NEC ESMPRO Agent Extension
Installation Manual
Document Rev.1.06
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About This Document

This document introduces remote management using the "NEC ESMPRO Agent Extension" and explains the complete procedures from installation to managed server's setup.

Before attempting to operate the NEC ESMPRO Agent Extension, read this document so as to gain an adequate understanding of the contents.

- **Notes**
  This document is intended for persons who are familiar with the operating system's functions and operations and the network's functions and setup. For operations and inquiries about the operating system, see its online help information.

This document covers universal information about generally managed servers. The notes and restrictions on use of each product as a managed server are explained in the user's guide provided with the managed server and "ESMPRO Manager Ver.5 Setup guide".

Names used with screen images in this document are fictitious. They are unrelated to existing product names, names of organizations, or individual names. The setting values on the screen images are shown as examples, so setting values such as IP addresses on screen images are not guaranteed for operation.

In this document. "¥" expresses back slash.

- **About Symbols in This Document**
  The following explains three symbols that are used in this document:

  **IMPORTANT:** Points or particular notes you must follow when handling software of servers.
  **CHECK:** Points or notes you need to check when handling software or servers.
  **TIPS:** Useful information.

- **Other Documents for NEC ESMPRO Agent Extension**
  For other information about the NEC ESMPRO Agent Extension, see the documents below.

  - **How to operate after setup.**
    See the NEC ESMPRO Agent Extension help information.

  **TIPS:**
  - You can refer to following for the NEC ESMPRO Agent Extension help information.
    "On Windows"
    Click "NEC ESMPRO Agent Extension" - "NEC ESMPRO Agent Extension Help" from [start] on Windows.

    "On Linux"
    Open the setting of NEC ESMPRO Agent Extension and press F12 key on the screen displayed "[F12] help" at the bottom.
    Refer to "3.4.5 Confirm whether the setting of NEC ESMPRO Agent Extension opens" for the way to open the setting screen.

Chapter 1  About NEC ESMPRO Agent Extension

NEC ESMPRO Agent Extension is software that works on the server for management. It configures the BMC on the managed server, and executes commands specified by the NEC ESMPRO Manager Ver.5.

1.1  NEC ESMPRO Agent Extension Functions

- **BMC configuration**
  Configuration information can be set for the BMC on the managed server.
  Setting the configuration information to the BMC is needed to operate the managed server from the NEC ESMPRO Manager Ver.5.

- **System Information (Version Information)**
  The versions of BMC Firmware, Sensor Data Information (SDR) and System BIOS can be collected.
Chapter 2  System Requirements

2.1 Managed server
Install NEC ESM PRO Agent Extension in the server to be managed.

- **Hardware**
  -- The server that integrates a standard BMC conforming to IPMI Ver.1.5 or Ver.2.0.
  -- The server that integrates EXPRESSSCOPE Engine or EXPRESSSCOPE Engine 2 conforming to IPMI Ver.2.0.
  -- The server that is installed a Remote Management Card [N8115-01CP01] conforming to IPMI Ver.1.5 or Ver.2.0.
  -- The server that is installed an Advanced Remote Management Card [N8115-02CP01] conforming to IPMI Ver.1.5 or Ver.2.0.

**TIPS:**
- EXPRESSSCOPE Engine and EXPRESSSCOPE Engine 2 are generically called EXPRESSSCOPE Engine series.

**CHECK:**
- Energy Saving Server (NEC Express5800/E120a) is supported by the upper version from NEC ESM PRO Agent Extension Ver1.05.
- Energy Saving Server (NEC Express5800/E120b-M) is supported by the upper version from NEC ESM PRO Agent Extension Ver1.08.
- Scalable HA Server (NEC Express5800/A1080a) is supported by the upper version from NEC ESM PRO Agent Extension Ver1.06.

- **Memory**
  512MB or more

- **Availability of hard disk**
  100MB or more

- **Software**
- **Operating system**
  - Microsoft Windows 2000 Server/Advanced Server (SP4) [*3]
  - Microsoft Windows Server 2003 Standard /Enterprise x64 Edition
  - Microsoft Windows Server 2003 R2 Standard /Enterprise x64 Edition
  - Windows Server 2008 R2 Standard/Enterprise/Datacenter [*1]
  - Red Hat Enterprise Linux ES 2.1 [*3]
  - Red Hat Enterprise Linux AS 2.1 [*3]
  - Red Hat Enterprise Linux ES 3.0 (x86) [*3]
  - Red Hat Enterprise Linux AS 3.0 (x86, x64) [*3]
  - Red Hat Enterprise Linux ES 4 (x86, x64)
  - Red Hat Enterprise Linux AS 4 (x86, x64)
  - Red Hat Enterprise Linux Advanced Platform 5 (x86)
  - Red Hat Enterprise Linux Advanced Platform 5 (x64) [*2][*4]
  - Red Hat Enterprise Linux Server 5 (x86)
  - Red Hat Enterprise Linux Server 5 (x64) [*2][*4]
NEC ESMPRO Agent Extension Installation Manual

Miracle Linux Standard Edition 2.1 [*3]
Miracle Linux 3.0 - Asianux Inside [*3]
Miracle Linux 4.0 - Asianux Inside (x86, x64)
Asianux Server 3 == MIRACLE LINUX V5 (x86, x64) [*2][*4]
SUSE Linux Enterprise Server 10 (SP2, SP3) (x86, x64) [*5]

[*1] Datacenter is only supported on Scalable HA Server.
[*2] x64 is only supported on OpenIPMI Driver.
[*3] supported by the lower version from NEC ESMPRO Agent Extension Ver1.06
[*4] supported by the upper version from NEC ESMPRO Agent Extension Ver1.07
[*5] supported by the upper version from NEC ESMPRO Agent Extension Ver1.09

IMPORTANT:
- You can't install NEC ESMPRO Agent Extension in the following case.
  -- Installation on Server Core at Windows Server 2008 or later
  -- Installation on guest OS virtual of machine such as Hyper-V.

Other information
If you use the remote management function for which NEC ESMPRO Manager Ver.5 requires to communicate with NEC ESMPRO Agent Extension, NEC ESMPRO Agent Extension must need following:
JRE 5.0 (32bit version 1.5.0_13 or later) or JRE 6 (32bit version 1.6.0_20 or later).
(JRE is attached to NEC ESMPRO Agent Extension)

IMPORTANT:
- It becomes an update installation if NEC ESMPRO Agent Extension is installed in the environment in which "DianaScope Agent" is installed, and it replaces. Moreover, please do not install "DianaScope Agent" in the environment in which "NEC ESMPRO Agent Extension" is installed.

CHECK:
- NEC ESMPRO Agent Extension Ver1.09 and above can support JRE 6.
- If NEC MWA Agent that can configure BMC is installed already, you must uninstall NEC MWA Agent, and then install NEC ESMPRO Agent Extension.
2.1.1 Server Management Driver

On Linux, Server Management Driver or OpenIPMI Driver must be installed to use NEC ESM PRO Agent Extension.

IMPORTANT:
- If OpenIPMI Driver is installed already, Server Management Driver's installation is unnecessary.
- Server Management Driver and OpenIPMI Driver cannot be used at the same time.
- You can confirm the server supported Server Management Driver from the following website:
  [http://www.nec.co.jp/express/](http://www.nec.co.jp/express/)
  And if Server Management Driver is supported on the server, the driver is stored in NEC EXPRESSBUILDER.

CHECK:
- Use the following command to confirm that OpenIPMI Driver has been installed on Linux.
  ```
rpm -qa | grep -i OpenIPMI
  ```
- If the OpenIPMI Driver is stopped, you need to start OpenIPMI Driver. You can confirm the status of OpenIPMI Driver by the following command.
  ```
  /etc/init.d/ipmi status
  ```
  If "not loaded" is displayed after executing the above command, please start OpenIPMI Driver by the following command.
  ```
  /etc/init.d/ipmi start
  ```
  And you can start OpenIPMI Driver automatically at the system booting to execute the following command and reboot the operation system.
  ```
  chkconfig ipmi on
  ```

2.1.1.1 Server Management Driver Installation

If NEC EXPRESSBUILDER ver.5 and above is attached with the managed server, please install the Server Management Driver as following order. Make sure to login to Linux as root user to install the Server Management Driver.

CHECK:
- If there is no above-mentioned directory or the Server Management Driver does not match your kernel version, please download the Server Management Driver from the following site.
  [http://www.nec.co.jp/express/](http://www.nec.co.jp/express/)
- If the managed server is ft Server, Server Management Driver is installed initially.

(1) Insert the EXPRESSBUILDER attached with the managed server to the DVD drive, and mount the EXPRESSBUILDER to your system.

(2) Move to the directory where the Server Management Driver is stored. The Server Management Driver is stored under "EXPRESSBUILDER revision"/lnx/pp/svmdrv/ on the EXPRESSBUILDER.

(3) Execute the blow script.

```
sh ./rasinst.sh
```
(4) Eject the EXPRESSBUILDER from the DVD drive and reboot the managed server. The Server Management Driver is loaded when the OS starts.

### 2.1.1.2 Server Management Driver Un-installation

Login to Linux as root user.

1. Confirm the rpm files by following command.

   ```
   rpm -q libnechwid
   rpm -q libnechwmtr
   rpm -q libnecipmi
   rpm -q libnecsmbios
   rpm -qa | grep necipmi15
   rpm -qa | grep necrasconf
   ```

2. Delete the all rpm files that have been confirmed by (1). The following is an example to delete libnechwid:

   ```
   rpm -e libnechwid
   ```

**TIPS:**
- Some rpm files may not have been installed on the managed server.
- Delete the rpm files concerning the necipmi15.
2.2 Notes on Managed Servers and Network Devices

This section explains particular notes on managed servers and network devices.

2.2.1 On the managed server that BMC uses standard LAN port

-- Setting of Teaming for standard LAN with the OS (providing redundancy or multiplexing with multiple network adapters) for the managed server installed BMC that uses a standard LAN port:

The managed server installed BMC that uses a standard LAN port shares the embedded standard LAN controller between BMC, System BIOS and OS, but the BMC and System BIOS do not support the LAN teaming modes including AFT (Adapter Fault Tolerance) and ALB (Adaptive Load Balancing). So if the AFT mode or ALB mode was made available by OS, NEC ESMPRO Manager Ver5 can communicate with BMC and System BIOS only under the following conditions while Failover does not occur.

- If RLB (Receive Load Balancing) is set with ALB (Adaptive Load Balancing), disable the RLB. (If RLB cannot be disabled, NEC ESMPRO Manager Ver.5 cannot communicate with BMC.)
- Make the Teaming-set address ("preferred primary") identical to the LAN1 IP address and MAC address in the BMC configuration information.
- Even if the configuration of LAN2 for the BMC on the managed server is available, do not set LAN2 in the BMC configuration information.
- If the teaming is set with channel bonding on Linux, please add "mode" and "primary" definition to the line of /etc/modprobe.conf or /etc/modules.conf as following.

```
options bondname mode=1 primary=eth0 miimon=100
```

- See "Appendix. How to setup for using NEC ESMPRO Agent Extension on the managed server that is set LAN teaming" -1 if you install NEC ESMPRO Agent Extension for Windows on the managed server. Note that NEC ESMPRO Manager Ver.5 is not available when you use RLB (Receive Load Balancing) or FEC (Fast Ether Channel) teaming mode on the managed server.

2.2.2 On the managed server that BMC uses an exclusive LAN port (Management LAN port)

-- Setting of Teaming for LAN with the OS (providing redundancy or multiplexing with multiple network adapters) for the managed server installed BMC that uses an exclusive LAN port (Management LAN port):

If the teaming setting was made available for the LAN port that NEC ESMPRO Agent Extension uses, see "Appendix. How to setup for using NEC ESMPRO Agent Extension on the managed server that is set LAN teaming".

2.2.3 Change of the hardware of a default gateway or an alert receiver

-- In case that there is a gateway between management PC and a managed server, re-configure BMC on the managed server after the change the hardware of the gateway. In case that there is not gateway between an alert receiver and a managed server, re-configure BMC on the managed server after the change the hardware of the alert receiver. The BMC on the managed server can know MAC address of the new hardware by setting the BMC configuration.
Chapter 3  NEC ESM PRO Agent Extension Installation

3.1 NEC ESM PRO Agent Extension Installation for Windows
Install the NEC ESM PRO Agent Extension in the managed server in following order:

(1) Install the JRE
   If you use only BMC configuration function of NEC ESM PRO Agent Extension, it is unnecessary to install JRE.

(2) Install the NEC ESM PRO Agent Extension
   NEC ESM PRO Agent Extension includes BMC configuration Function and NEC ESM PRO Agent Extension service which communicate with NEC ESM PRO Manager Ver.5 for the remote management. You can choose the function to install.

(3) Change the LAN port that NEC ESM PRO Agent Extension uses
   Do the setting only if BMC on the managed server uses an exclusive LAN port (Management LAN port).

3.1.1 Check before installation
Check the followings:
-- See chapter 2.1 to check the system requirement of the managed server and the NEC ESM PRO Agent Extension.
-- Login to Windows as Administrator.

3.1.2 Start installation menu
   If you install the NEC ESM PRO Agent Extension by using downloaded modules:
   Open the following files of the NEC ESM PRO Agent Extension Installer on web browser.
   ¥esmpro_sa_ex¥menu¥en¥menu.html
   ![CHECK:](image)
   • Installation menu must be open using Microsoft Internet Explorer.

   If you install the NEC ESM PRO Agent Extension by using NEC EXPRESSBUILDER or UtilityCD

   You can open the installation menu as follows:

   (1) Insert the NEC EXPRESSBUILDER DVD-ROM or the UtilityCD CD-ROM into the DVD drive on the managed server which Windows has started.
       The menu will be automatically displayed. Select the OS if you use the UtilityCD.

   (2) Click [Software Setup] ➔ [NEC ESM PRO] ➔ [NEC ESM PRO Agent Extension].
       The NEC ESM PRO Agent Extension installation menu for Windows will appear.
3.1.3 Install the JRE
Be sure to install the JRE of the version specified in chapter 2.1.

1. Click "Java Runtime Environment (JRE)" on the installation menu. The "Download Files" dialog box will appear. Click [Open].
   The JRE installer will be started.

2. Install the JRE according to the installer's instructions.

3.1.4 Install the NEC ESMPRO Agent Extension
Check before perform the installation.
-- Login to Windows as Administrator.
-- Confirm that JRE has been installed, if you select the NEC ESMPRO Agent Extension service. See chapter 2.1 for JRE version.

1. Click "NEC ESMPRO Agent Extension" on the installation menu. The "Download Files" dialog box will appear. Click [Open].
   The NEC ESMPRO Agent Extension installer will be started.

2. The NEC ESMPRO Agent Extension installer will be started. Click [Next].
(3) Enter the name of directory to install. Click [Next].

(4) Select the features to install. The BMC configuration function is required. And then, click [Next].

**TIPS:**
- If BMC configuration feature is not select, you cannot advance.
(5) This dialog box is shown with following condition:
- The managed server has the BMC that uses an exclusive LAN port (Management LAN Port).
- NEC ESMPRO Agent Extension service has been selected.

Enter BMC IP address synchronization setting. Click [Next].

TIPS:
• You can also set this item after finishing the installation.

(6) Information about the installation will be displayed. Read the information, and click [Next]. The installation will be started.

When the installation is completed, the NEC ESMPRO Agent Extension service is started and available.
3.1.5 Confirm whether the setting of NEC ESMPRO Agent Extension opens

After the installation is completed, do the following operation to open the main dialog box of NEC ESMPRO Agent Extension.
- Click “NEC ESMPRO Agent Extension” - “NEC ESMPRO Agent Extension” from [start] on Windows

You can operate BMC configuration etc in the dialog box. (Available functions of the dialog box depend on the kind of BMC.)

(1) The following screen shows example for the managed server that the BMC uses standard LAN port.

TIPS:
- Following functions are available only if NEC ESMPRO Agent Extension service is started.
  - Select IP address for Agent
  - BMC IP address Synchronization
(2) In the case of Scalable HA Server, the screen shows as follows.

**TIPS:**
- Following functions can't be operated.
  - Read File
  - Write File
  - Alert Test
  - SDR Version
- Following functions are available only if NEC ESMPRO Agent Extension service is started.
  - Select IP address for Agent
3.1.6 Change the LAN port that NEC ESMPRO Agent Extension uses
Do the setting only if BMC on the managed server uses an exclusive LAN port (Management LAN port).

**TIPS:**
- If the BMC on the managed server uses standard LAN port, you do not need the setting because NEC ESMPRO Agent Extension uses same LAN as BMC.

(1) Click "NEC ESMPRO Agent Extension" - "NEC ESMPRO Agent Extension" from [start] on Windows to open the setting dialog box of the NEC ESMPRO Agent Extension.

(2) Click [Set Agent IP address] on the dialog box.

(3) Select IP address of Operating system that NEC ESMPRO Agent Extension uses.

**CHECK:**
- Please execute [Set Agent IP address] again if you change the LAN ports or a new LAN card is inserted to the managed server. Perform the "Check Connection" of NEC ESMPRO Manager Ver.5 after the setting is changed.

**TIPS:**
- The setting of BMC IP address, perform it in [set Configuration].
3.2 NEC ESMPRO Agent Extension Uninstallation for Windows

To uninstall the software, perform it in following order:

(1) Uninstall the NEC ESMPRO Agent Extension
   Open "Add/Remove Programs" of control panel on Windows. Select the NEC ESMPRO Agent Extension
   and click [Delete]. Uninstall it according to the on-screen instructions.
   
   CHECK:
   • Close the dialog box of the NEC ESMPRO Agent Extension if it has been opened, and then
     uninstall the NEC ESMPRO Agent Extension.

(2) Uninstall the JRE
   Open "Add/Remove Programs" of control panel on Windows. Select the JRE and click [Delete]. When the
   version of the JRE is 5.0 Update18, select [J2SE Runtime Environment 5.0 Update18]. When the version of
   the JRE is 6 Update20, select [Java(TM) 6 Update 20].

3.3 JRE Update for Windows

To update JRE on the managed server which NEC ESMPRO Agent Extension has been installed on, perform
it in following order.

The following is an example that NEC ESMPRO Agent Extension service is installed under "C:¥Program
Files¥ServerAgent Extension", and JRE6 is installed under "C:¥Program Files¥Java".

(1) Stop NEC ESMPRO Agent Extension service.

   TIPS:
   • Service name is "ESM Agent Extension Service".

(2) Install the new version JRE.

   IMPORTANT:
   • If the reboot of operating system is required, please reboot operating system after (3).

(3) Edit path of the JRE that NEC ESMPRO Agent Extension use.

   Open the following file with text editor.
   
   C:¥Program Files¥ServerAgent Extension¥service¥jsl.ini

   Edit the path of JRE.

   jrepath=C:¥Program files¥Java¥jre6

(4) Start NEC ESMPRO Agent Extension service.
3.4 NEC ESMPRO Agent Extension Installation for Linux

To install the software, perform it in following order:

(1) Install the JRE
   If you install NEC ESMPRO Agent Extension service with which that NEC ESMPRO Manager Ver.5 requires to communicate for completing the remote management, please install the JRE.

(2) Copy and extract the NEC ESMPRO Agent Extension installer
   Copy the installer to the hard disk on the managed server and extract it.

(3) Install NEC ESMPRO Agent Extension
   NEC ESMPRO Agent Extension installed.

(4) Change the LAN port that NEC ESMPRO Agent Extension uses
   Do the setting only if BMC on the managed server uses an exclusive LAN port (Management LAN port).

3.4.1 Check before installation

Check the followings:
-- See chapter 2.1 to check the system requirement of managed server and NEC ESMPRO Agent Extension.
-- Login to Linux as root user.

CHECK:
- NEC ESMPRO Agent Extension installer exists on following directory:
  If you install the NEC ESMPRO Agent Extension by using downloaded modules:/esmpro_sa_ex.
  If you install the NEC ESMPRO Agent Extension by using NEC EXPRESSBUILDER ver.5 and above: "EXPRESSBUILDER revision"/lnx/pp/esmpro_sa_ex.
  (ex. 001/lnx/pp/esmpro_sa_ex)
  If you install the NEC ESMPRO Agent Extension by using UtilityCD:
    /lnx/pp/esmpro_sa_ex.

3.4.2 Install the JRE

JRE installer is attached to NEC ESMPRO Agent Extension installer. JRE installer (Linux) is in the below directory.
/esmpro_sa_ex/jre_x

Regardless of below input examples, be sure to install the JRE of the version specified in chapter 2.1.

(1) Copy JRE the installer into any directory.
   The following is an example of copying from NEC EXPRESSBUILDER to /usr/local/bin/jre_x.
   (The mount path is dependent on the OS. Specify the right path.)
   ```bash
cp /mnt/cdrom/001/lnx/pp/esmpro_sa_ex/jre_x /usr/local/bin
   ```

(2) Move to the directory containing the JRE installer.
   The following is an example of copying into /usr/local/bin/jre_x:
   ```bash
cd /usr/local/bin/jre_x
   ```
(3) Install the JRE. JRE will be installed in the directory named JRE version under JRE/usr/java. The following is an example that the version of the JRE is 6 Update20.

```
./jre-6u20-linux-i586-rpm.bin
```

### 3.4.3 Copy and extract NEC ESMPRO Agent Extension installer
Copy the NEC ESMPRO Agent Extension installer into any directory on the managed server. The NEC ESMPRO Agent Extension installer files are in /esmpro_sa_ex/agt_x.

The following is an example of installation into /usr/local/bin:

(1) Copy the all installer files to /usr/local/bin.
   It is shown example that files is copied from NEC EXPRESSBUILDER to /use/local/bin directory. 
   (The mount path is dependent on the OS. Specify the right path.)
```
cp -r /mnt/cdrom/001/lnx/pp/esmpro_sa_ex/agt_x /usr/local/bin
```

(2) Move to the directory containing the installer.
```
cd /usr/local/bin/agt_x
```

(3) Extract the installer.
```
tar xzvf EsmproSaEx-N.NN-x.tgz
```
"N.NN" in the example file name means the version.

### 3.4.4 Install the NEC ESMPRO Agent Extension

(1) Move to the directory that the installer was extracted.
```
cd /usr/local/bin/agt_x/EsmproSaEx-N.NN-x
```
"N.NN" in the example directory name means the version.

(2) Execute the shell for the installation.
```
./EsmproSaEx-N.NN-x.sh
```
"N.NN" in the example file name means the version.

(3) A message to confirm whether to install BMC Configuration function of NEC ESMPRO Agent Extension is displayed. Input "yes" and "Enter" key.
   The BMC Configuration function will be installed under /opt/nec/esmpro_sa_ex_sysman directory.

(4) A message to confirm whether to install NEC ESMPRO Agent Extension service is displayed. If you use the remote management function for which NEC ESMPRO Manager Ver.5 requires to communicate with NEC ESMPRO Agent Extension, input "yes" and "Enter" key.
   NEC ESMPRO Agent Extension service will be installed under /opt/nec/esmpro_sa_ex_agent directory.
   If you input "no", the installer finishes the procedure.

(5) In case that BMC on the managed server uses a standard LAN port, a message to confirm the setting of BMC IP address synchronization function is displayed. Input "yes" to set enable, or "no" to set disable. And then input "Enter" key.
When the function is set to enable, NEC ESMPRO Agent Extension service will set the OS IP address for BMC IP address.

**TIPS:**
- You can also set this item after finishing the installation.

When the installation is completed, the NEC ESMPRO Agent Extension service is started and available at any time.

### 3.4.5 Confirm whether the setting of NEC ESMPRO Agent Extension opens

After the installation is completed, do the following operation to open the setting function of NEC ESMPRO Agent Extension.

```
/opt/nec/esmpro_sa_ex_sysman/agentconf
```

You can operate BMC configuration etc in the setting screen.

### 3.4.6 Change LAN port that NEC ESMPRO Agent Extension uses

Do the setting only if BMC on the managed server uses an exclusive LAN port.

**TIPS:**
- If the BMC on the managed server uses standard LAN port, you do not need the setting because NEC ESMPRO Agent Extension uses same LAN as BMC.

1. Open the setting of NEC ESMPRO Agent Extension.
2. Select "Select IP address for Agent".
3. Select IP address of Operating system that NEC ESMPRO Agent Extension uses.
3.5 NEC ESMPRO Agent Extension Uninstallation for Linux

Login to Linux as root user.

To uninstall the software, perform it in following order:

(1) Uninstall the NEC ESMPRO Agent Extension

(2) Uninstall the JRE

3.5.1 Uninstall the NEC ESMPRO Agent Extension

(1) Move to the directory in which is copied the all files for the installation.

```
cd /usr/local/bin/agt_x/EsmproSaEx-N.NN-x
```

"N.NN" in the example directory name means the version.

(2) Execute the shell for the uninstallation.

```
./EsmproSaEx-N.NN-x.sh
```

"N.NN.NN" in the example file name means the version.

(3) A message to confirm whether to uninstall BMC configuration function of NEC ESMPRO Agent Extension is displayed. Input "delete" and "Enter" key. If you uninstall BMC configuration function, NEC ESMPRO Agent Extension service is also uninstalled automatically.

(4) A message to confirm whether to uninstall NEC ESMPRO Agent Extension service is displayed. Input "delete" and "Enter" key.

3.5.2 Uninstall the JRE

You can confirm the version of the JRE by following command.

```
rpm -qa | grep jre
```

The following is an example that the version of the JRE is 6 Update20.

```
rpm -e jre-1.6.0_20-fcs
```
3.6 JRE Update for Linux

Perform it in following order to update JRE software on the managed server which NEC ESMPRO Agent Extension has been installed on:
This example is for updating JRE to ver.6 Update20 when you use NEC ESMPRO Agent Extension.

(1) Stop NEC ESMPRO Agent Extension service.

```
/etc/rc.d/init.d/dianascopeagent stop
```

(2) Update JRE.

```
./jre-6u20-linux-i586-rpm.bin
```

(3) Start NEC ESMPRO Agent Extension service.

```
/etc/rc.d/init.d/dianascopeagent start
```
Chapter 4  BMC Configuration Information Items

4.1 BMC Configuration Items
This chapter explains all the BMC configuration information items. Items that are not mandatory can be used with the default values.

The following screens are example displays for creating new configuration information with NEC ESMPRO Agent Extension.

TIPS:
- If the managed server is Scalable HA Server, the screen shows as "(7) Set Authentication Key".

(1) Common

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Information</td>
<td>Management information setting on the managed server side</td>
<td></td>
</tr>
<tr>
<td>Model Name</td>
<td>Displays the model name of the managed server. (The model name included in the FRU information is displayed. It may be different from the official product name.)</td>
<td>-</td>
</tr>
<tr>
<td>Comments 1, 2</td>
<td>Set comments. Comments can be freely entered. (The comments cannot be viewed remotely. Only the alphanumeric character can be input. The blank character cannot be input.)</td>
<td>Blank</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>Default Value</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Computer Name</td>
<td>Enter any name for managing the server on NEC ESMPRO Manager Ver.5. The computer name of each server to be managed must be unique.</td>
<td>host1</td>
</tr>
<tr>
<td>Authentication Key</td>
<td>Set the authentication key for connection with the BMC.</td>
<td>guest</td>
</tr>
<tr>
<td>Community Name</td>
<td>Set the community name of the SNMP trap to be sent by the BMC.</td>
<td>public</td>
</tr>
<tr>
<td>Alert *2</td>
<td>Determine whether to enable/disable the sending of alerts.</td>
<td>Enable</td>
</tr>
<tr>
<td>Alert Process *3</td>
<td>Select either “All Alert Receivers” or “One Alert Receiver”.</td>
<td>One Alert Receiver</td>
</tr>
<tr>
<td>Alert Acknowledge</td>
<td>Determine whether to enable/disable the confirming of alert acknowledge.</td>
<td>Energy Saving Server: Disable Other server: Enable</td>
</tr>
<tr>
<td>Alert Level *4</td>
<td>Set a level for determining whether to send alerts, depending on the importance of events which have occurred on the managed server.</td>
<td>Level 4</td>
</tr>
<tr>
<td>Remote Control (LAN1)</td>
<td>Determine whether to enable/disable remote control via LAN1. When &quot;Disable&quot; is selected, connection via LAN1 from NEC ESMPRO Manager Ver.5 cannot be made.</td>
<td>Enable</td>
</tr>
<tr>
<td>Remote Control (LAN2)</td>
<td>Determine whether to enable/disable remote control via LAN2. When &quot;Disable&quot; is selected, connection via LAN2 from NEC ESMPRO Manager Ver.5 cannot be made. This item is displayed only when the managed server supports communication with NEC ESMPRO Manager Ver.5 via LAN2.</td>
<td>Enable</td>
</tr>
<tr>
<td>Remote Control (WAN/Direct)</td>
<td>Determine whether to enable/disable remote control via WAN/Direct connection. When &quot;Disable&quot; is selected, WAN/Direct connection from NEC ESMPRO Manager Ver.5 cannot be made.</td>
<td>Enable</td>
</tr>
<tr>
<td>Redirection (LAN)</td>
<td>Determine whether to enable/disable a remote console via LAN by BIOS. When &quot;Disable&quot; is selected, the remote console function via LAN cannot be used.</td>
<td>Enable</td>
</tr>
<tr>
<td>Redirection (WAN/Direct)</td>
<td>Determine whether to enable/disable a remote console via WAN/Direct connection by BIOS. When &quot;Disable&quot; is selected, the remote console function via WAN/Direct connection cannot be used.</td>
<td>Enable</td>
</tr>
</tbody>
</table>

*1: When you change Community Name, please set up the community name so that the alert receiver can receive it via LAN. Only the alphanumeric character can be input.
*2: See 4.2 "Alert form BMC".
*3: In Energy Saving Server, alerts are sent to all alert receivers even if "One Alert Receiver" is selected.
*4: The alert levels are as follows:
### Alert Level Importance of Alert Event

<table>
<thead>
<tr>
<th>Alert Level</th>
<th>Importance of Alert Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unrecoverable</td>
</tr>
<tr>
<td>2</td>
<td>Unrecoverable, Error</td>
</tr>
<tr>
<td>3</td>
<td>Unrecoverable, Error, Warning</td>
</tr>
<tr>
<td>4</td>
<td>Unrecoverable, Error, Warning, Recoverable</td>
</tr>
<tr>
<td>5</td>
<td>Unrecoverable, Error, Warning, Recoverable, Notice</td>
</tr>
<tr>
<td>6</td>
<td>Unrecoverable, Error, Warning, Recoverable, Notice, Monitoring</td>
</tr>
</tbody>
</table>

**IMPORTANT:**
- When you use the serial port 2 of the managed server to connect device such as UPS, please disable the following three items. In this case, it becomes impossible to use a remote console via LAN when the managed server supports SOL.
  - "Remote Control (WAN/Direct)"
  - "Redirection (LAN)"
  - "Redirection (WAN/Direct)"
- Please refer to "NEC ESMPRO Manager Ver.5 Setup Guide" to confirm the managed server supports SOL.

**TIPS:**
- If the managed server supports SOL, the following items are changed automatically when you register the configuration information with "Redirection (LAN)" enabled.
  - "Redirection (WAN/Direct)" item in "Common" tab : Enable
  - "Flow control" item in "WAN/Direct" tab : RTS/CTS

(2) Alert Order
Priorities are displayed when the managed server's BMC supports communication via LAN2.
Click [Alert Order] on the "Common" tab page.
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAN1/LAN2</td>
<td>Determine whether to give priority to alerts via LAN1 or LAN2.</td>
<td>LAN1</td>
</tr>
<tr>
<td>LAN/Alert Receiver</td>
<td>Determine whether to give priority to alerts via the same LAN or to assign priorities to the alert receivers. When priority is given to LAN, alerts are sent to all alert receivers via the same LAN, and then alerts via the other LAN are sent. When priorities are assigned to the alert receivers, alerts are sent to them in priority descending order via LAN1 and LAN2 by turns.</td>
<td>LAN</td>
</tr>
</tbody>
</table>

(3) LAN1/LAN2
"LAN2" tab page is displayed when the managed server supports communication with NEC ESMPRO Manager Ver.5 via LAN2.

**IMPORTANT:**
- Do not change the default values of "LAN1" and "LAN2" when you do not use LAN connection.
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server</td>
<td>Setting for network to be used with the managed server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Obtain an IP Address automatically(DHCP)</td>
<td>Determine whether to dynamically obtain an IP address from a DHCP server. If the item is set enable and registered, the BMC set the value obtained from DHCP server on &quot;IP Address&quot;, &quot;Subnet Mask&quot; and &quot;Default Gateway&quot;. You can set enable on the item only if the BMC supports this capability.</td>
</tr>
<tr>
<td></td>
<td>IP Address</td>
<td>Set the IP address of the managed server's BMC.</td>
</tr>
<tr>
<td></td>
<td>Subnet Mask</td>
<td>Set the subnet mask of the managed server.</td>
</tr>
<tr>
<td></td>
<td>Default Gateway</td>
<td>Set the IP address of the managed server's default gateway.</td>
</tr>
<tr>
<td></td>
<td>Alert Receiver / Management PC</td>
<td>Setting of the NEC ESMPRO Manager Ver.5 server that manages the server, or alert receiver that receives alerts from BMC.</td>
</tr>
<tr>
<td></td>
<td>Alert (Check Box)</td>
<td>Determine whether to enable/disable the sending of alerts to the alert receiver.</td>
</tr>
<tr>
<td></td>
<td>IP Address</td>
<td>Set the IP address of the NEC ESMPRO Manager Ver.5 server or the alert receiver. Please set the IP address of NEC ESMPRO Manager Ver.5 server for Primary Alert Receiver / Management PC. When you set alert receiver / management PC on same network with the managed server for this item, please connect the managed server via LAN port used by BMC and the alert receiver / management PC to network before register the configuration to BMC.</td>
</tr>
<tr>
<td>Alert Retry</td>
<td>Setting for alert retry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alert Retry Count</td>
<td>Set the number of times an alert retried.</td>
</tr>
<tr>
<td></td>
<td>Alert Timeout</td>
<td>Set a timeout period (seconds) for an alert.</td>
</tr>
</tbody>
</table>

**CHECK:**
- The managed server included the BMC that uses an exclusive LAN port (Management LAN port) supports the function of "Obtain an IP Address automatically (DHCP)".
- If the managed server has been installed Advanced Remote Management Card or ft Remote Management Card, the BMC may not immediately obtain the IP address after the BMC is configured to obtain the IP address by the DHCP. Please turn the managed server AC-OFF and AC-ON because the BMC try to obtain the IP address whenever the managed server is turned AC-ON.
(4) WAN/Direct

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial Port</td>
<td>Setting for the COM port to be used with the managed server</td>
<td></td>
</tr>
<tr>
<td><strong>Mode</strong> *1</td>
<td>Select &quot;WAN (Modem)&quot; for WAN connection, and &quot;Direct&quot; for direct connection.</td>
<td>Direct</td>
</tr>
<tr>
<td><strong>Baud Rate</strong> *1</td>
<td>Select a baud rate.</td>
<td>19.2Kbps</td>
</tr>
<tr>
<td><strong>Flow Control</strong> *1</td>
<td>Select a flow control method.</td>
<td>None</td>
</tr>
<tr>
<td>Modem</td>
<td>Setting for the modem to be used with the managed server</td>
<td></td>
</tr>
<tr>
<td><strong>Dial Mode</strong></td>
<td>Enter &quot;Pulse&quot; for a “pulse” circuit, and &quot;Tone&quot; for a &quot;tone&quot; circuit.</td>
<td>Pulse</td>
</tr>
<tr>
<td><strong>Initialization Command</strong></td>
<td>Set the initialization command to use the modem.</td>
<td>ATE1Q0V1X48D</td>
</tr>
<tr>
<td><strong>Hang-up Command</strong></td>
<td>Set the command to disconnect the line.</td>
<td>ATH</td>
</tr>
<tr>
<td><strong>Escape Command</strong></td>
<td>Set the command to change the communication mode from &quot;online mode&quot; to &quot;offline mode&quot;.</td>
<td>+</td>
</tr>
</tbody>
</table>

*1 Items that match the BIOS settings
(5) WAN (setting for alerts)
This dialog box is displayed when you click "Alert setting" button in "WAN/Direct" tab of the NEC ESM PRO Agent Extension.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPP Server n</td>
<td>Setting for the alert receiver to which PPP connection is made from the managed server's BMC</td>
<td></td>
</tr>
<tr>
<td>Alert (Check Box)</td>
<td>Determine whether to enable/disable the sending of alerts.</td>
<td>Disable</td>
</tr>
<tr>
<td>Phone</td>
<td>Set the phone number of the alert receiver to which PPP connection is made.</td>
<td>Blank</td>
</tr>
<tr>
<td>User ID</td>
<td>Set the user ID for PPP connection.</td>
<td>guest</td>
</tr>
<tr>
<td>Password</td>
<td>Set the password for PPP connection.</td>
<td>guest</td>
</tr>
<tr>
<td>Domain</td>
<td>Set the domain name for PPP connection.</td>
<td>Blank</td>
</tr>
<tr>
<td>Alert IP Address</td>
<td>Set the IP address of the alert receiver management PC.</td>
<td>0.0.0.0</td>
</tr>
<tr>
<td>Dial Retry</td>
<td>Setting for dial-up retry when alerts are sent via WAN</td>
<td></td>
</tr>
<tr>
<td>Dial Retry Count</td>
<td>Set the number of times dial-up retried.</td>
<td>3</td>
</tr>
<tr>
<td>Dial Retry Interval</td>
<td>Set intervals (seconds) at which dial-up is retried.</td>
<td>60</td>
</tr>
<tr>
<td>Alert Retry</td>
<td>Setting for alert retry when alerts are sent via WAN</td>
<td></td>
</tr>
<tr>
<td>Alert Retry Count</td>
<td>Set the number of times an alert retried.</td>
<td>3</td>
</tr>
<tr>
<td>Alert Timeout</td>
<td>Set a timeout period (seconds) for an alert.</td>
<td>6</td>
</tr>
</tbody>
</table>
(6) Pager

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert Receiver n</td>
<td>Setting for the alert receiver to which PPP connection is made from the managed server's BMC.</td>
<td></td>
</tr>
<tr>
<td>Alert (Check Box)</td>
<td>Determine whether to enable/disable the sending of alerts.</td>
<td>Disable</td>
</tr>
<tr>
<td>Phone No.</td>
<td>Set the phone number of the pager.</td>
<td>Blank</td>
</tr>
<tr>
<td>Message</td>
<td>Setting for the message to be sent from the managed server's BMC to the pager.</td>
<td></td>
</tr>
<tr>
<td>Pager Message</td>
<td>Set the message to be sent from the managed server's BMC to the pager.</td>
<td>Blank</td>
</tr>
<tr>
<td>Guide Message Wait Time</td>
<td>Set the wait time until the message is sent after dialing the pager center's phone number. Setting range: 0-30 seconds</td>
<td>20</td>
</tr>
</tbody>
</table>

**TIPS:**
- The items of the Dial-up Retry and the Alert Retry in the "WAN (Alert setting)" are also applied to the "Pager".
- The managed server that integrates EXPRESSSCOPE Engine series does not support the alert to pagers.
(7) Set Authentication Key

If the managed server is Scalable HA Server, you can only set the authentication key. The screen shows as follows.

![Authentication Key Dialogue Box]

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentication Key</td>
<td>Set the authentication key for connection with the BMC.</td>
<td>guest</td>
</tr>
</tbody>
</table>
4.2 Alert form BMC

In the case that the item "Alert" on BMC Configuration is enabled, BMC will alert directly to the specified alert receiver when the event which is in specified alert level. If NEC ESMPRO Manager Ver.5 or NEC ESMPRO Manager Association Module is installed on the alert receiver, the alert from BMC is registered on NEC ESMPRO AlertManager.

Sending the alert from BMC depends on exist of NEC ESMPRO Agent.

(1) When NEC ESMPRO Agent has been installed on the managed server.
   If OS does not run on the managed server, BMC send the alert when the specified event happens. After OS runs and NEC ESMPRO Agent starts, BMC does not send the alert even if the event happens, because NEC ESMPRO Agent sends the alert.

(2) When NEC ESMPRO Agent has not been installed on the managed server.
   BMC sends the alert whenever the specified event happens.

 TIPS:
   • If the managed server is Scalable HA Server, you must set the alert by Server Web Console. For details, see the user's guide of Scalable HA Server.
4.3 Configuration with NEC ESMPRO Agent Extension (for LAN connection)

This document explains the configuration procedure using the NEC ESMPRO Agent Extension for Windows.

**TIPS:**
- If the managed server is Scalable HA Server, you must need following:
  - Set "Authentication Key" by NEC ESMPRO Agent Extension
  - Set "Server Name", "Network" and "Alert Management" by Server Web Console.
  For details, see the user's guide of Scalable HA Server.

1. On the managed server, click Windows [start] and start the BMC configuration function of NEC ESMPRO Agent Extension.

2. The main dialog box will be appeared.
   Click [Set Configuration]. When a confirmation message is displayed, click [OK].

   The following screen shows example for the managed server that the BMC uses standard LAN port.
(3) "BMC Configuration" dialog box will be displayed. Click "Common" tab page. Be sure to set the below item. The other items can be used with the default values.

-- "Computer Name"

Enter a unique name for each managed server.

-- "Authentication Key"

The following screen shows an example.

![BMC Configuration dialog box](image)

**TIPS:**

- If the managed server is compatible with SOL and "Enable" is selected for the item "Redirection (LAN)", the following items necessary for the remote console via the LAN will be changed automatically.
  - "Common" tab page - "Redirection (WAN/Direct)": Enable
  - "WAN/Direct" page - "Flow Control": RTS/CTS
(4) Select "LAN1" tab page for LAN port 1 of the BMC.
Set the below items. The other items can be used with the default values.
-- "Obtain an IP Address automatically (DHCP)"
  Determine whether to dynamically obtain an IP address from a DHCP server.
  If the item is set enable and registered, the BMC set the value obtained from DHCP server on "IP Address", "Subnet Mask" and "Default Gateway".
  You can set enable on the item only if the BMC supports this capability.
-- "IP Address"
  Case that BMC on the managed server uses an exclusive LAN port (Management LAN port); enter the IP address for the exclusive LAN port.
  Case that BMC on the managed server uses a standard LAN port; be sure to make the setting identical to the setting on the operating system of the managed server.
-- "Subnet Mask"
  Enter the subnet mask for the IP address.
-- "Default Gateway"
  Enter the default gateway if the managed server connects to NEC ESMPRO Manager Ver.5 server via any gateway
-- "Alert Receiver / Management PC IP Address" - "Primary".
  Enter the IP address of NEC ESMPRO Manager Ver.5 server.

The following screen shows example.

CHECK:
- When you enter "Management PC IP Address", the same IP address is displayed for "Alert Receiver/Management PC (1)".
- The "LAN2" tab is displayed only when the managed server's BMC supports communication via LAN2. To communicate with the NEC ESMPRO Manager Ver.5 via LAN2, make the setting on the "LAN2" tab as same as "LAN1" tab.
(5) If you set "Default Gateway", please connect the managed server via LAN port used by BMC and the gateway to network. If you set "Alert Receiver / Management PC IP Address" on same network with the managed server, please connect the managed server via LAN port used by BMC and the alert receiver/management PC to network.

(6) Click [Register]. The configuration information will be set in the BMC. The MAC addresses of the gateway and the alert receivers will be also set in the BMC.
Chapter 5  Precautions for Use

5.1 About NEC ESMPRO Agent Extension installation
-- NEC ESMPRO Agent Extension Installer (Windows & Linux) cannot downgrade to the older version. If you want to use the older version, uninstall the current version and then install older version.
Note: All the registered information will be deleted as the result of the uninstalling.

-- Do not install NEC MWA Agent and NEC ESMPRO Agent Extension on a same server.

-- Please do not install DianaScope Agent in the device in which NEC ESMPRO Agent Extension is installed.

-- NEC ESMPRO Agent Extension (Windows) Installer may indicate a message that requests some disk if you upgrade the NEC ESMPRO Agent Extension with the installer on CD-ROM. In this case, copy the installer on the HDD and then upgrade.

5.2 About Firewall
If the firewall is enabled on the managed server, NEC ESMPRO Agent Extension may not work correctly. Please perform following settings on the managed server.

5.2.1 About Windows Firewall
(1) Open "Windows firewall" from "control panel" of Windows.

(2) Select "Add Port" on "Exceptions" tab page.

(3) Enter following setting:

<table>
<thead>
<tr>
<th>Name</th>
<th>arbitrary name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port number:</td>
<td>Port number that you need to add.</td>
</tr>
<tr>
<td>If NEC ESMPRO Manager Ver.5 cannot communicate with NEC ESMPRO Agent Extension:</td>
<td>47120 - 47129</td>
</tr>
<tr>
<td>TCP/UDP:</td>
<td>TCP</td>
</tr>
</tbody>
</table>

5.2.2 About Linux Firewall in excluding SUSE Linux Enterprise Server

(1) Execute "setup" command.

(2) Select "Firewall configuration" and "Customize".

(3) Enter following setting at "Allow incoming":

<table>
<thead>
<tr>
<th>Other Port:</th>
<th>Port number that you need to add : tcp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>If NEC ESMPRO Manager Ver.5 cannot communicate with NEC ESMPRO Agent Extension:</td>
<td>47120 - 47129</td>
</tr>
</tbody>
</table>
5.2.3 About Linux Firewall in SUSE Linux Enterprise Server

(1) Execute "yast" command.

(2) Select "Security and Users" and "Firewall".

(3) Select "Allowed Services" and "Advanced...".

(4) Enter following setting at "Additional Allowed Ports":

<table>
<thead>
<tr>
<th>TCP Ports:</th>
<th>Port number that you need to add</th>
</tr>
</thead>
<tbody>
<tr>
<td>If NEC ESMPRO Manager Ver.5 cannot communicate with NEC ESMPRO Agent Extension:</td>
<td>47120 - 47129</td>
</tr>
</tbody>
</table>

5.3 About BMC Configuration

5.3.1 About BMC Configuration tool

Among the BMC configuration information tools there are some tools which cannot be used to setup NEC ESMPRO Agent Extension.

-- NEC MWA Agent cannot be used.

-- If the NEC ESMPRO Agent Extension is not stored in the NEC EXPRESSBUILDER DVD-ROM, "A setup of a system management" stored in the DVD-ROM cannot be used.

-- If the NEC ESMPRO Agent Extension is not stored in the UtilityCD CD-ROM, "A setup of a system management" stored in the CD-ROM cannot be used.

-- The Console-less function of the NEC EXPRESSBUILDER can be used only when NEC ESMPRO Agent Extension is stored in the same NEC EXPRESSBUILDER DVD-ROM.

5.3.2 In Case of Exchange of alert receiver PC

If an alert receiver PC as an alert receiver has been exchanged, register the managed server's BMC configuration information again even when the IP address of the alert receiver PC remains unchanged. Otherwise, the BMC may fail to recognize the alert receiver.

5.3.3 About BMC IP address synchronization of NEC ESMPRO Agent Extension

If BMC on the managed server uses a standard LAN port, NEC ESMPRO Agent Extension has the function that corrects the IP address of the BMC automatically to the IP address set on the operating system when the operating system is started. In the case below, it is possible that competition or repetition of IP address occurs.

-- When your DHCP environment is possible to set a different IP address to the managed server every booting the operating system, the DHCP server expects that the IP address is released after the operating system of the managed server is shut downed. But BMC continues to use the IP address because the BMC IP address synchronization function set the IP address to the BMC. If the DHCP server reuses the IP address, competition of IP address will occur.

-- When the managed server has cluster system, the BMC IP address synchronization of the NEC ESMPRO Agent Extension set the logical IP address for the cluster system to BMC. It is possible to let occur the repetition of the IP address.

Cause of these problems is that BMC has shared the standard LAN port of the managed server. These problems do not occur for Advanced Remote Management Card because the BMC on the card uses an exclusive LAN port (Management LAN port).
If the IP address for the BMC is different from the IP address for the operating system, you can avoid these problems. Refer to the following operation for Windows:

1. Click [synchronization] on the main dialog box of the NEC ESMPRO Agent Extension to disable the BMC IP address synchronization function.

2. Set the different IP address for the BMC from the IP address of the operation system.

3. Add a static entry to the ARP table of the management PC or of the gateway server that resolves the IP address used by BMC to the MAC address.
   - When the management PC and the managed server are in the same network, add a static entry to the ARP table of the management PC.
   - When the management PC is in the different network from and the managed server, add a static entry to the ARP table of the gateway server for the managed server.

   The example is shown below. (IP address 157.55.85.212, MAC address 00-aa-00-62-c6-09)
   
   ```plaintext
   arp -s 157.55.85.212    00-aa-00-62-c6-09
   ```

5.3.4 About the function "Obtain an IP Address automatically (DHCP)"
The managed server included the BMC that uses an exclusive LAN port (Management LAN port) supports the function "Obtain an IP Address automatically (DHCP)".

Following version of NEC ESMPRO Agent Extension modules supports the setting of the function.
- The managed server that integrates EXPRESSSCOPE Engine series.
- The managed server installed Advanced Remote Management Card or ft Remote Management Card.

5.4 About the initialization of the BMC Configuration Information setting
When you set "Default value" on the BMC Configuration Information with NEC ESMPRO Agent Extension, or create New Configuration with "System Management Tool" started from NEC EXPRESSBUILDER DVD-ROM or UtilityCD CD-ROM, each items of the BMC Configuration Information are initialized. If the managed server integrates EXPRESSSCOPE Engine series, Advanced Remote Management Card or ft Remote Management Card, following items for BMC Web server are also initialized because they are shared with BMC Configuration Information:
- DHCP Configuration
- IP Address
- Subnet Mask
- Default Gateway

How to set the Web server is following:
- Select "System Management Tool" on "Tool" started from NEC EXPRESSBUILDER DVD-ROM, and then select "Web server of BMC".
- Login to Web server of the BMC, and then select "Configuration" - "Network".

TIPS:
- If the managed server is Scalable HA Server, you can't initialize the BMC Configuration Information by NEC ESMPRO Agent Extension.
Appendix. How to setup for using NEC ESMPRO Agent Extension on the managed server that is set LAN teaming

Please setup NEC ESMPRO Agent Extension with the procedure below.

How to setup is depended on the type of the managed server which the NEC ESMPRO Agent Extension has been installed on.
- On the managed server that BMC uses standard LAN port.
- On the managed server that BMC uses an exclusive LAN port (Management LAN port).
Please see the appropriate explanation.

1. On the managed server that BMC uses standard LAN port

See 2.2.1 "On the managed server that BMC uses standard LAN port" about the setting of LAN Teaming that is available for NEC ESMPRO Agent Extension.

If OS on the managed server is Linux, how to setup the NEC ESMPRO Agent Extension is not depended on LAN teaming. If OS on the managed server is Windows, please setup the NEC ESMPRO Agent Extension with the procedure below.

1. Invalidate BMC IP address synchronization function of the NEC ESMPRO Agent Extension.
   1. Click "NEC ESMPRO Agent Extension" - "NEC ESMPRO Agent Extension" from the start menu on Windows.
   2. Click [synchronization] on the dialog box of the NEC ESMPRO Agent Extension.
   3. Set the BMC IP address synchronization to disable.

2. Set BMC configuration by using the NEC ESMPRO Agent Extension.

   See 4.3 "Configuration with NEC ESMPRO Agent Extension (for LAN connection)" and set BMC configuration information.
   Note the followings:
   - Set LAN1 IP address to same value of the teaming-set IP address.
   - Even if the configuration of LAN2 for the BMC on the managed server is available, do not set LAN2 in the BMC configuration information. (If LAN2 IP address for BMC is already set, change it to "0.0.0.0 ".)

   CHECK:
   - Even if the BMC configuration has been already set, confirm the LAN1 IP address and register it again after invalidating BMC IP address synchronization function.
3. Select IP address for NEC ESMPRO Agent Extension.

(1) Select [Select IP address for Agent] on the NEC ESMPRO Agent Extension.

(2) Enter the teaming address for LAN1.

CHECK:
• Confirm the IP address of the managed server even if the "Check Connection" for the managed server has been completed. If the IP address is different from the teaming-set IP address that is set in the procedure "2. Set BMC configuration by using the NEC ESMPRO Agent Extension", edits it and performs "Check Connection" again.

2. On the managed server that BMC uses an exclusive LAN port (Management LAN port)

Please setup the NEC ESMPRO Agent Extension with the procedure below. This procedure does not depend on OS of the managed server.

Set IP address that NEC ESMPRO Agent Extension uses on the NEC ESMPRO Agent Extension.
- Click [Set Agent IP address] of NEC ESMPRO Agent Extension and set the IP address that is used for Teaming on any LAN.

CHECK:
• If the "Check Connection" for the managed server has been completed, perform "Check Connection" again after performing "Set IP address that NEC ESMPRO Agent Extension uses on the NEC ESMPRO Agent Extension".
## Revision History

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<th>Revision</th>
<th>Date</th>
<th>Description</th>
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<tr>
<td>1.00</td>
<td>2009/02/05</td>
<td>Initial edition</td>
</tr>
<tr>
<td>1.01</td>
<td>2009/03/23</td>
<td>Appends OpeniPMI Driver.</td>
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<td></td>
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<td>Corrects writing errors.</td>
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<tr>
<td>1.02</td>
<td>2009/09/11</td>
<td>Appends the license files and the source files of VNC.</td>
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<tr>
<td></td>
<td></td>
<td>Adds Windows Server 2008 R2 for NEC ESMPRO Agent Extension.</td>
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<td></td>
<td></td>
<td>Corrects writing errors.</td>
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<tr>
<td>1.03</td>
<td>2009/11/20</td>
<td>Corrects the license files.</td>
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<tr>
<td></td>
<td></td>
<td>Adds UtilityCD and Energy Saving Server.</td>
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<td>Corrects writing errors.</td>
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<tr>
<td>1.04</td>
<td>2010/03/05</td>
<td>The description related to VNC and the GUI remote-console is deleted.</td>
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<td></td>
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<td>Adds Scalable HA Server.</td>
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<td></td>
<td></td>
<td>Corrects writing errors.</td>
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<tr>
<td>1.05</td>
<td>2010/06/01</td>
<td>Adds the description to refer the help.</td>
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<tr>
<td></td>
<td></td>
<td>Corrects Hardware and Software of System requirement.</td>
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<tr>
<td></td>
<td></td>
<td>Corrects the description to confirm the Server Management Driver.</td>
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<td></td>
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<td>Adds About Linux Firewall.</td>
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<tr>
<td></td>
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<td>Corrects writing errors.</td>
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<tr>
<td>1.06</td>
<td>2010/08/04</td>
<td>Adds SUSE Linux Enterprise Server.</td>
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<td>Adds JRE 6.</td>
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<td>Adds Energy Saving Server.</td>
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