



NEC Expree5800 Server

Enabling Microsoft Windows Server 2003 R2 Hardware Management

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1 Overview

As a new Windows component, the Hardware Management feature has been added to the Windows Server 2003 R2 functionality. This document describes how to configure and use the new Hardware Management feature on your server.

In the server systems, hardware management functionality is already supported by the remote management software applications NEC ESMPRO and NEC DianaScope. These applications offer higher performance than that delivered by the Windows Server 2003 R2 Hardware Management feature alone. It is therefore not necessary to install the Windows Server 2003 R2 Hardware Management feature in your server.

If you are already using NEC ESMPRO and NEC DianaScope, or if you are going to use a server system, it is recommended that you use or continue to use NEC ESMPRO and NEC DianaScope for your hardware management.

Please refer to this document if you use the Windows Server 2003 R2 Hardware Management feature, instead of NEC ESMPRO and NEC DianaScope, in your server.

2 Introduction to Windows Server 2003 R2 Hardware Management

The Hardware Management feature is optional and enabled by WS-Management (Web Services for Management) Protocol and IPMI (Intelligent Platform Management Interface). As a core set of Web service specifications and usage requirements, WS-Management is designed to simplify the management of varying system and devices connected to a network. IPMI is the industry-standard hardware manageability interface specification that has been established and promoted by Intel, HP, NEC and Dell. Please refer to the **Chapter 5 References** for details.

NEC ESMPRO and NEC DianaScope support IPMI to enable hardware management. If you use NEC ESMPRO and NEC DianaScope for IPMI-based hardware management, you do not have to install the Windows Server 2003 R2 Hardware Management feature.

However, if you use the Hardware Management feature in Windows Server 2003 R2, instead of NEC ESMPRO and NEC DianaScope, in your server, please perform the installation procedure in this document.

2.1 How to Install the Hardware Management Feature

The Hardware Management feature in Windows Server 2003 R2 is optional. To enable it, please refer to the **Chapter 3 Installing the Hardware Management Feature** for details.

2.2 Notes on Using the Hardware Management Feature

Please note the following when you use IPMI for the Hardware Management feature bundled in Windows Server 2003 R2 on your server.

- ◆ You cannot combine NEC DianaScope Agent and the Hardware Management feature bundled in Windows Server 2003 R2.
- ◆ You cannot combine NEC ESMPRO Agent and the Hardware Management feature bundled in Windows Server 2003 R2.
- ◆ You must remove the NEC Server Management Controller Driver.

Please remove NEC DianaScope Agent, NEC ESMPRO Agent, and NEC Server Management Driver before enabling the Hardware Management feature bundled in Windows Server 2003 R2 on your server. After removing, you cannot use the remote management feature by NEC ESMPRO Manager, and you cannot use a part of NEC DianaScope features.

If your system does not support IPMI interface, you can combine the Windows Server 2003 R2 Hardware Management feature with NEC ESMPRO Agent and NEC Server Management Driver.

To confirm whether your system supports IPMI, please refer to the “**Chapter 3 - 3.2 Confirming IPMI Support**”.

3 Installing the Hardware Management Feature

When you want to use the Hardware Management feature bundled in Windows Server 2003 R2 on your server, please refer to the following.

However, NEC recommended to using the NEC ESMPRO and the NEC DianaScope for hardware management on your server. In this case, it is not necessary to perform the following setup for your server.

3.1 Installation Flow

The Hardware Management installation flow is shown in the **Figure 3-1**. First, please confirm whether IPMI is supported on your server. Even if IPMI is not supported on your server, you can use the NEC DianaScope Agent, NEC ESMPRO Agent, and NEC Server Management Controller Driver with the Hardware Management feature bundled in Windows Server 2003 R2. However, if IPMI is supported on your server, you should remove the NEC DianaScope Agent, NEC ESMPRO Agent, and NEC Server Management Controller Driver before enabling the Hardware Management bundled in Windows Server 2003 R2.

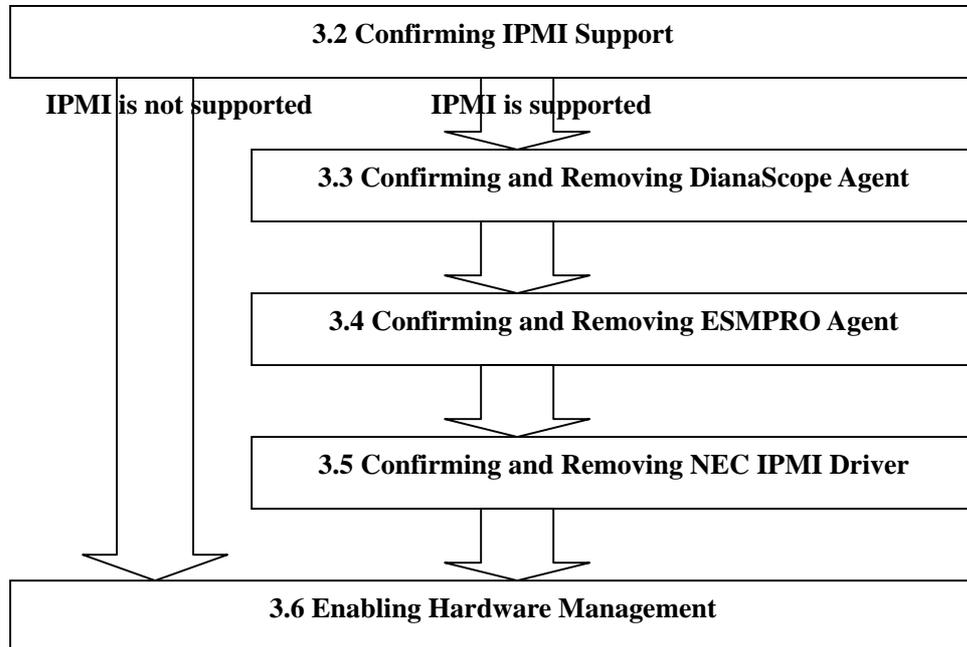


Figure 3-1 Installation Flow

3.2 Confirming IPMI support

You can confirm whether your Express5800 server can use IPMI by the following procedure.

From the “Start” menu, select "Run" and enter "regedit"; this runs the Registry Editor. Open the following registry value at the Registry Editor.

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\NECRAS\Parameters

You can find the **IPMISupport** registry value under this value. Refer to the **Figure 3-2**. If this value is 1, your Express5800 server can use IPMI. In this case, you must perform the setting referring to **“3.3 Confirming and Removing NEC DianaScope Agent”**.

If this value is 0, your Express5800 server cannot use IPMI. In this case, you will go to **“3.6 Enabling Hardware Management”**. However, you can not enable the Hardware Management feature since IPMI is not supported. Only the WS-Management service is installed.

If you cannot find the **NECRAS** registry key, the NEC Server Management Driver is not installed on your Express5800 server. In this case, you can go to the **“3.6 Enabling Hardware Management”** also.

After you confirm the registry setting, close the Registry Editor.

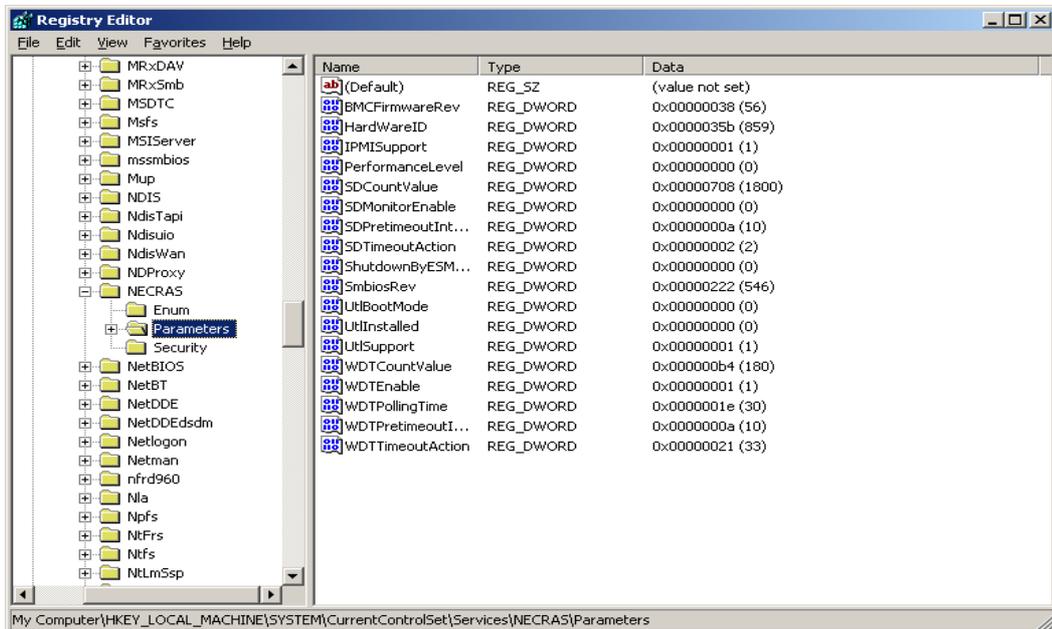


Figure 3-2 Registry Editor

3.3 Confirming and Removing NEC DianaScope Agent

If IPMI is supported on your server, you must remove the NEC DianaScope Agent before enabling the Hardware Management feature bundled with Windows Server 2003 R2.

You can confirm if the NEC DianaScope Agent is installed and remove it by the following procedure. Note administrative user account is required for this operation.

1) Confirming NEC DianaScope Agent

From the "Control Panel", Select "Add or Remove Programs".

Then you can confirm whether the NEC DianaScope Agent is installed.

2) Removing NEC DianaScope Agent

Select the "DianaScope Agent" and click the "Change/Remove". You can remove the NEC DianaScope Agent.

For more detail, please refer to the "NEC DianaScope Installation Manual" on the EXPRESSBUILDER attached your server.

3.4 Confirming and Removing NEC ESMPRO Agent

If IPMI is supported on your server, you must remove the NEC ESMPRO Agent before enabling the Hardware Management feature bundled with Windows Server 2003 R2.

If IPMI is not supported on your server, it is not necessary for your server to remove the NEC ESMPRO Agent.

You can confirm if the NEC ESMPRO Agent is installed and remove it by the following procedure.

1) Confirming NEC ESMPRO Agent

From "Control Panel", Select "Add or Remove Programs".

Then you can confirm whether the NEC ESMPRO Agent is installed.

2) Removing NEC ESMPRO Agent

To remove the NEC ESMPRO Agent, please refer to the "NEC ESMPRO Agent User's Guide" on the EXPRESSBUILDER attached your server.

3.5 Confirming and Removing NEC IPMI Driver

If IPMI is supported on your server, you must remove the NEC Server Management Controller Driver, which is the IPMI driver provided by NEC, before enabling the Hardware Management feature bundled in Windows Server 2003 R2.

If IPMI is not supported on your server, it is not necessary for your server to remove the NEC Server Management Controller Driver. In this case, the NEC Server Management Controller Driver does not use the IPMI.

Note the administrative user account is required for this operation. And you must remove the NEC DianaScope Agent and the NEC ESMPRO Agent before removing the NEC Server Management Controller Driver.

1) Confirming NEC Server Management Controller Driver

From "Control Panel", select "System".

Click "Hardware" tab, and click "Device Manager".

It runs "Device Manager". Refer to the **Figure 3-3**.

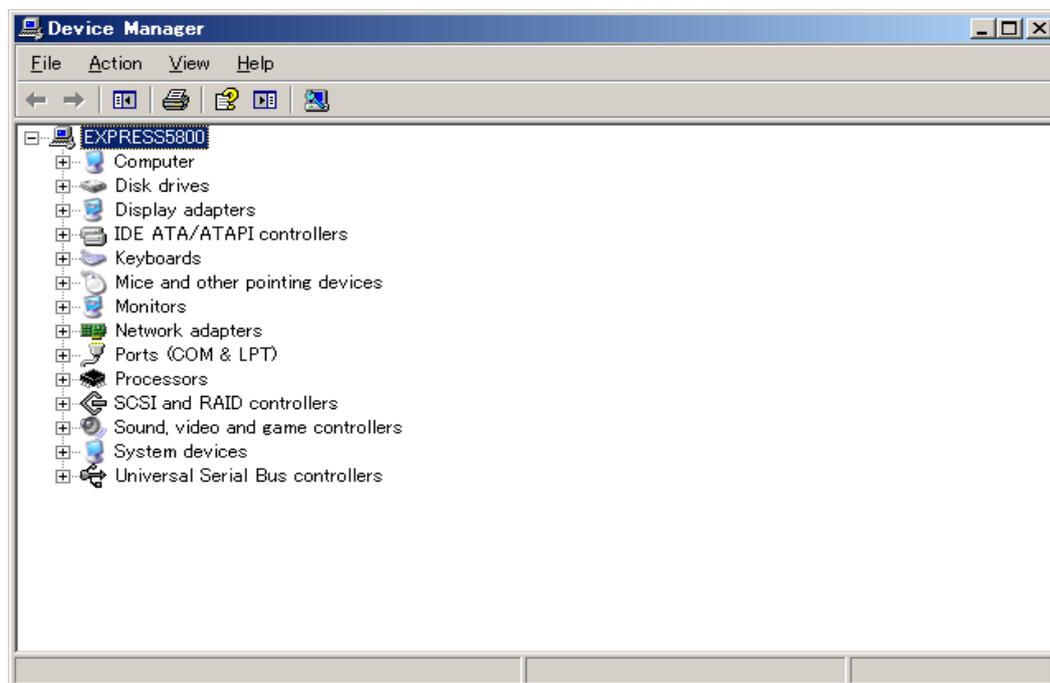


Figure 3-3 Device Manager

Select “Show hidden devices” from “View” in the tool bar menu.

Refer to the **Figure 3-4**.

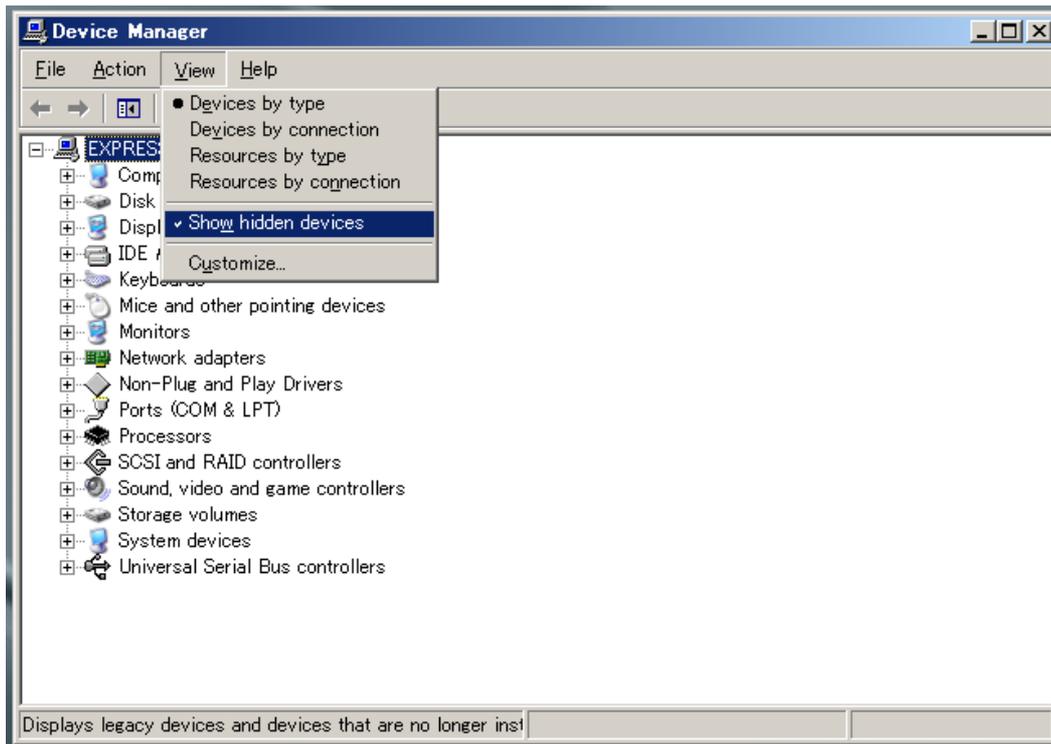


Figure 3-4 Show hidden devices

Select the “Non-Plug and Play Drivers”. Refer to the **Figure 3-5**.

If you can see “**NEC System Management Controller**”, NEC Server Management Controller Driver is installed.

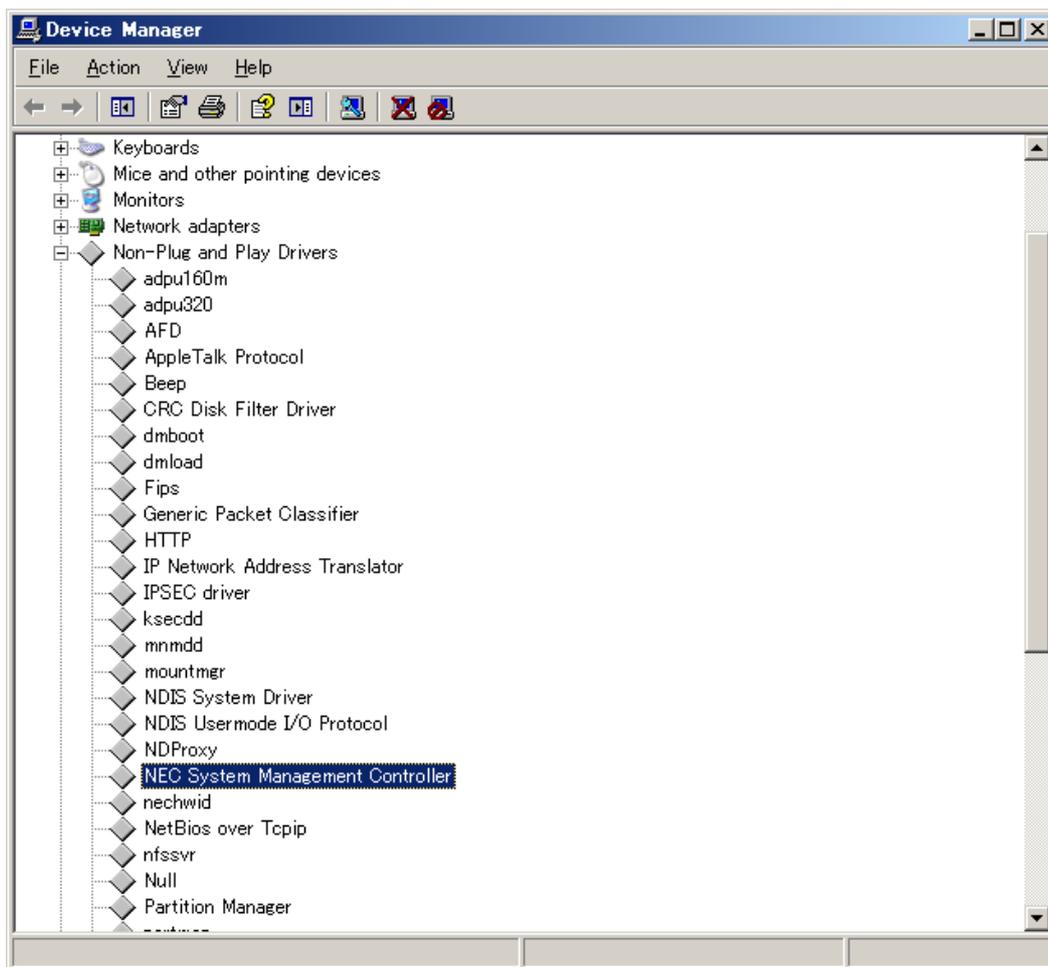


Figure 3-5 NEC Server Management Controller Driver

2) Removing NEC Server Management Driver

If you want to remove the NEC Server Management Controller Driver, select “**NEC System Management Controller**”. Then select “Uninstall” from the shown menu on the right-click. Refer to the **Figure 3-6**. You can remove the NEC System Management Controller Driver.

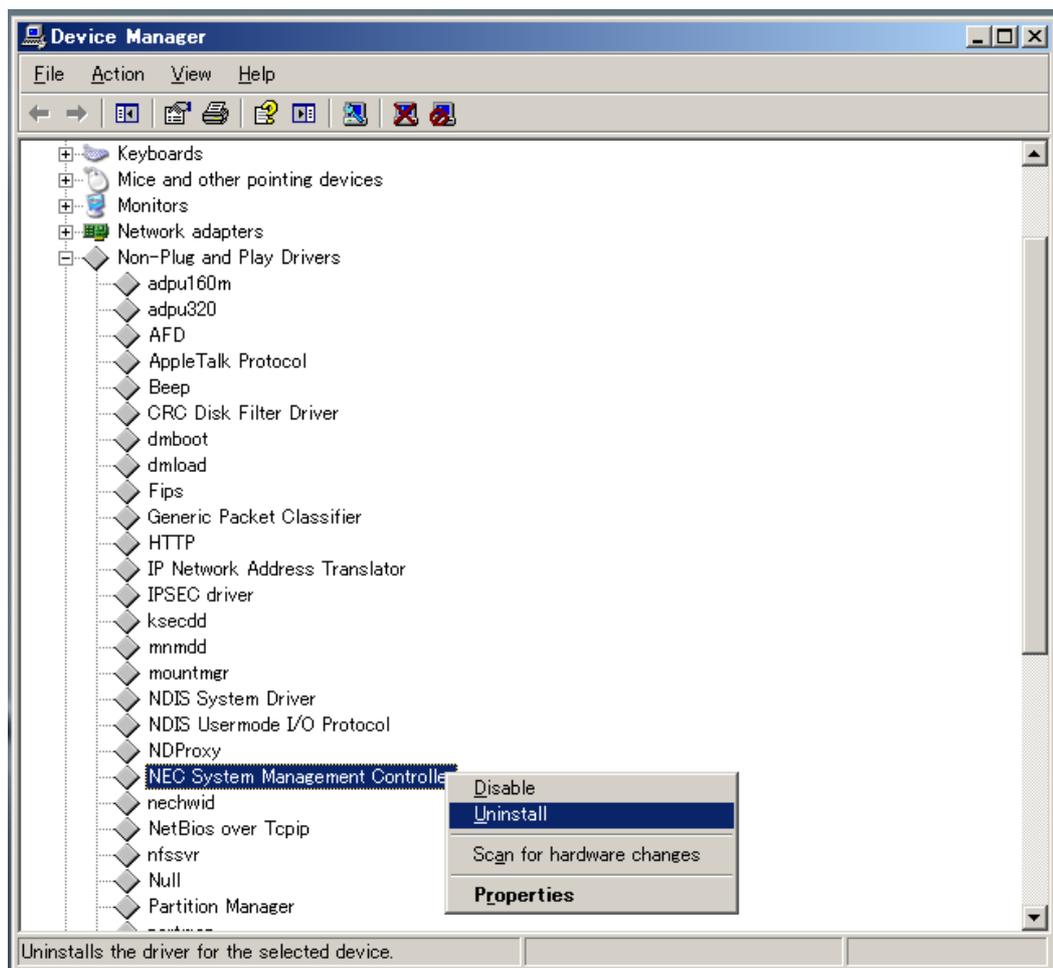


Figure 3-6 Uninstall the NEC Server Management Controller Driver

3) Restarting your server

Finish the Device Manager. And restart your server.

3.6 Enabling Hardware Management

When you want to enable the Hardware Management feature bundled in Windows Server 2003 R2, refer to the following procedures. If IPMI is supported on your server, Microsoft IPMI driver will be installed by following.

Note it is necessary for this installation to use the Windows Server 2003 R2 Disc 2.

1) Adding Hardware Management

From “Control Panel”, Select “Add or Remove Programs”.

Select “Add/Remove Windows Components”.

Select “Management and Monitoring Tools” and click the “Details” to bring up the following screen. Refer to the **Figure 3-7**.

Choose “Hardware Management”. And click “OK”.

When IPMI is not supported on your server, installation is finished. However, if IPMI is supported on your server, you must do the following procedures.

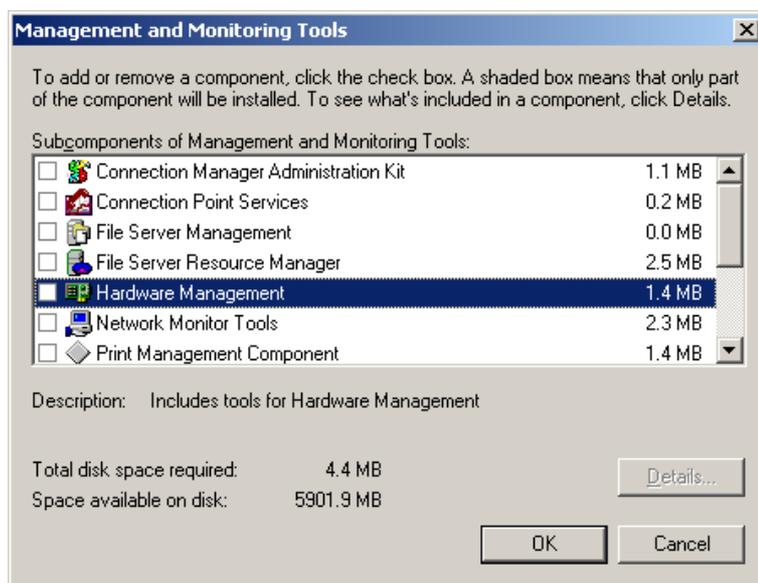


Figure 3-7 Management and Monitoring Tools

2) Warning Message

If IPMI is supported on your server, the following dialog box will be displayed. Refer to the **Figure 3-8**. If you had removed the NEC Server Management Driver, you can click “OK“ referring to the “**3.5 Confirming and Removing NEC IPMI Driver**”, you can click “OK“.

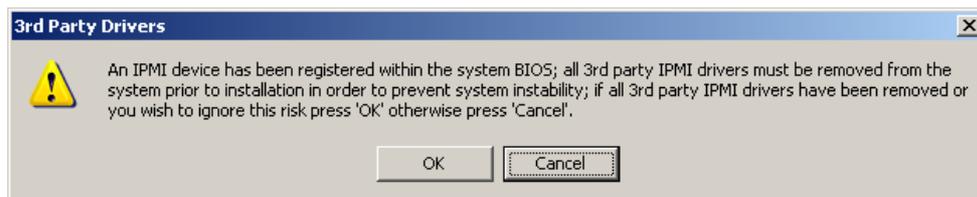


Figure 3-8 Warning Message

3) Enabling Microsoft IPMI Driver

Microsoft IPMI driver will be installed automatically on systems supporting IPMI. If it is not installed automatically, you can add the Microsoft IPMI driver manually after the installation of Hardware Management is completed.

To add the Microsoft IPMI driver, execute the following command from a command prompt. Refer to the **Figure 3-9**.

```
Microsoft Windows [Version 5.2.3790]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\Administrator> rundll32 ipmisetp.dll, AddTheDevice

C:\Documents and Settings\Administrator>
```

Figure 3-9 Command Prompt

You can confirm completion of the Microsoft IPMI Driver installation as following procedures.

- ◆ You can find the **“Microsoft IPMI Compliant Device”** in the **“System devices”** tree from **“Device Manager”**. Refer to the **Figure 3-10**.
- ◆ Select the **“Microsoft IPMI Compliant Device”**. Then select the **“Properties”** from shown menu on the right-click. In the **“properties”** dialog, confirm whether **“Device status”** is **“This device is working properly”**.

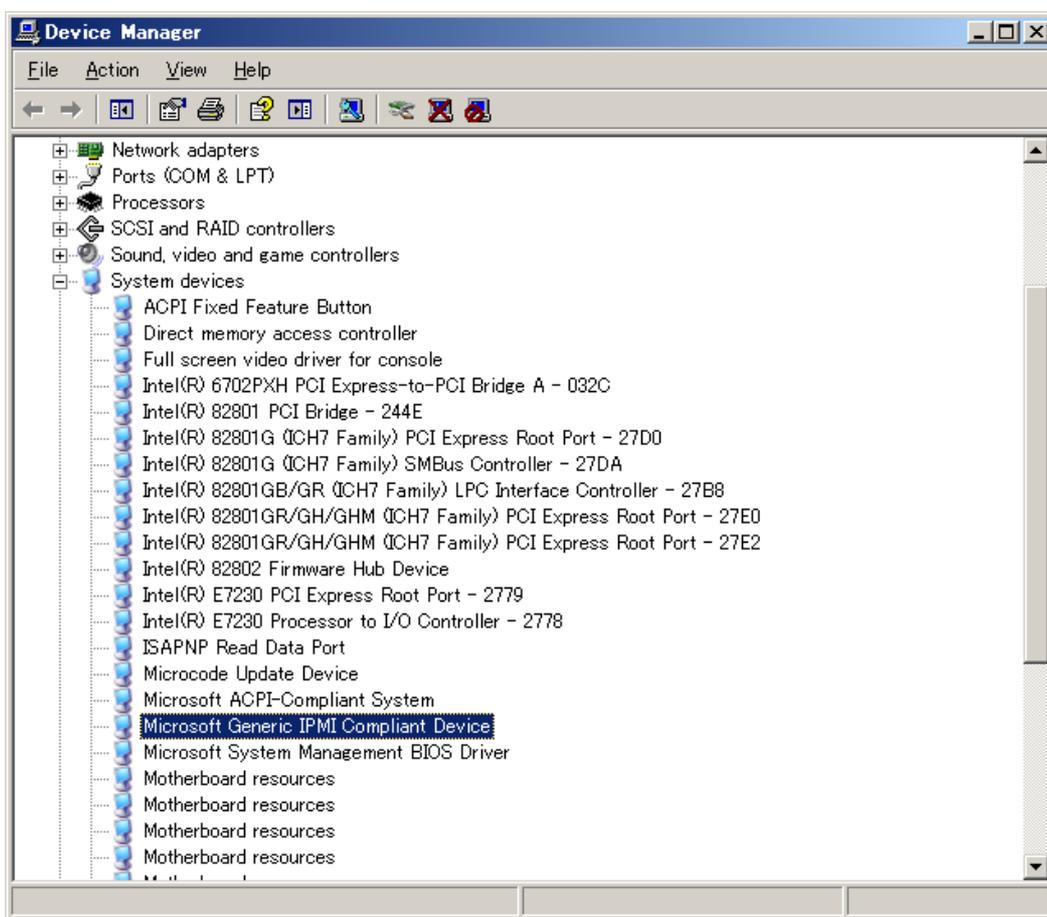


Figure 3-10 Microsoft IPMI Driver

If IPMI is not supported on your server and you tried to add the Microsoft IPMI driver, the Device Manager shows the error. Refer to the **Figure 3-11**.

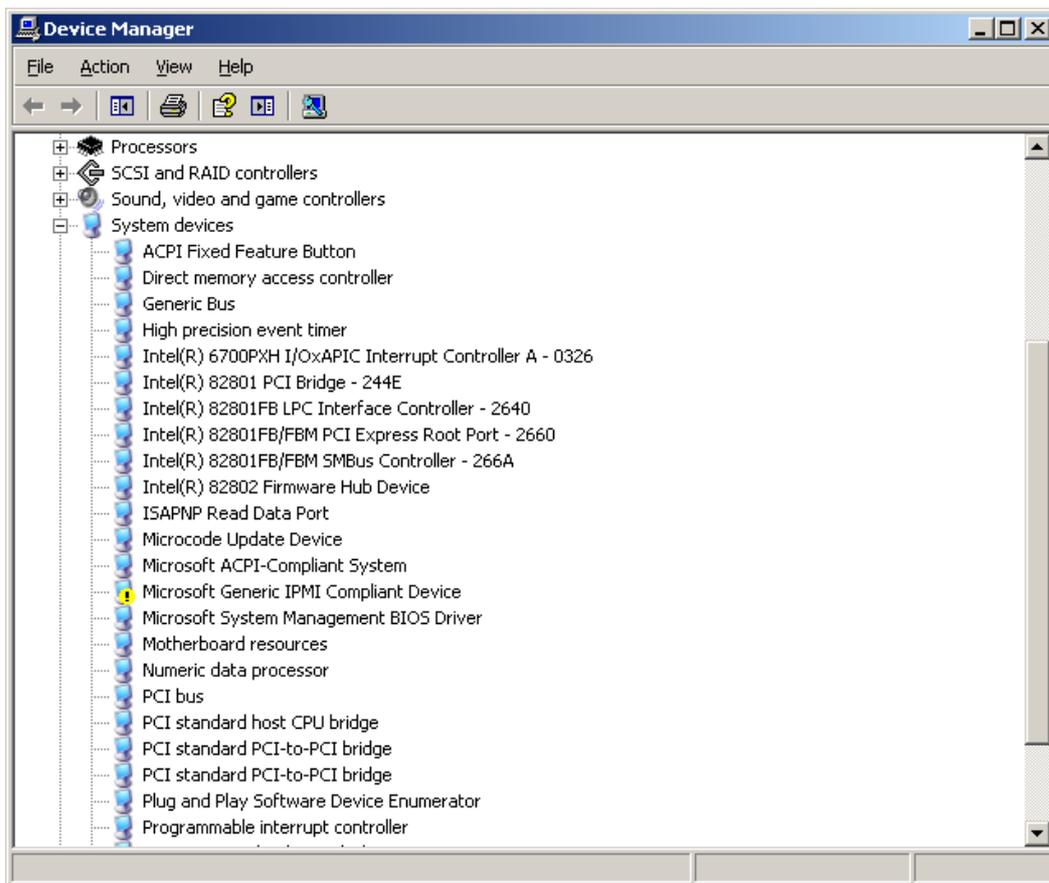


Figure 3-11 Device Manager

And the error shown in the **Figure 3-12** appears in the System Event Log. In this case, NEC recommends removing the Microsoft IPMI driver. To remove this driver, select “**Microsoft Generic IPMI Compliant Device**” which is in “System devices” tree from “Device Manager”. Then select “Uninstall” from the shown menu on the right-click. You can remove the Microsoft IPMI driver.

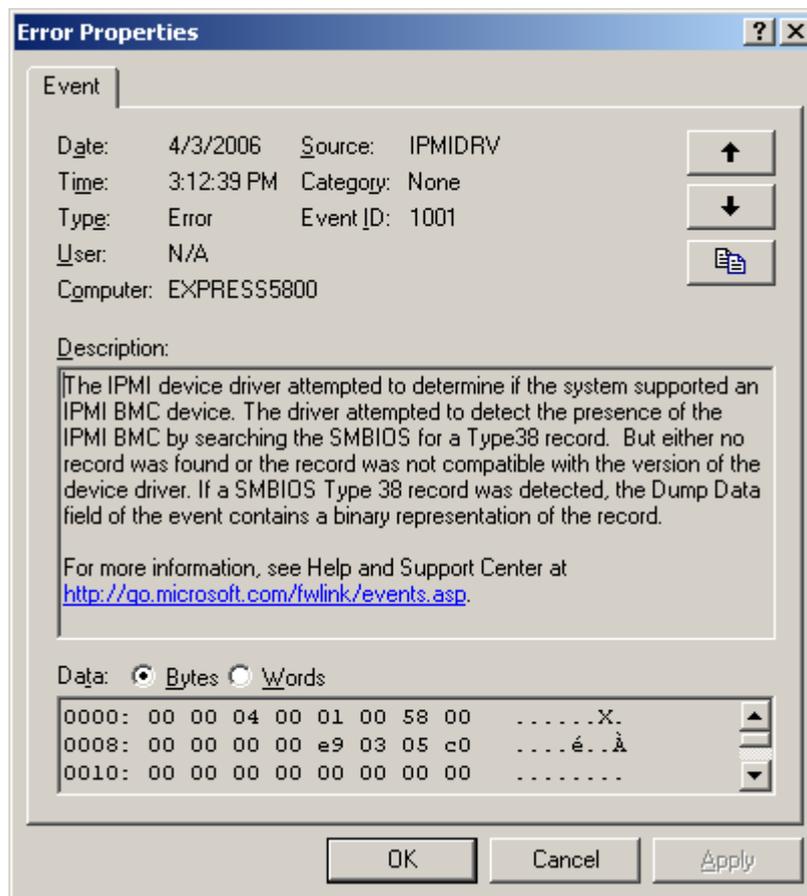


Figure 3-12 Error Event

4 Returning the System to Initial Condition

4.1 Removing Hardware Management

From “Control Panel”, Select “Add or Remove Programs”.

Select “Add/Remove Windows Components”.

Select “Management and Monitoring Tools” and click “Detail”.

Remove the check from the “Hardware Management” and click “OK”. Refer to the **Figure 4-1**. Then you can remove the “Hardware Management”.

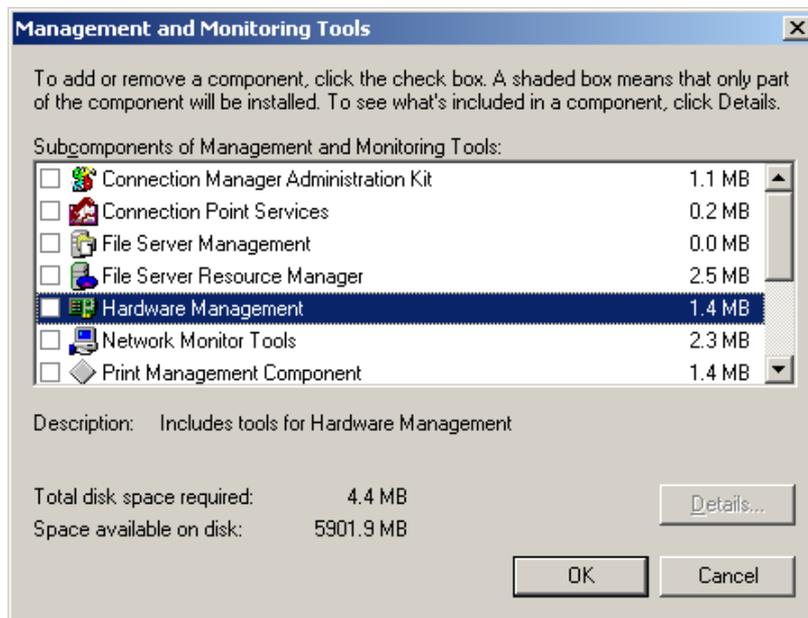


Figure 4-1 Management and Monitoring Tools

4.2 NEC Server Management Controller Driver Reinstallation

If you reinstall NEC Server Management Controller Driver to return the system to the initial condition, run the “**Update System**” from the EXPRESSBUILDER attached your server.

Refer to the manuals on the EXPRESSBUILDER for the “**Update System**” detail.

Note you must remove the Hardware Management feature bundled with the Windows Server 2003 R2 in advance.

4.3 NEC ESMPRO Agent Reinstallation

If you reinstall the NEC ESMPRO Agent to return the system to the initial condition, you can reinstall it from the EXPRESSBUILDER attached your server.

Detail of the NEC ESMPRO Agent installation is in “NEC ESMPRO Agent User’s Guide” on the EXPRESSBUILDER. Refer to it.

Note you must remove the Hardware Management feature bundled with the Windows Server 2003 R2 in advance and NEC Server Management Driver must be installed before installing NEC ESMPRO Agent.

4.4 NEC DianaScope Agent Reinstallation

If you reinstall the NEC DianaScope Agent to return the system to the initial condition, you can install it from the EXPRESSBUILDER attached your server.

Detail of the NEC DianaScope Agent installation is in “NEC DianaScope Agent Installation Manual” on the EXPRESSBUILDER. Refer to it.

Note you must remove the Hardware Management feature bundled with the Windows Server 2003 R2 in advance and the NEC Server Management Driver must be installed before reinstalling NEC DianaScope Agent.

5 References

- ◆ About NEC ESM PRO (NEC)
<http://www.nec.co.jp/express/products/software/esmpro/intro/index.html>
- ◆ NEC Express5800 Product Guide (NEC)
http://www.nec.co.jp/express/library/pg_guide.html
- ◆ Enabling Hardware Management (Microsoft TechNet)
<http://technet2.microsoft.com/WindowsServer/en/Library/8c6c90e8-16b8-4d51-bf1e-efad5f5a61081033.msp#>
- ◆ Windows Remote Management (Microsoft MSDN Library)
<http://msdn.microsoft.com/library/default.asp?url=/library/en-us/winrm/winrm/portal.asp>
- ◆ About IPMI (Intel)
<http://www.intel.com/design/servers/ipmi/>

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