 2008 x86 Windows Server 2008 R2	16.4.0.2	EXPRESSBUILDER of server (Version at the time of shipment)
NEC Express5800/R120f-1E	Windows Server 2008 x86 Windows Server 2008 R2	16.4.0.2	EXPRESSBUILDER of server (Version at the time of shipment)
NEC Express5800/E120f-M	Windows Server 2008 R2	16.4.0.2	EXPRESSBUILDER of server (Version at the time of shipment)
NEC Express5800/R120f-2E NEC Express5800/T120f	Windows Server 2008 x86 Windows Server 2008 R2	16.4.0.2	EXPRESSBUILDER of server (Version at the time of shipment)