## NEC Express5800 series

## Unexpected device driver application of Intel(R) Management Engine Interface caused by Windows Update (\*Note 3)

\*Note 3: The device driver that causes this issue was removed from Windows Update on July 6, 2017. This update will no longer be displayed in Windows Update.

We would like to thank you for your patronage and your trust in our product, Express5800 series. On the following models of Express5800 series servers, an unexpected device driver has been applied as <u>Intel(R)</u> Management Engine Interface causing failures when installing Windows Server 2012 (hereafter referred to as WS) or WS2012R2 (Note 1).

Chapter 2 explains procedure to confirm and fix these failures. Please handle your issues referring to the description.

(On the model in Group 3 in the Table 1, no failure has been reported, however, it is recommended to fix the driver because unexpected device driver has been applied.)

(\*Note 1: On WS2016, the published drivers themselves can be applied to the server, however, not displayed in Windows Update.)

1 Target models, phenomena, and Windows Update that can be a cause.

1.1 Target models and phenomena

Table 1

Na dal Madal na ma			
model model name Ph	Phenomena		
group			
Group 1       Express5800/R110f-1E, T110f-S, T110f-E       •         Express5800/R110g-1E, T110g-S, T110g-E       •       •         T110g-E       •       •	When attempting to restart the server from Windows, The server turns (DC) off instead of restarting (occurrence frequency is 100%). Wake On LAN fails sometimes (occurrence frequency is unknown). The following logs may be registered to the system event log of Windows (occurrence frequency is unknown) (*Note 2). CPU internal error occurred. Date: YYYY/MM/DD HH:MM:SS CPU Number: 0x01		

(Continued to the next page)

Note 2. Examples of system event log on Windows.

Source: ESMCommonService Event ID: 1400

CPU internal error occurred. Date: YYYY/MM/DD HH:MM:SS CPU Number: 0x01

Table 1 (continued)

Model	Model name	Phenomena
group		
Group 2	Express5800/T110h, T110h-S, R110h-1 Express5800/T110i, T110i-S, R110i-1	<ul> <li>The following logs may be registered to the System event log of Windows (occurrence frequency is unknown) (*Note3).</li> <li>Sensor Error has been detected.</li> <li>Sensor Number: 8Ah</li> <li>The following logs may be left on the System event log of Windows (occurrence frequency is unknown) (*Note4).</li> <li>The system might have broken down. There is no response from the sensor.</li> <li>Sensor Number: 8Ah</li> <li>Sensor Number: 8Ah</li> </ul>
Group 3	Express5800/R120f-2E, T120f R120g-2E, T120g	No failure is confirmed.
	Express5800/R120f-1M, R120f-2M R120f-1E Express5800/R120g-1M, R120g-2M R120g-1E	No failure is confirmed.
	Express5800/E120f-M Express5800/E120g-M	No failure is confirmed.
	Express5800/B120f, B120f-h Express5800/B120g-h	No failure is confirmed.

Note 3: Examples of system event log on Windows.

Table	Table 2 Target devices (*) of the device errors on I2C Bus of Group 2			
	Sensor number	Sensor name	Note	
	28h	POWER		
	29h	Processor1 POWER		

32h	PSU1 temp1	
3Bh	PSU2 temp1	In Redundant power
		supply configuration
61h	Power Supply1	
62h	Power Supply2	In Redundant power
		supply configuration
70h	PSU FAN1	
78h	PSU FAN2	In Redundant power
		supply configuration
A2h	Proc1 Margin	
A6h	Chipset Temp	

(\*Not all of the failures occur simultaneously.)

Note 4: Examples of system event log on Windows.

#### 1.2 Windows Update that causes failures

The following have been confirmed to cause the failures.

- Intel System 11/16/2016 12:00:00 AM 11.6.0.1042
- Intel System 9/15/2016 12:00:00 AM 11.6.0.1032
- Intel System 7/8/2016 12:00:00 AM 11.5.0.1019

#### Display on Windows Update

When the responsible device driver is applied, the display will be as follows on Device Manger. (Device Manager [View] -> [Show hidden device]

Right click on Intel® Management Engine Interface -> Properties -> [Driver] tab)

£	Device Manager		• "Driver" Tab		
File Action View Help				<b>v</b>	
	Inte	I(R) Management Engine Inte	erface Properties		
⊿ I System devices ▲ ACPI Fixed Feature Button	Genera	Driver Details Events Resource	es		
ACPI Power Button		Intel(R) Management Engine Interfac	ce		
ACPI Processor Aggregator		Driver Provider: Intel	I		
Composite Bus Enumerator Direct memory access controller		Driver Date: 2016/09/15		Followin	a versions.
High precision event timer		Driver Version: 11.6.0.1032		11.6.0.1	032
Intel(R) 8 Series/C220 Series Managemen III Intel(R) 8 Series/C220 Series PCI Express R	t Engine Interface - 8C3B oot Port #1 - 8C10	Digital Signer: Microsoft Windo Publisher	ws Hardware Compatibility	11.6.0.1	042
Intel(R) 8 Series/C220 Series PCI Express R I Intel(R) 8 Series/C220 Series PCI Express R	oot Port #5 - 8C18	Driver Details To view details abo	out the driver files.	11.5.0.1	.019
Intel(R) 8 Series/C220 Series SMBus Conti IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	oller - 8C22	odate Driver To update the drive	er software for this device.		
Intel(R) C224 Series Server Standard SKU Image: Intel(R) Management Engine Interface	PC Controller - 8C54	If the device fails a back to the previou	fter updating the driver, roll usly installed driver.		
I Intel(R) Xeon(R) processor E3-1200 v3 DR I LSI MegaRAID Virtual Device	AM Controller - 0C08	Disable Disables the select	ed device.		
1월 Microsoft ACPI-Compliant Power Meter 1월 Microsoft ACPI-Compliant System 1월 Microsoft Basic Display Driver		Uninstall To uninstall the driv	ver (Advanced).		
Microsoft Basic Render Driver	Intel <sup>®</sup> Management		OK Cancel		
<ul> <li>Microsoft Hardware Error Device</li> <li>Microsoft System Management BIOS Drive</li> <li>Microsoft Virtual Drive Enumerator</li> </ul>	Engine Interface Right Click		~		

#### 2. Fix procedure

#### 2.1. Flow of fix procedure

This Chapter explains the fix procedure of Management Engine Interface driver.



### 2.2 Preparations

This chapter explains prerequisite procedure for fixing Management Engine Interface driver.

Important	Execute the following procedure by logging on as a user with an administrative privilege (administrator, etc.). Performing this procedure by using OS remote desktop function is not supported. (Under the failure environment where computer turns off instead of restarting, the PC must be turned on after this fixing procedure. When failing to OS start, it is difficult to handle remotely, therefore, perform it on local console.) In the environment where CLUSTERPRO is not used but Hyper-V is used, all the guest OS should be shut down and the auto-starting setting should be canceled before this fix procedure. Before performing this procedure, make sure to close other windows, etc. In the case that your problem is not solved after performing this procedure, there may be other problems. Contact the store where you purchased this product or contact service representative.

- 2.2.1 Confirmation of the Management Engine Interface driver This chapter explains how to check Management Engine Interface driver. Check the
  - Management Engine Interface driver and its version referring to the following procedure.
- (1) Start [Device Manager] and select [View] -> [Show hidden devices].Then, select [System devices] and display the system device.

£	De 🚔
File Action View Help	File Action View Help
🗇 🔿 🔣 💽 Devices by type	
⊿ ♣ 23U-RBI Devices by connection	⊿ 🚑 23U-RBD2R
Image: Com Resources by type	Computer
Disk Resources by connection	Disk drives
Distribution of the second	Display adapters
	DVD/CD-ROM drives
Flop Customize	Floppy disk drives
Human Interface Devices	Human Interface Devices
IDE ATA/ATAPI controllers	IDE ATA/ATAPI controllers
Keyboards	Keyboards
Mice and other pointing devices	Mice and other pointing devices
Monitors	Monitors
Network adapters	Network adapters
Ports (COM & LPT)	Ports (COM & LPT)
Print queues	Print queues
Processors	Processors
D Software devices	Software devices
Storage controllers	Storage controllers
🔈 🧫 Storage volumes	Storage volumes
Image: System devices	System devices
Universal Serial Bus controllers	Universal Serial Bus controllers

- (2) Check the Management Engine Interface driver referring to the following procedure.
  - (a) The display when fix procedure is needed.
    - [Intel(R) Management Engine Interface]

(Driver version: 11.6.0.1032, 11.6.0.1042 or 11.5.0.1019)

In the case that the above is displayed, proceed to fix the driver referring to the procedure in this document.

For checking the driver version, right click on this device and select [Properties]. Property window is displayed. Select [Driver] tab and check the driver version.



(b) The displays when fix procedure for driver is not needed.

If [Intel(R) Management Engine Interface] confirmed in (a) does not exist but both of the following two devices exist, the fix procedure is not necessary.

Model	
group	
Group 1	Intel(R) 8 Series Management Engine Interface – 8C3A
	Intel(R) 8 Series Management Engine Interface – 8C3B*
Group 2	intel(R) 11 Series Chipset Family Management Engine Interface - A13A
	intel(R) 11 Series Chipset Family Management Engine Interface - A13B*
Group 3	Intel(R) C610 series/X99 Chipset Management Engine Interface - 8D3A
	Intel(R) C610 series/X99 Chipset Management Engine Interface - 8D3B*

Group 1 without any problems:



#### Group 2 without any problems:

🜉 Intel(R) 100 Series/C230 Series Chipset Family LPC Controller (C236) - A149
👰 Intel(R) 100 Series/C230 Series Chipset Family PCI Express Root Port #9 - A118
🜉 Intel(R) 100 Series/C230 Series Chipset Family PCI Express Root Port #5 - A114
🜉 Intel(R) 100 Series/C230 Series Chipset Family PCI Express Root Port #4 - A113
🜉 Intel(R) 100 Series/C230 Series Chipset Family PCI Express Root Port #1 - A110
Intel(R) 100 Series/C230 Series Chipset Family PCI Root Port #18 - A168
Intel(R) 100 Series/C230 Series Chipset Family PCI Root Port #20 - A16A
Intel(R) 100 Series/C230 Series Chipset Family PMC - A121
Intel(R) 100 Series/C230 Series Chipset Family Serial IO GPIO Host Controller - 345D
Intel(R) 100 Series/C230 Series Chipset Family SMBus - A123
Intel(R) 100 Series/C230 Series Chipset Family Thermal subsystem - A131
📮 Intel(R) 11 Series Chipset Family Management Engine Interface - A13B
Intel(R) 11 Series Chipset Family Management Engine Interface - A13A
Intel(K) 62602 Firmware Hub Device
Intel(R) Xeon(R) E3 - 1200/1500 v5/6th Gen Intel(R) Core(TM) PCIe Controller (x16) - 1901
Intel(R) Xeon(R) E3 - 1200/1500 v5/6th Gen Intel(R) Core(TM) PCIe Controller (x16) - 1901
LSI MegaRAID Virtual Device

Group 3 without any problems:



#### 2.2.2 Stop of CLUSTERPRO related services

(This section is applied only when CLUSTERPRO is used. If not used, go to the next section.) Stop the CLUSTERPRO related services referring to the following CLUSTERPRO manual. <u>http://www.nec.com/en/global/prod/expresscluster/en/support/manuals.html</u>

- Select your EXPRESSCLUSTER version
- Choose Reference Guide
- Operation by WebManager
  - $\rightarrow$ Chapter 1 Functions of the WebManager
  - $\rightarrow$ Window of the WebManager
  - $\rightarrow$ Operating a cluster and cluster services on the WebManager
- EXPRESSCLUSTER command reference
  - →Chapter 3 EXPRESSCLUSTER command reference
  - $\rightarrow$ Operating the cluster (clcpl command)
  - \*After shut-down is completed, start the system and move on to the section 4.

## 2.3 Fix procedure of Management Engine Interface driver

This chapter explains how to fix Management Engine Interface driver.

Important	Execute the following procedure by logging on as a user with an administrative privilege (administrator, etc.). Performing this procedure by using OS remote desktop function is not supported. (Under the failure environment where computer turns off instead of restarting, the PC must be turned on after this fixing procedure. When failing to OS start, it is difficult to handle remotely, therefore, perform it on local console.) In the environment where CLUSTERPRO is not used but Hyper-V is used, all the guest OS should be shut down and the auto-starting setting should be canceled before this fix procedure. Before performing this procedure, make sure to close other windows, etc. In the case that your problem is not solved after performing this procedure, there may be other problems. Contact the store where you purchased this product or contact service representative.

- 2.3.1 Management Engine Interface driver repairing procedure
  - (a) Start [Device Manager] and select [View] -> [Show hidden devices].

Then, select [System devices] and display the system device.



🚔 Device Manager 📃 🗖	x	
File Action View Help		
⊿ 🜉 System devices	^	
19 ACPI Fixed Feature Button		
19 ACPI Power Button		
19 ACPI Processor Aggregator		
19 ACPI Sleep Button		
1틪 Composite Bus Enumerator		
👰 Direct memory access controller		
19 High precision event timer		
py Intel(R) 8 Series/C220 Series Management Engine Interface - 8C3B		
1999 Intel(R) 8 Series/C220 Series PCI Express Root Port #1 - 8C10		
199 Intel(R) 8 Series/C220 Series PCI Express Root Port #5 - 8C18		
199 Intel(R) 8 Series/C220 Series PCI Express Root Port #6 - 8C1A	=	
1틪 Intel(R) 8 Series/C220 Series SMBus Controller - 8C22		
📜 Intel(R) 82802 Firmware Hub Device		
📕 Intel(R) C224 Series Server Standard SKU LPC Controller - 8C54		
🜉 Intel(R) Management Engine Interface		
Intel(R) Xeon(R) processor E3 Update Driver Software		
1 ISI MegaRAID Virtual Device Disable		
🖳 Microsoft ACPI-Compliant Po		
Nicrosoft ACPI-Compliant Sy		
Nicrosoft Basic Display Driver Scan for hardware changes		
Microsoft Basic Render Driver Properties		
👰 Microsoft Generic IPMI Comprisine bevice		
📜 Microsoft Hardware Error Device		
💻 Microsoft System Management BIOS Driver	- L	
Nicrosoft Virtual Drive Enumerator		
Uninstalls the driver for the selected device.		

(c) [Confirm Device Uninstall] is displayed. Tick on [Delete the driver software for this device] and click OK.

Confirm Device Uninstall	x	
Intel(R) Management Engine Interface		
Warning: You are about to uninstall this device from your system.		
Pelete the driver software for this device.		
Tick OK Cancel		

(d) Select [Action] and execute [Scan for hardware changes].

4	Device Manager	
File Action View Help		
🦛 🖷 Scan for hardware changes		
Add legacy hardware		
Þ Help		
Disk anves	1	
Display adapters		
DVD/CD-ROM drives		
Human Interface Devices		
E IDE ATA/ATAPI controllers      Keyboards		
Mice and other pointing devices		
Mine and other pointing devices Monitors		
Network adapters		
Ports (COM & LPT)		
Print queues		
Processors		
Storage controllers		
Storage volumes		
⊿ 🜉 System devices		
🜉 ACPI Fixed Feature Button		
📜 ACPI Power Button		
🖳 ACPI Processor Aggregator		
ACPI Sleep Button		
🖳 Composite Bus Enumerator		
Pirect memory access controller		
High precision event timer		

(e) Confirm the display referring to [(b) The displays when fix procedure is not needed] in 2.2.1(2).

(2).

In the case when [Intel(R) Management Engine Interface] is displayed although the procedure of (a) to (d) was performed, retry the procedure from (a) to (e).

(When the [Intel(R) Management Engine Interface] driver has been updated multiple times, the update should be deleted one by one; hence, multiple procedures are necessary.)

(f) Restart the server. If the STATUS LED is amber ON caused by this issue, once remove AC power and turn AC power ON and boot.

Important	To complete fixing Management Engine Interface driver, it is necessary to
	restart the computer.
	> Under the failure environment where the computer powers off instead
	of restarting, power off may occur by restarting immediately after this
	fixing process. When this failure occurs, press power button and turn
	it on. It will restart normally thereafter.
	Please do not perform this fix procedure under the remote environment

ImportantIn the environment where CLUSTERPRO is not used but Hyper-V is<br/>used, all the guest OS should be shut down and the auto-starting setting<br/>should be canceled before this fix procedure.<br/>Before performing this procedure, make sure to close other windows,<br/>etc.In the case that your problem is not solved after performing this<br/>procedure, there may be other problems. Contact the store where you<br/>purchased this product or contact service representative.

# 2.4.1 Starting of CLUSTERPRO related service

(This section is applied only when CLUSTERPRO is used. If not used, go to the next section.) Start the CLUSTERPRO related services referring to the following CLUSTERPRO manual. <u>http://www.nec.com/en/global/prod/expresscluster/en/support/manuals.html</u>

- Select your EXPRESSCLUSTER version
- Choose Reference Guide
  - Operation from WebManager
  - $\rightarrow$ Chapter 1 Functions of the WebManager
  - $\rightarrow$ Window of the WebManager
  - $\rightarrow$ Operating a cluster and cluster services on the WebManager
- EXPRESSCLUSTER command reference
  - $\rightarrow$ Chapter 3 EXPRESSCLUSTER command reference
  - $\rightarrow$ Operating the cluster (clcpl command)

## 3. Precautions

This Chapter explains precautions regarding the fix procedure of Management Engine Interface driver.

3.1 Operating by using remote desktop

Make sure to perform all the operations in this document from console connected to the server.

OS remote desktop function or operation by using other remote operation tool is not supported. (Under the failure environment where computer turns off instead of restarting, the server must be turned on after this fixing procedure. When failing to OS start, it is difficult to handle remotely, therefore, perform it on local console.)

3.2 Account at the time of operation

When performing all the operations in this document, make sure to log on or sign as an account with administrative privilege.

Make sure to start command prompt as an administrator.

## 3.3 About Windows Update

When performing Windows Update, do not select the following updates.

When erroneously applied, fix it referring to the procedure in this document.

- [Intel System 07/08/2016 12:00:00 AM 11.5. 0.1019]
- [Intel System 09/16/2016 12:00:00 AM 11.6. 0.1032]
- [Intel System 11/16/2016 12:00:00 AM 11.6. 0.1042]

### <Example of display>



Change History:

Rev. Date	Change
Rev. 1.3	Initial revision in English (based on Rev.1.3 Japanese
June 26, 2017	version)
Rev. 2.0	Page 1
July 31, 2017	Added the description that the device driver causing the
	issue was removed from Windows Update on July 6, 2017.
	Page 1, 4
	Removed the descriptions that instruct not to apply the
	update again after the procedures described in this
	document was performed.