

# **Server Configuration Utility User's Guide**

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/sv\_config/src/

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## About this Document

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This document explains the complete procedures from installation of "Server Configuration Utility" to setup of the server.

Before attempting to operate Server Configuration Utility, read this document so as to gain an adequate understanding of the contents.

### n **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 servers. The notes and restrictions on use of each product as a server are explained in the user's guide provided with the server and "ESMPRO Manager Ver.6 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.

### n **About Symbols in This Document**

The following explains three symbols that are used in this document:

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

# 1. Summary

---

Server Configuration Utility is software that works on the server. It configures BMC on the server.

## 1.1 Server Configuration Utility Functions

### 1.1.1 NEC Express5800 series

The functions which are supported are displayed.

n **EXPRESSSCOPE Engine 3 or SP3**

n **BMC** (other than above)

You can specify the configurations of BMC on the server.

You can initialize the configurations to the ex-factory settings, reset to restart without system rebooting, clear the SEL (System Event Log) information.

n **System BIOS**

You can configure the System BIOS settings on the server.

n **ECO**

You can check and configure the ECO information.

You can initialize the ECO setting.

n **Battery**

You can check and configure the information of the battery pack and the battery controller.

n **Monitoring**

For Windows, you can configure the monitoring setting of WDT and OS shutdown.

n **Backup**

You can output the configurations on the server to files.

n **Restore**

You can apply the configurations which are backed up in files on the server.

n **System Information (Version Information)**

The versions of BMC Firmware, Boot Firmware, Sensor Data Information (SDR) and System BIOS can be collected.

### 1.1.2 NEC Express5800/Many-core Server

n **NEC ESMPRO Management**

You can specify the authentication key to manage from NEC ESMPRO Manager to the managed server's BMC.

n **SNMP Alert**

You can specify the alert receiver to the managed server's BMC.

## 2. System Requirements

---

### 2.1 Hardware

It needs to satisfy the following conditions.

- | **Target System**
  - NEC Express5800 Series and NEC Storage NS Series that integrates EXPRESSSCOPE Engine 3 or EXPRESSSCOPE Engine SP3 and bundles this product.
  - NEC Express5800/HR110c-M
  - NEC Express5800/D120h
  - NEC Express5800 Series that integrates BMC which is not EXPRESSSCOPE Engine and bundles this product. (ex: NEC Express5800/T110j)
- | **Memory**
  - 512MB or more
- | **Availability of hard disk**
  - 100MB or more

---

**CHECK:**

- Examples of the target models to install this product are the following.
    - NEC Express5800/R120f-2M, R120f-2E, or 2Way 2U Rack Servers that be released later.
    - NEC Express5800/R120f-1M, R120f-1E, or 2Way 1U Rack Servers that be released later.
    - NEC Express5800/T120f, or 2Way Tower Servers that be released later.
    - NEC Express5800/E120f-M, or Modular Servers that be released later.
    - NEC Express5800/B120f, or Blade Servers that be released later.
    - NEC Express5800/R110h-1, or 1Way Rack Servers that be released later.
    - NEC Express5800/T110h, T110h-S, or 1Way Tower Servers that be released later.
- 

**CHECK:**

- NEC Express5800/HR110c-M is supported by the upper version from Server Configuration Utility for Linux Ver.1.08. This model supports only the function described in chapter 5.
  - NEC Express5800/D120h is supported by the upper version from Server Configuration Utility for Windows Ver.1.09. This model supports only the function described in 4.5 Monitoring.
  - BMC which is not EXPRESSSCOPE Engine (ex:NEC Express5800/T110j) is supported by the upper version from Server Configuration Utility for Windows/Linux Ver.1.11.
  - EXPRESSSCOPE Engine SP3 is supported by the upper version from Server Configuration Utility for Windows/Linux Ver.1.10.
-



## 2.2 Operating System

Target OS is as follows.

### I **Windows**

Windows Server 2008 Standard/Enterprise  
Windows Server 2008 Standard/Enterprise/Datacenter x64 Edition  
Windows Server 2008 R2, Standard/Enterprise/Datacenter  
Windows Server 2012 Standard/Datacenter  
Windows Server 2012 R2, Standard/Datacenter  
Windows Server 2016 Standard/Datacenter  
Windows Server 2019 Standard/Datacenter

### I **Linux**

Red Hat Enterprise Linux Advanced Platform 5 (x86, x64)  
Red Hat Enterprise Linux Server 5 (x86,x64)  
Red Hat Enterprise Linux Server 6 (x86, x64)  
Red Hat Enterprise Linux Server 7 (x64)  
SUSE Linux Enterprise Server 12 (SP2) (x64)  
SUSE Linux Enterprise Server 15 (x64)  
Oracle Linux 7 (x64)

---

#### **IMPORTANT:**

- You cannot install this product in the following case.
    - Installation on guest OS of virtual machine.
- 

#### **CHECK:**

- Red Hat Enterprise Linux Server 7 is supported by the upper version from Server Configuration Utility for Linux Ver1.03.
  - SUSE Linux Enterprise Server 12, 15 and Oracle Linux 7 are supported by the upper version from Server Configuration Utility for Linux Ver1.10.
-

## 2.3 Server Management Driver

On Linux, OpenIPMI Driver must be run to use this product.

---

**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`

---

## 3. Installation

---

### 3.1 Server Configuration Utility Installation for Windows

#### 3.1.1 Check before installation

Check the followings:

- See chapter 2 to check the system requirement.
- Login to Windows as Administrator.

#### 3.1.2 Start installer

n **If you install by using EXPRESSBUILDER:**

Please refer to the User's Guide of the server for details of EXPRESSBUILDER.

EXPRESSBUILDER Autorun Menu is started.

The initiation method on the Autorun Menu is different depending on the models.

- The equipment by which EXPRESSBUILDER DVD isn't standard.

Click NEC EXPRESSBUILDER from Windows Start Menu or run the shortcut on the desktop.

---

**TIPS:**

- After installing Starter Pack in the server, you can run EXPRESSBUILDER as a Windows application.
- 

- The equipment by which EXPRESSBUILDER DVD is standard.

You can install as follows:

- (1) Insert EXPRESSBUILDER DVD into Optical disk drive on the server which Windows has started.

---

**TIPS:**

- If Autorun Menu does not launch, double-click ¥autorun¥dispatcher.exe from EXPRESSBUILDER. (x64 Edition : dispatcher\_x64.exe)
  - If the device selection window is displayed, select the device you are using.
- 

- (2) Select as follows, Server Configuration Utility installation will be started.

- Click [Applications] - [Server Configuration Utility] - [Install].

n **If you install by using downloaded modules:**

After unzipping the downloaded modules, please execute the following file. The installer will be started.

¥sv\_config¥setup.exe

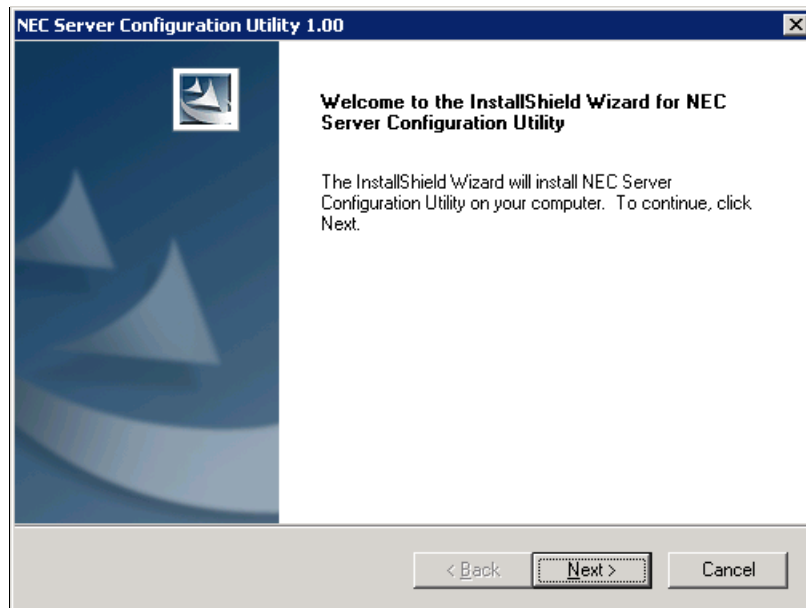
---

**TIPS:**

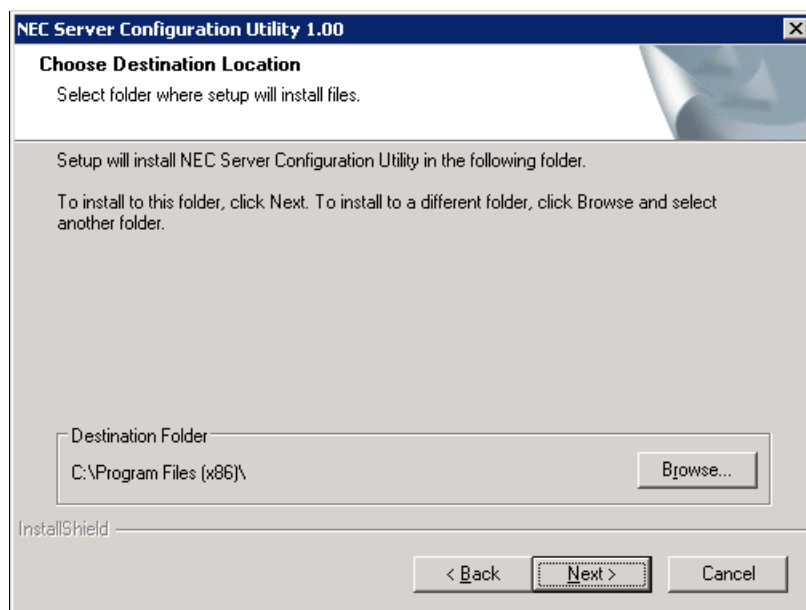
- Please refer to 5.1 Installation when you install it.
-

### 3. 1.3 Install Server Configuration Utility

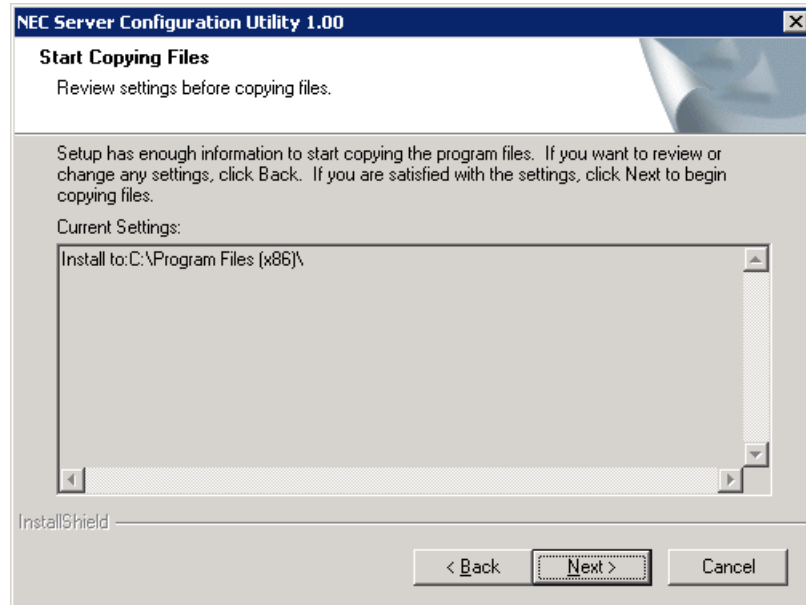
- (1) The Server Configuration Utility installer is started. Click [Next].



- (2) Enter a folder name to install. Click [Next].



- (3) Confirm the installation settings, and click [Next]. The installation is started.



After the installation is completed, Server Configuration Utility is available.

---

**CHECK:**

- If the following message is displayed on the installation complete screen, Server Configuration Utility is available after the system is rebooted.  
-- "The change will take effect after system restart."
-

## 3.2 Server Configuration Utility Uninstallation for Windows

### 3.2.1 Check before uninstallation

Check the following:

-- Login to Windows as Administrator.

### 3.2.2 Uninstall Server Configuration Utility

Uninstall from the Windows menu [Control Panel] - [Add or Remove Programs]. Select [NEC Server Configuration Utility] and click [Change/Remove] button. You can uninstall it by displayed direction.

---

**CHECK:**

- After confirming Server Configuration Utility is not running, you can uninstall it.
-

## 3.3 Server Configuration Utility Installation for Linux

### 3.3.1 Check before installation

Check the followings:

- See chapter 2 to check the system requirement.
- Login to Linux as root user.

### 3.3.2 Copy and extract the installer

Copy the installer (all files in /sv\_config) into any directory on the server.

The following is an example to copy into /usr/local/bin:

---

**CHECK:**

- Server Configuration Utility installer exists on following directory:
    - If you install by using EXPRESSBUILDER: <revision folder>/lnx/pp/sv\_config
    - If you install by using downloaded modules: /sv\_config
- 

(1) Copy the all installer files to /usr/local/bin.

It is shown example that files is copied from EXPRESSBUILDER DVD to /usr/local/bin directory.

(The mount path is dependent on the OS. Specify the right path.)

```
cp -r /mnt/cdrom/001/lnx/pp/sv_config /usr/local/bin
```

(2) Move to the directory containing the installer.

```
cd /usr/local/bin/sv_config
```

(3) Extract the installer.

-- In the case of tgz format:

```
tar xzvf ConfigurationUtility-N.NN-x.tgz
```

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

-- In the case of zip format:

```
unzip EXPRESSBUILDER7_XXXXXXXX_XXXXXXXXXXXXXXXXX.zip
```

"XXXXXX..." in the example file name depends on the module.

---

**CHECK:**

- If unzip command is not installed, you need to install it.
- 

**TIPS:**

- Please refer to 5.1 Installation when you install it.
-

### 3.3.3 Install Server Configuration Utility

(1) Move to the directory that the installer was extracted.

-- In the case of tgz format:

```
cd /usr/local/bin/sv_config/ServerConfiguration-N.NN-x
```

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

-- In the case of zip format:

```
cd /usr/local/bin/sv_config
```

(2) Execute the shell script for the installation.

```
sh setup_config.sh
```

(3) A confirmation message of installation is displayed. Input "yes" and "Enter" key.  
Server Configuration Utility is installed under /opt/nec/ServerConfiguration directory. If you input "no", the installation is not executed.

When the installation is completed, a completion message is displayed.

After the installation is completed, Server Configuration Utility is available.

---

**CHECK:**

- Don't delete the files that are used to install, because you will use them to uninstall.
-



## 3.4 Server Configuration Utility Uninstallation for Linux

### 3.4.1 Check before installation

Check the following:

-- Login to Linux as root user.

### 3.4.2 Uninstall Server Configuration Utility

(1) Move to the directory that the installer was extracted.

-- In the case of `tgz` format:

```
cd /usr/local/bin/sv_config/ConfigurationUtility-N.NN-x
```

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

-- In the case of `zip` format:

```
cd /usr/local/bin/sv_config
```

(2) Execute the shell script for uninstallation.

```
sh setup_config.sh
```

(3) A confirmation message of uninstallation is displayed. Input "delete" and "Enter" key.

When the uninstallation is completed, a completion message is displayed.

## 4. Functions

---

This chapter describes the functions of BMC Configuration of if you use a standard server.  
Please refer to chapter 5 when you use Many-core Server.

### 4.1 Start procedure

#### 4.1.1 On Windows

After the installation is completed, do the following operation as the built-in Administrator to start Server Configuration Utility.

- Click "NEC Server Management Utility" - "NEC Server Configuration Utility" - "NEC Server Configuration Utility" from [start] on Windows

---

**CHECK:**

- If it is not a built-in Administrator, right click the menu and select "Run as administrator".
- 

**TIPS:**

- Refer to the following to see Server Configuration Utility help information.
    - Click "Help" on the screen.
    - Click "NEC Server Management Utility" - "NEC Server Configuration Utility" - "NEC Server Configuration Utility Help" from [start] on Windows.
- 

#### 4.1.2 On Linux

After the installation is completed, do the following operation as root user to start Server Configuration Utility.

```
/opt/nec/ServerConfiguration/svconf
```

---

**TIPS:**

- Refer to the following to see Server Configuration Utility help information.
    - Open the setting of Server Configuration Utility and press F12 key on the screen displayed "[F12] help" at the bottom.
-

### 4.1.3 On Off-line TOOL

Please refer to the User's Guide of the server for details of the Off-line TOOL.

Below is an example of the start procedure when the server that integrates EXPRESSSCOPE Engine 3 or EXPRESSSCOPE Engine SP3.

(1) The following message is displayed on the bottom of POST screen.

Press<F2> SETUP, <F3> Internal flash memory, <F4> ROM Utility, <F12> Network

(2) Press F4 key on this screen. If F4 key is entered, Keyboard type selection screen is displayed after POST screen, and the Off-line TOOL menu is displayed after selecting keyboard type.

(3) Select Server Configuration Utility.

---

**TIPS:**

- Off-line TOOL is integrated in the server that integrates EXPRESSSCOPE Engine 3 or EXPRESSSCOPE Engine SP3 by default.
  - The Off-line TOOL menu is not displayed according to the system.
  - Refer to the following to see help information.  
Start the tool and select Help menu, or press Home key or "?" key  
on the screen displayed "[ Help:[Home or ?]]" at the bottom.
-

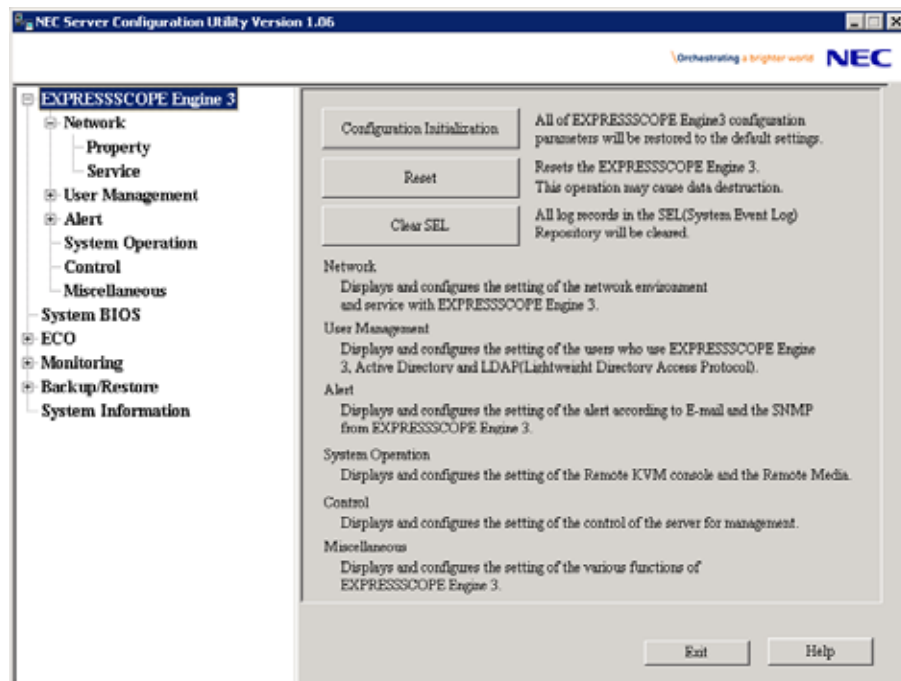
## 4.2 EXPRESSSCOPE Engine3, SP3

This chapter explains "EXPRESSSCOPE Engine 3" or "EXPRESSSCOPE Engine SP3" items.

Refer to set more detailed settings.

Further, refer to "4.3 BMC" in case of the BMC which is not EXPRESSSCOPE Engine.

Explain the settings with the screen for Windows.



Item	Description
Configuration Initialization *1 *3	You can restore all of configuration parameters to the default settings. It will take a few minutes to restart BMC.
Reset *2 *3	You can reset BMC without rebooting system. It will take a few minutes to restart BMC.
Clear SEL	You can clear all records of System Event Log.

\*1: This operation may cause data destruction.

\*2: Please use this operation when you cannot operate the BMC functions correctly or if necessary. This operation does not clear the configuration settings.

\*3: False HW error information may be detected on the server if Shutdown, Reboot, or any other operation is executed during a few minutes after this operation. Please refer to the server's User's Guide to get more information, because the occurrence of the false HW error detection depends on the model of the server.

## 4.2.1 Network Property

This screen displays and sets the network environment.

It is displayed “Property(Master)” or “Property(Standby)” in the case of EXPRESSSCOPE Engine SP3.

NEC Server Configuration Utility Version 1.06

Orchestrating a brighter world **NEC**

EXPRESSSCOPE Engine 3

- Network
  - Property**
  - Service
- User Management
- Alert
  - System Operation
  - Control
  - Miscellaneous
- System BIOS
- ECO
- Monitoring
- Backup/Restore
- System Information

\*If change the settings on this screen, the connection to the EXPRESSSCOPE Engine 3 may be fail.

**Management LAN**

Management LAN: Management LAN

Connection Type: Auto Negotiation

MAC Address: 1C:6F:65:3E:3F:50

DHCP: ☒ Enable ☐ Disable

IP Address [Required]: 192.168.14.13

Subnet Mask [Required]: 255.255.254.0

Default Gateway: 0.0.0.0

Dynamic DNS: ☐ Enable ☒ Disable

DNS Server: 0.0.0.0

Host Name:

Domain Name:

IPv6 Configuration

Default Apply Exit Help

NEC Server Configuration Utility Version 1.06

Orchestrating a brighter world **NEC**

EXPRESSSCOPE Engine 3

- Network
  - Property**
  - Service
- User Management
- Alert
  - System Operation
  - Control
  - Miscellaneous
- System BIOS
- ECO
- Monitoring
- Backup/Restore
- System Information

IPv6: ☒ Enable ☐ Disable

IPv6 Address Assignment Mode: ☐ Dynamic ☒ Static

IPv6 Link Local Address: fe80::76d4:350f:fe8c:4102

IPv6 Global Address:

IPv6 Static Address [Required]: ::

IPv6 Prefix Length [Required]: 64 (0 - 64)

IPv6 Gateway Address [Required]: ::

IPv6 DNS Server Address [Required]:

**Access Limitation**

Access Limitation Type: ☒ Allow All ☐ Allowed Address ☐ Denied Address

IP Address [Required]:

\* Use comma (,) to separate IP address.  
\* The wildcard (\*) can be used in IP Address.

Default Apply Exit Help

Item	Description	Default Value
Management LAN	Management LAN setting	
Management LAN	Set and display LAN port to communicate with BMC. You can modify this setting only on Server Configuration Utility of Off-line TOOL. *1 *2 *14 Management LAN : LAN port for BMC exclusive use. Shared BMC LAN : LAN port of System (OS) is shared and used.	Management LAN
Connection Type	Set and display the connection type of the management LAN. When Management LAN is "Shared BMC LAN", you can modify this setting only on Server Configuration Utility of Off-line TOOL. *1 *14 *19 Auto Negotiation : Connecting by suitable setting. 10Gbps Full : Connecting by Full Duplex at speed of 10Gbps. 10Gbps Half : Connecting by Half Duplex at speed of 10Gbps. 1Gbps Full : Connecting by Full Duplex at speed of 1Gbps. 1Gbps Half : Connecting by Half Duplex at speed of 1Gbps. 100Mbps Full : Connecting by Full Duplex at speed of 100Mbps. 100Mbps Half : Connecting by Half Duplex at speed of 100Mbps. 10Mbps Full : Connecting by Full Duplex at speed of 10Mbps. 10Mbps Half : Connecting by Half Duplex at speed of 10Mbps.	Auto Negotiation
MAC Address	MAC Address of the management LAN is displayed.	
DHCP	Determine whether to dynamically obtain an IP address from a DHCP server. If the item is set Enable and applied, BMC set the value obtained from DHCP server on "IP Address", "Subnet Mask" and "Default Gateway".	Blade Server: Enable Other server: Disable
IP Address	Set the BMC IP address of the management LAN. *4	192.168.1.1 *17
Subnet Mask	Set the Subnet Mask of the management LAN. *3 *4	255.255.255.0
Default Gateway	Set the Default Gateway IP Address of the management LAN. *4 If you set this item, it is necessary for applying configuration information that the gateway is connected on network.	0.0.0.0
Dynamic DNS	Determine whether to enable/disable of Dynamic DNS. *5 *18	Disable
DNS Server	Set the DNS Server. *18	0.0.0.0
Host Name	Set the Host Name. *6 *7 *18	Blank
Domain Name	Set the Domain Name. *7 *18	Blank
GUID	GUID is displayed. *16 *18	
DHCP Client ID	DHCP Client ID is displayed. *16	
IPv6 Configuration	IPv6 setting *10 *19	
IPv6	Select Enable/Disable of IPv6.	Disable
IPv6 Address Assignment Mode	Select Dynamic/Static of IPv6 Address Assignment Mode. *11	Dynamic

Item	Description	Default Value
IPv6 Link Local Address	IPv6 Link Local Address is displayed. *11	
IPv6 Current Address	IPv6 Current Address is displayed. *11 *12	
IPv6 Static Address	Set the IPv6 Static Address. *11 *13	0::0
IPv6 Prefix Length	Set the IPv6 Prefix Length. *11 *13	64
IPv6 Gateway Address	Set the IPv6 Gateway Address. *11 *13	0::0
IPv6 DNS Server Address	Set the IPv6 DNS Server Address. *11 *15	0::0
Access Limitation	Access Limitation setting *12 *18	
Access Limitation Type	Select the Access Limitation Type. Allow All : Access to BMC is not limited. Allow Address : Set the IP Address that is allowed to access BMC. Deny Address : Set the IP Address that is limited to access BMC.	Allow All
IP Address	Set the IP Address to allow or deny to access with the management LAN. *8 *9	Blank

\*1: When the system is supporting change in this item, the supported Connection Type is displayed to the choices, and it is possible to set.

\*2: If you modify this setting, "Reset BMC" is necessary on some systems. When set to "Shared BMC LAN", the management LAN port is disabled. When set to "Shared BMC LAN", the network performance may be reduced because the data of both LANs must be transmitted or received.

\*3: When the Subnet Mask is wrong setting, error message, such as "Failed to apply configuration.", is displayed.

\*4: It is possible to set when DHCP is "Disable".

\*5: It is possible to set when DHCP is "Enable".

\*6: The length of Host Name must be less than 64 characters. Host Name will be truncated to 63 characters, if you input over 63 characters.

\*7: Host Name and Domain Name should be within total of 255 characters.

\*8: The range of IP address to "Allow" or "Deny" access is delimited by ",(comma)". "(asterisk)" can be described an IP address as a wild-card. (ex: 192.168.1.\*,192.168.2.1,192.168.2.254)

\*9: It is possible to set when Access Limitation Type is "Allowed Address" or "Denied Address". The length must be less than 255 characters.

\*10: The Blade Server does not support this item.

\*11: This item is valid only when IPv6 is "Enable".

\*12: It is displayed when IPv6 Address Assignment Mode is "Dynamic".

\*13: It is possible to set when IPv6 Address Assignment Mode is "Static".

\*14: When both of the following has been set, Server Configuration Utility fails to change "Connection Type".

- Management LAN is set to "Shared BMC LAN".

- Boot Mode of BIOS SETUP (To press F2 key on POST) is set to "UEFI".

You can change the configuration of "Connection Type" is available when Boot Mode is "Legacy". Change Boot Mode configuration from "UEFI" to "Legacy" before changing "Connection Type" configuration, and then restore Boot Mode to "UEFI" (after changing "Connection Type").

\*15: It is not displayed when the system does not support this function.

\*16: It displays only in the case of EXPRESSSCOPE Engine SP3.

\*17: In the case of EXPRESSSCOPE Engine SP3, the default value is "192.168.1.110" or "192.168.1.111"

for Master and “192.168.1.210” or “192.168.1.211” for Standby.

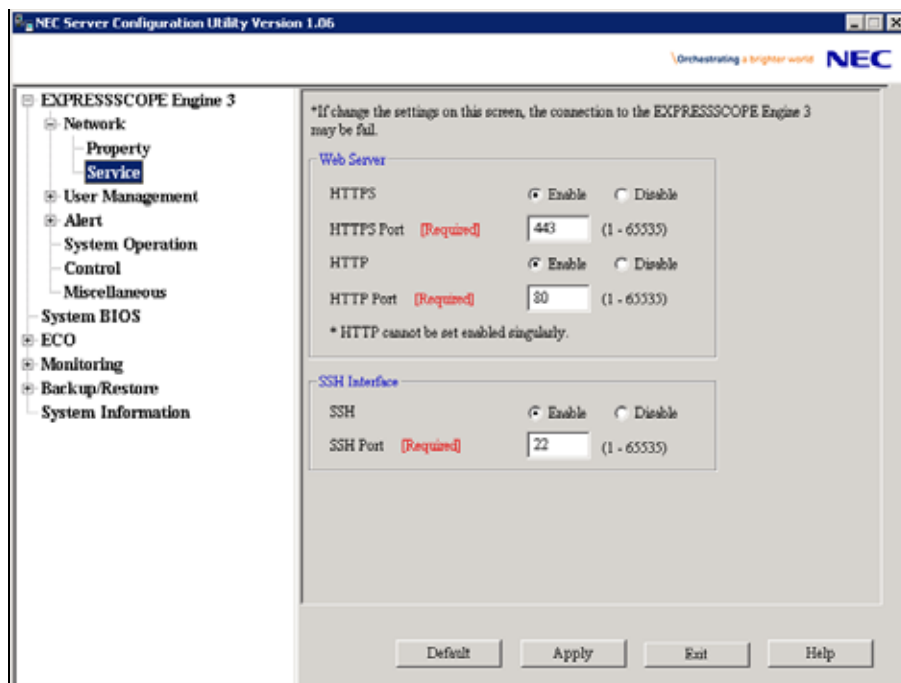
\*18: In the case of EXPRESSSCOPE Engine SP3, it is not supported and it is not displayed.



## 4.2.2 Network Service

This screen displays and sets the list of the network service.

It is displayed “Service(Master)” in the case of EXPRESSSCOPE Engine SP3.



Item	Description	Default Value
Web Server	Web Server setting	
HTTPS	Select Enable/Disable of HTTPS. *1	Enable
HTTPS Port	Set the HTTPS Port. *2 *3	443
HTTP	Select Enable/Disable of HTTP. *1	Enable
HTTP Port	Set the HTTP Port. *2 *3	80
SSH	SSH setting	
SSH	Select Enable/Disable of SSH.	Enable
SSH Port	Set the SSH Port. *2 *3	22

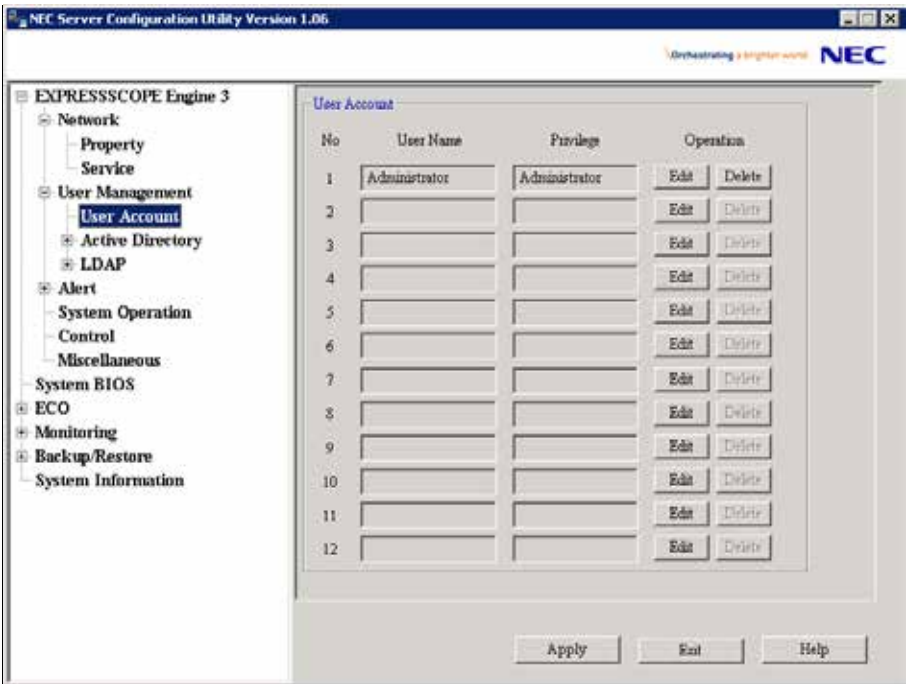
\*1: If HTTP is set Enable, HTTPS is also set Enable automatically. You cannot set HTTP alone to enable.

\*2: It is possible to set when each service is set to enable.

\*3: Each port number of service must not overlap.

4.2.3 User Account

This screen displays and sets the users. It is possible to register up to 12 users or less.



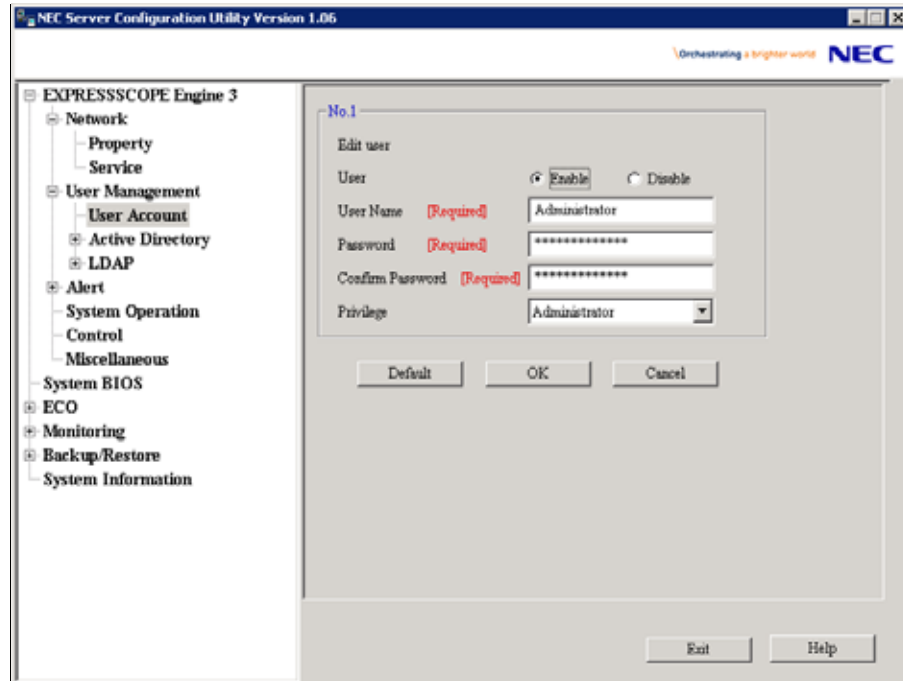
Item	Description
User Account	Displays a list of registered users.
No	The number allocated to user is displayed.
User Name	The user name is displayed.
Privilege	The privilege of the user is displayed.
Edit	Add or change user information.
Delete	Delete user information. *1

\*1: It is possible to delete only for the existing user.

CHECK:

- In Off-line Tool, you can delete user information at the next user settings screen.

This screen sets the selected user.



Item	Description	Default Value
No. X	User setting (No. X)	
User	Select Enable/Disable of User. *1	Enable
User Name	Set the User Name. *2	Blank
Password	Set the Password of the User. *3	Blank
Confirm Password	Set same character string as the Password. *3	Blank
Privilege	Select the privilege of the User. *4 Administrator Operator User	Administrator

\*1: It is possible to set only for the existing user.

\*2: It is possible to set less than 15 alphanumeric characters, "-"(minus sign)" and "\_"(underscore)". "-"(minus sign)" cannot use top character of User Name. "null", "MWA", "AccessByEM-Poem", "InternalUseOnly", "Maintenance" and already registered name in other number cannot use.

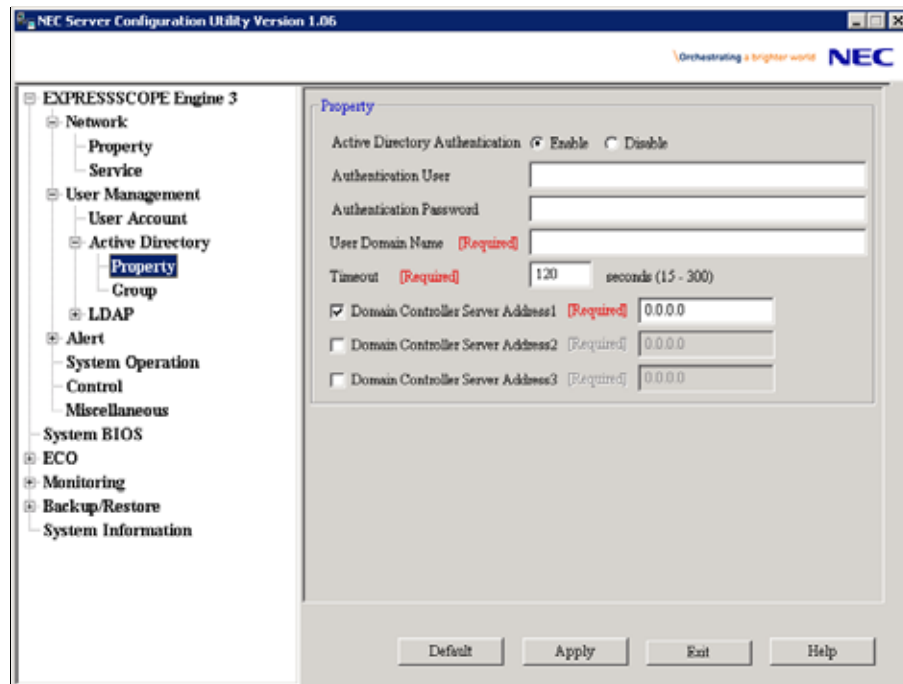
\*3: It is possible to set less than 19 ASCII characters, except for " (space)", " "(quotation marks)", "&" , "?" , "=", "#" and "¥".

\*4: The privilege is as follows:

Privilege	Description
Administrator	Users who have an administrative account and are allowed to perform any operation.
Operator	Users who can operate the system, except session management, registration of license, Remote KVM/Media, whole settings and update.
User	General users who are only allowed to access the IPMI Information.

#### 4.2.4 Active Directory Property

This screen displays and sets the Active Directory.



Item	Description	Default Value
Property	Active Directory setting	
Active Directory Authentication	Select Enable/Disable of Active Directory Authentication.	Disable
Authentication User	Set the user name of Active Directory Authentication. *1 *2	Blank
Authentication Password	Set the password of Active Directory Authentication. *1 *3	Blank
User Domain Name	Set the user domain name used by Active Directory Authentication. *1 *4	Blank
Timeout	Set the timeout period with domain controller. *1	120
Domain Controller Server 1	Select Enable/Disable of Domain Controller Server 1. *1 *5	Enable
Server Address 1	Set the IP Address of Domain Controller Server 1. *1 *6	Blank
Domain Controller Server 2	Select Enable/Disable of Domain Controller Server 2. *1 *5	Disable
Server Address 2	Set the IP Address of Domain Controller Server 2. *1 *6	Blank
Domain Controller Server 3	Select Enable/Disable of Domain Controller Server 3. *1 *5	Disable
Server Address 3	Set the IP Address of Domain Controller Server 3. *1 *6	Blank

\*1: It is possible to set when Active Directory Authentication is "Enable".

\*2: It is possible to set less than 64 ASCII characters, except for " (space)", ",(comma)" , ":", ":", "|", "=", "+", "\*", "?", "<", ">", "@", " "(quotation marks)", "/", "¥", "[", "]", " '(apostrophe)", and "#".

\*3: It is possible to set from 6 to 127 ASCII characters, except for " (space)".

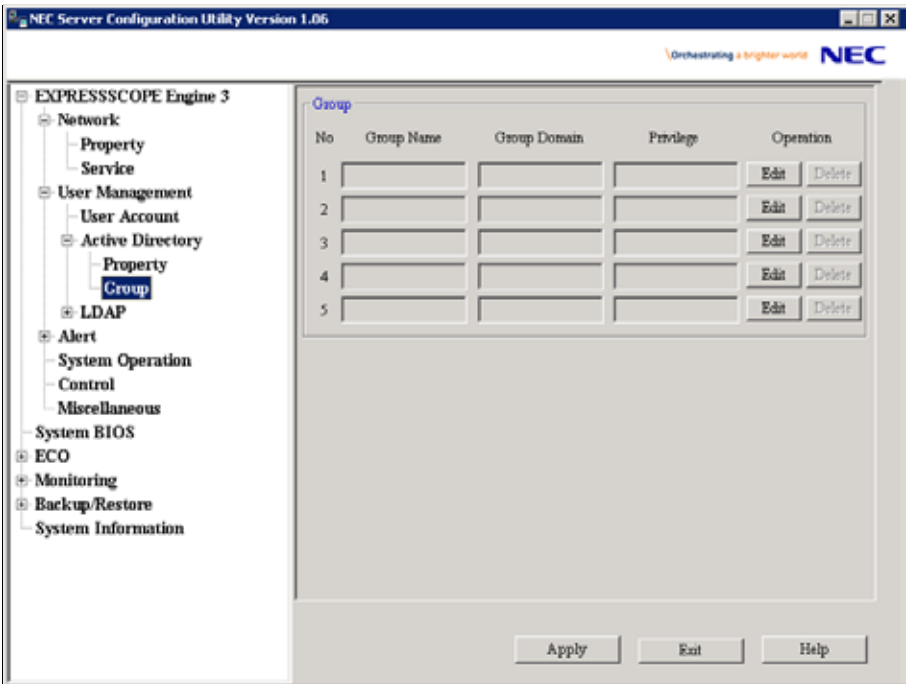
\*4: It is possible to set less than 255 alphanumeric characters, "-(minus sign)", "\_ (underscore)" and ".(period)".

\*5: When Active Directory Authentication is enabled, one or more of the Domain Controller Server should be enable.

\*6: It is possible to set when each Domain Controller Server is "Enable".

### 4.2.5 Active Directory Group

This screen displays and sets the Active Directory group. It is possible to register up to 5 groups or less.



Item	Description
Group *1	Displays a list of registered groups.
No	The number allocated to group is displayed.
Group Name	The group name is displayed.
Group Domain	The domain name of the group is displayed.
Privilege	The privilege of the group is displayed.
Edit *1	Add or change group information.
Delete *1 *2	Delete group information.

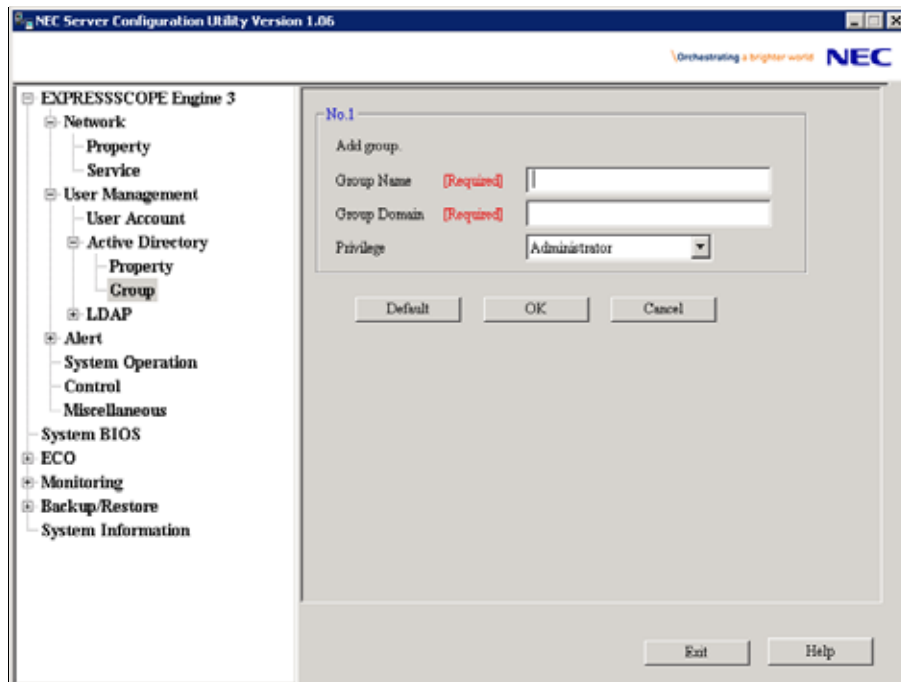
\*1: It is possible to set when Active Directory Authentication is "Enable".

\*2: It is possible to set only for the existing group.

**CHECK:**

- In Off-line Tool, you can delete group information at the next group settings screen.

This screen sets the selected group.



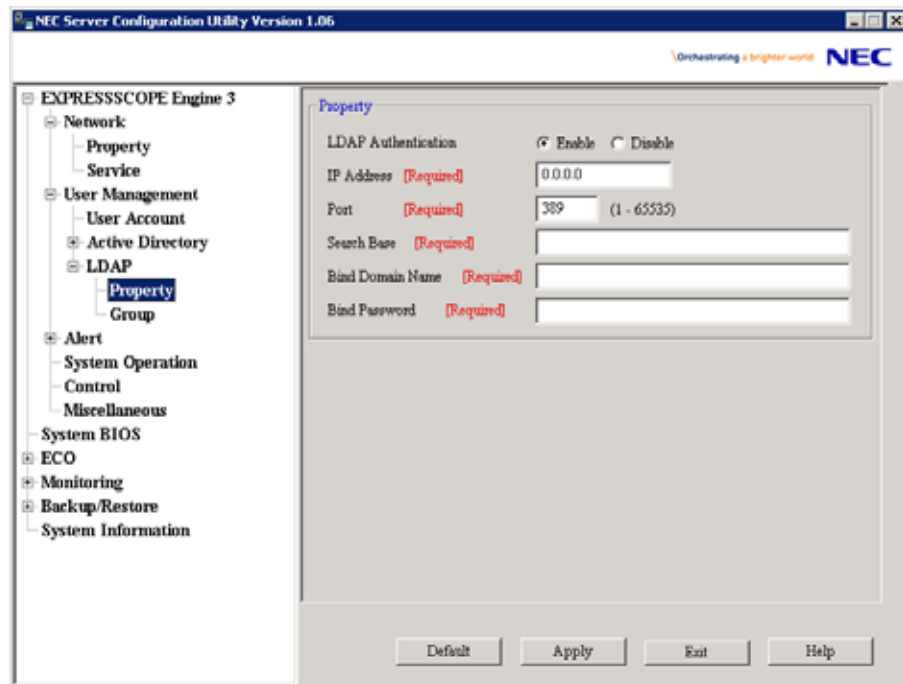
Item	Description	Default Value
No. X	Active Directory Group setting (No. X)	
Group Name	Set the Group Name. *1	Blank
Group Domain	Set the Group Domain Name. *2	Blank
Privilege	Select the privilege of the Group. Administrator Operator User	Administrator

\*1: It is possible to set less than 255 alphanumeric characters, "-(minus sign)" and "\_ (underscore)".

\*2: It is possible to set less than 255 alphanumeric characters, "-(minus sign)", "\_ (underscore)" and ".(period)".

## 4.2.6 LDAP Property

This screen displays and sets the LDAP (Lightweight Directory Access Protocol).



Item	Description	Default Value
Property	LDAP setting	
LDAP Authentication	Select Enable/Disable of LDAP Authentication.	Disable
IP Address	Set the IP Address. *1	0.0.0.0
Port	Set the LDAP Port. *1	389
Search Base	Set the Search Base used by LDAP Authentication. *1 *2	Blank
Bind Domain Name	Set the Domain Name used by LDAP Authentication. *1 *2	Blank
Bind Password	Set the Password used by LDAP Authentication. *1 *3	Blank

\*1: It is possible to set when LDAP Authentication is "Enable".

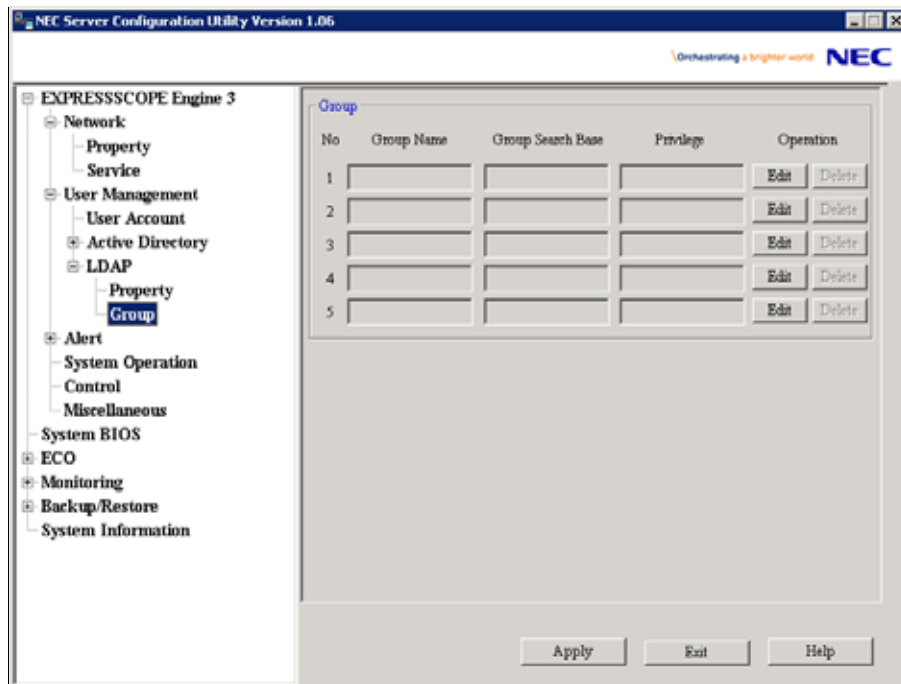
\*2: It is possible to set from 4 to 62 alphanumeric characters, "-"(minus sign)", "\_"(underscore)", "."(period)", ","(comma)"and "=".

\*3: It is possible to set from 4 to 31 alphanumeric characters, except for " "(quotation marks)", "#" and "¥".



## 4.2.7 LDAP Group

This screen displays and sets the LDAP group. It is possible to register up to 5 groups or less.



Item	Description
Group *1	Displays a list of registered groups.
No	The number allocated to group is displayed.
Group Name	The group name is displayed.
Group Search Base	The Search Base of the group is displayed.
Privilege	The privilege of the group is displayed.
Edit *1	Add or change group information.
Delete *1 *2	Delete group information.

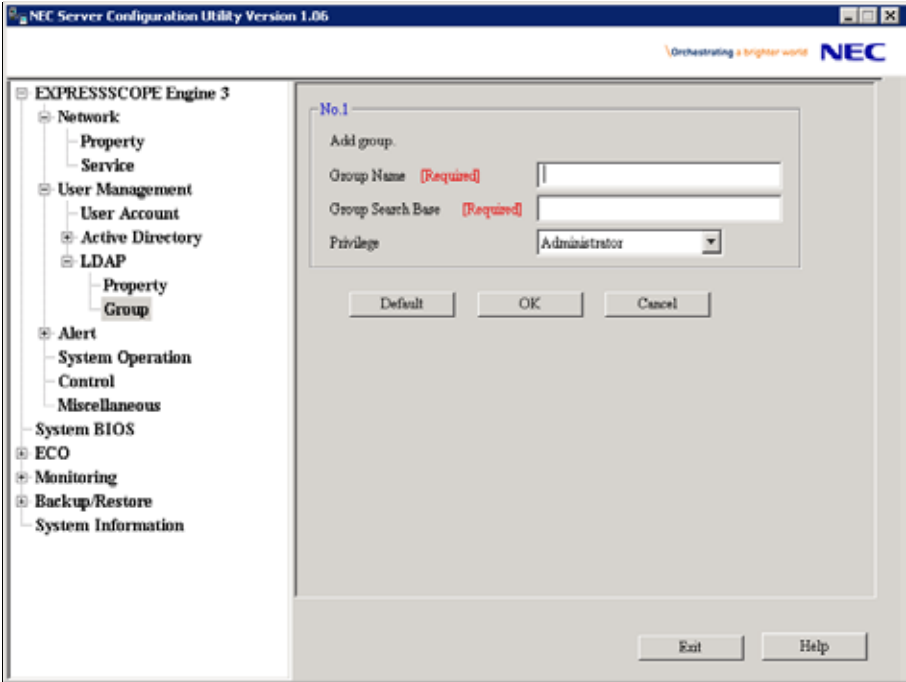
\*1: It is possible to set when LDAP Authentication is "Enable".

\*2: It is possible to set only for the existing group.

### CHECK:

- In Off-line Tool, you can delete group information at the next group settings screen.

This screen sets the selected group.



Item	Description	Default Value
No. X	LDAP Group setting (No. X)	
Group Name	Set the Group Name. *1	Blank
Group Search Base	Set the Group Search Base. *2	Blank
Privilege	Select the privilege of the Group. Administrator Operator User	Administrator

\*1: It is possible to set less than 255 alphanumeric characters, "-(minus sign)" and "\_ (underscore)".

\*2: It is possible to set from 4 to 62 alphanumeric characters, "-(minus sign)", "\_ (underscore)", ".(period)", ",(comma)" and "=".

### 4.2.8 Mail Alert

This screen displays and sets the alert by E-mail.  
This setting does not exist in the case of EXPRESSSCOPE Engine SP3.

The first screenshot shows the 'Mail Alert' configuration screen. The left sidebar lists the configuration tree with 'Mail Alert' selected. The main panel has the following fields:

- Alert:** Radio buttons for 'Enable' and 'Disable'.
- Waiting time for SMTP server's response:** A text box with '30' and a label 'seconds (30 - 600)'. A red '[Required]' label is present.
- Mail:** A section containing:
  - To:** Three rows for 'To1', 'To2', and 'To3', each with a red '[Required]' label and a text box.
  - From:** A text box.
  - Reply-To:** A text box.
  - Subject:** A text box.
  - Subject Option:** A checkbox labeled 'Add a severity information of the alert to mail subject'.
  - X-Priority:** A checkbox labeled 'Set X-Priority'.
  - Date Format:** A dropdown menu showing 'MM/DD/YYYY'.

The second screenshot shows the 'SMTP Server' configuration screen. The left sidebar is the same, but 'SMTP Server' is selected. The main panel has the following fields:

- SMTP Server:** A text box with '0.0.0.0' and a red '[Required]' label. A note below says '\*Enter IP address or domain name.'.
- SMTP Port:** A text box with '25' and a red '[Required]' label. A note below says '(1 - 65535)'.
- SMTP Authentication:** Radio buttons for 'Enable' and 'Disable'.
- Authentication Methods:** Three checkboxes: 'CRAM-MD5', 'LOGIN', and 'PLAIN', all of which are checked.
- User Name:** A text box with a red '[Required]' label.
- Password:** A text box with a red '[Required]' label.
- Alert Level:** A dropdown menu showing 'Error/Warning'.
- Temperature(Monitoring Threshold):** A table with columns 'To1', 'To2', and 'To3' and rows 'Error', 'Warning', and 'Information'. All cells contain a checked checkbox.

Item	Description	Default Value
Mail Alert	Mail Alert setting	
Alert	Select Enable/Disable of Mail Alert.	Disable
Response time of SMTP server	Set the timeout period until when the connection to SMTP server succeed by E-mail transmission.	30
Mail	Mail Header setting	
To:1	Select Enable/Disable of To:1. *1	Enable
Mail Address	Set the mail address of To:1. *2 *3	Blank
To:2	Select Enable/Disable of To:2. *1	Disable
Mail Address	Set the mail address of To:2. *2 *3	Blank
To:3	Select Enable/Disable of To:3. *1	Disable
Mail Address	Set the mail address of To:3. *2 *3	Blank
From	Set the From. *3	Blank
Reply-To	Set the Reply-To. *3	Blank
Subject	Set the Subject. *4	Blank
Subject Option	Select Enable/Disable of Subject Option.	Disable
X-Priority	Select Enable/Disable of X-Priority.	Enable
Date Formats	Select the Date Formats. MM/DD/YYYY DD/MM/YYYY YYYY/MM/DD	MM/DD/YYYY
SMTP Server	SMTP Server setting	
SMTP Server	Set the SMTP Server. *5	0.0.0.0
SMTP Port	Set the SMTP Port.	25
SMTP Authentication	Select Enable/Disable of SMTP Authentication.	Disable
CRAM-MD5	Select Enable/Disable of CRAM-MD5. *6 *7	Enable
LOGIN	Select Enable/Disable of LOGIN. *6 *7	Enable
PLAIN	Select Enable/Disable of PLAIN. *6 *7	Enable
UserName	Set the SMTP User Name. *6 *8	Blank
Password	Set the SMTP User Password. *6 *9	Blank
Alert Level	Alert Level setting	
Alert Level	Set the kind of event to alert. *10	Error/ Warning

\*1: When Mail Alert is enabled, one or more of the addresses should be enabled.

\*2: It is possible to set when To:X is "Enable".

\*3: It is possible to set less than 255 alphanumeric characters and "-(minus sign)", "\_ (underscore)", ".(period)", "@(at mark)".

\*4: It is possible to set less than 63 alphanumeric characters, except for "+", " "(quotation marks)", "?", "=", "<", ">", "#", "¥" and "'(apostrophe)".

\*5: It is possible to set full domain that is less than 255 characters at alphanumeric, "-(minus sign)", "\_ (underscore)" or ".(period)", or set IP Address(IPv4 or IPv6). It is possible to set IPv6 address when the system is supporting IPv6.

\*6: It is possible to set when SMTP Authentication is "Enable".

\*7: When SMTP Authentication is enabled, one or more of the authentic method should be enabled.

\*8: It is possible to set less than 64 alphanumeric characters, except for " (space)", " "(quotation marks)", "?", "=", "<", ">", "#", "¥", and "'(apostrophe)".

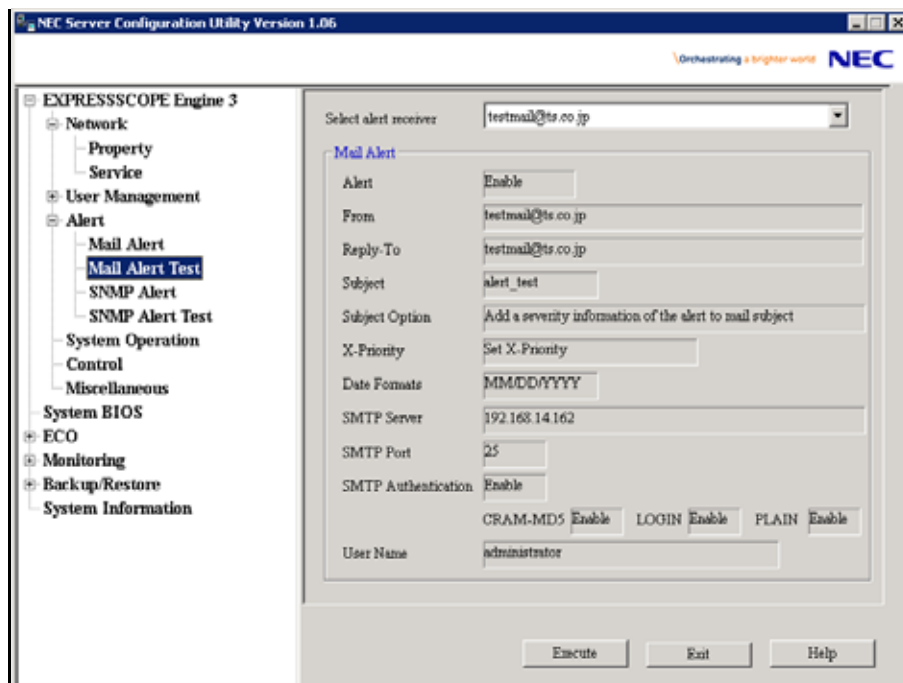
\*9: It is possible to set less than 19 alphanumeric characters, except for " (space)", " "(quotation marks)", "?", "=", "<", ">", "#", and "¥".

\*10: The Alert Level is as follows:

Alert Level	Description
Error	When "Error" is detected in each sensor type, the alert is sent to the checked address.
Error/ Warning	When "Error" or "Warning" is detected in each sensor type, the alert is sent to the checked address.
Error/ Warning/ Information	When "Error", "Warning" or "Information" is detected in each sensor type, the alert is sent to the checked address.
Separate Setting	You can arbitrarily select the event and the address (To:X) to alert in each sensor type.

## 4.2.9 Mail Alert Test

Execute the alert test by E-mail. Select the alert receiver and click [Execute].



Item	Description
Select alert receiver	Select the alert receiver. *1
Mail Alert	Mail Alert settings are displayed. *2

\*1: One or more the alert receiver must have been set by "4.2.8 Mail Alert".

\*2: The Mail Alert settings set by "4.2.8 Mail Alert" are displayed.

### 4.2.10 SNMP Alert

This screen displays and sets the alert by SNMP.

NEC Server Configuration Utility Version 1.06

Orchestrating a brighter world **NEC**

EXPRESSSCOPE Engine 3

- Network
  - Property
  - Service
- User Management
- Alert
  - Mail Alert
  - Mail Alert Test
  - SNMP Alert**
  - SNMP Alert Test
- System Operation
- Control
- Miscellaneous
- System BIOS
- ECO
- Monitoring
- Backup/Restore
- System Information

**SNMP Alert**

Alert ☐ Enable ☒ Disable

\*Setting up SNMP Alert configuration is required to send a hardware error alert to the NEC ESMPRO Manager. Please set the NEC ESMPRO Manager's address as 'Alert Receiver'.

Computer Name [Required]

Community Name [Required]

Alert Process ☒ One Alert Receiver ☐ All Alert Receivers

Alert Acknowledge ☒ Enable ☐ Disable

Alert Retry Count [Required]  times (0 - 7)

Alert Timeout [Required]  seconds (3 - 30)

**Alert Receiver**

☒ Alert Receiver 1 IP Address [Required]

☐ Alert Receiver 2 IP Address [Required]

Default Apply Exit Help

NEC Server Configuration Utility Version 1.06

Orchestrating a brighter world **NEC**

EXPRESSSCOPE Engine 3

- Network
  - Property
  - Service
- User Management
- Alert
  - Mail Alert
  - Mail Alert Test
  - SNMP Alert**
  - SNMP Alert Test
- System Operation
- Control
- Miscellaneous
- System BIOS
- ECO
- Monitoring
- Backup/Restore
- System Information

**Alert Receiver**

☒ Alert Receiver 1 IP Address [Required]

☐ Alert Receiver 2 IP Address [Required]

☐ Alert Receiver 3 IP Address [Required]

**Alert Level**

Alert Level

	Error	Warning	Information
Temperature(Monitoring Threshold)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Voltage(Monitoring Threshold)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FAN(Speed)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
POST Memory Resize		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Module/Board(Missing)	<input checked="" type="checkbox"/>		<input type="checkbox"/>
SMI Timeout	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Microcontroller State			<input type="checkbox"/>
Platform Security Violation Attempt			<input type="checkbox"/>

Default Apply Exit Help

Item	Description	Default Value
SNMP Alert	SNMP Alert setting	
Alert*1	Select Enable/Disable of SNMP Alert.	Disable
Computer Name	Set the Computer Name. *2	Blank
CommunityName	Set the CommunityName. *3	public
Alert Process	Select One Alert Receiver/All Alert Receiver of Alert Process.	One Alert Receiver
Alert Acknowledge	Select Enable/Disable of Alert Acknowledge.	Enable
Alert Retry Count	Set the count of Alert retry. *4	3
Alert Timeout	Set the seconds to alert timeout. *4	6
Alert Receiver	Alert Receiver setting.	
Primary IP Address	Select Enable/Disable of Primary IP Address. *5	Enable
IP Address	Set the IP Address of Primary. *6	0.0.0.0
Secondary IP Address	Select Enable/Disable of Secondary IP Address. *5	Disable
IP Address	Set the IP Address of Secondary. *6	0.0.0.0
Tertiary IP Address	Select Enable/Disable of Tertiary IP Address. *5	Disable
IP Address	Set the IP Address of Tertiary. *6	0.0.0.0
Alert Level	Alert Level setting	
Alert Level	Set the kind of event to alert. *7	Error/ Warning

\*1: When PEF(Platform Event Filter) setting is "Disable", it cannot alert.

\*2: It is possible to set less than 16 alphanumeric characters.

\*3: It is possible to set less than 16 alphanumeric characters, "-(minus sign)" and "\_ (underscore)".

\*4: It is possible to set when Alert Acknowledge is "Enable".

\*5: When SNMP Alert is enabled, one or more of the addresses should be enable.

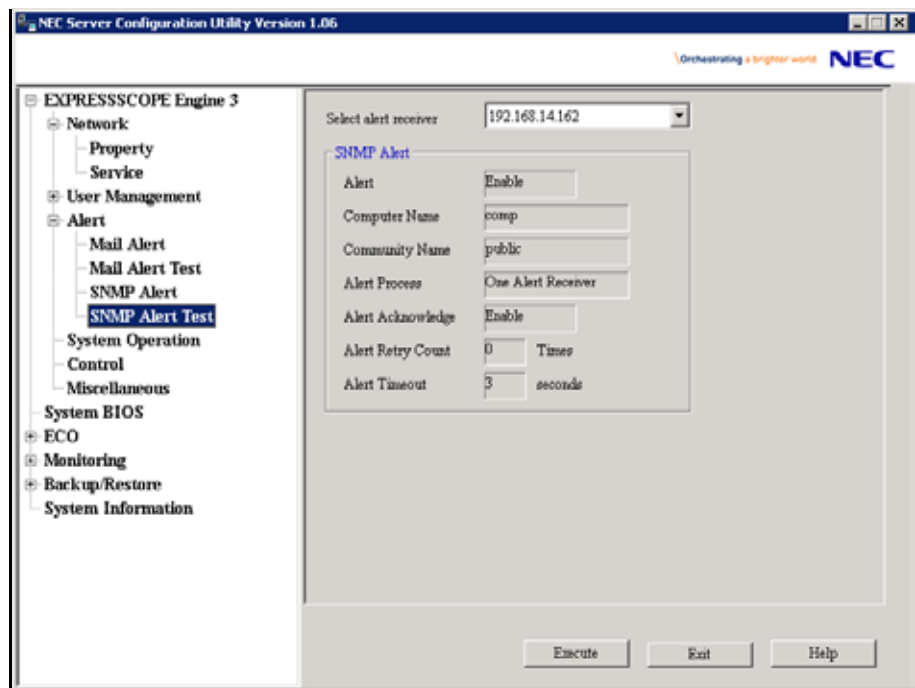
\*6: It is possible to set when each Alert Receiver is "Enable".

\*7: The Alert Level are as follows:

Alert Level	Description
Error	When "Error" is detected in each sensor type, the alert is sent to the checked address.
Error/ Warning	When "Error" or "Warning" is detected in each sensor type, the alert is sent to the checked address.
Error/ Warning/ Information	When "Error", "Warning" or "Information" is detected in each sensor type, the alert is sent to the checked address.
Separate Setting	You can arbitrarily select the event to alert in each sensor type.

4.2.1 1 SNMP Alert Test

Execute the alert test by SNMP. Select the alert receiver and click [Execute].



Item	Description
Select alert receiver	Select the alert receiver. *1
SNMP Alert	SNMP Alert settings are displayed. *2

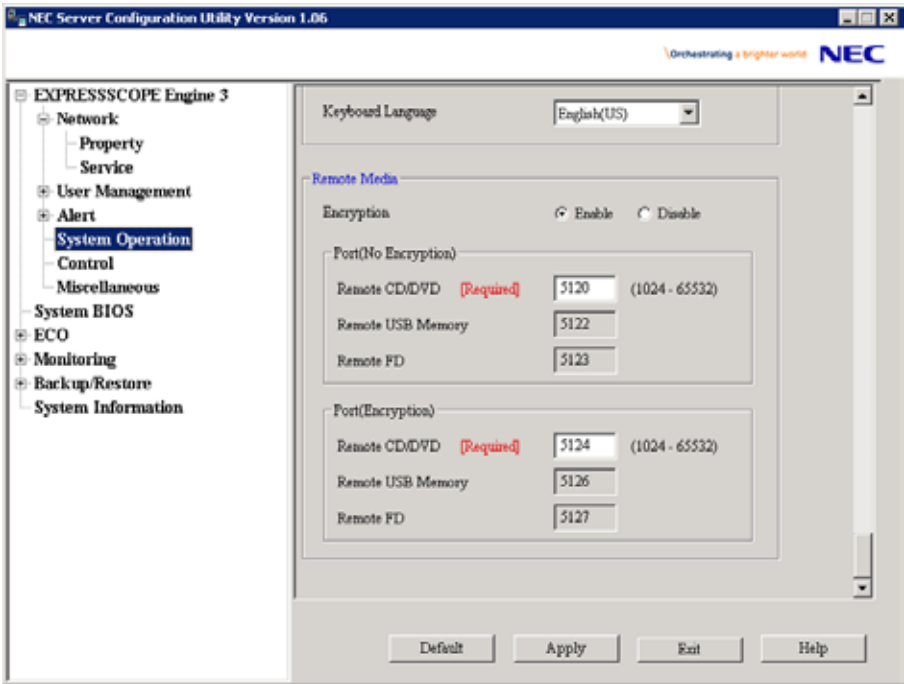
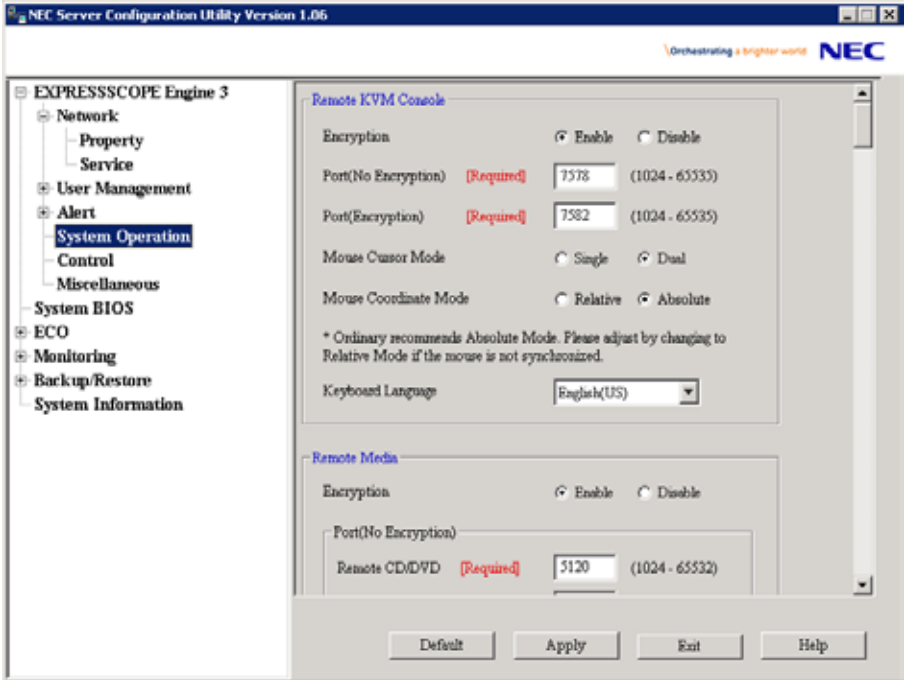
\*1: One or more the alert receiver must have been set by “4.2.10 SNMP Alert”.

\*2: The SNMP Alert settings set by “4.2.10 SNMP Alert” are displayed.



### 4.2.12 System Operation

This screen displays and sets the Remote KVM console and the Remote Media.



Item	Description	Default Value
Remote KVM Console	Remote KVM Console setting	
Encryption	Select Enable/Disable of Encryption.	Enable
Port (No Encryption)	Set the Remote KVM Console Port when Encryption is enabled. *1	7578
Port (Encryption)	Set the Remote KVM Console Port when Encryption is disabled. *1	7582
Mouse Cursor Mode	Select the mode of the mouse cursor. Single Dual	Dual
Mouse Coordinate Mode	Select the mode of expression of coordinates of the mouse cursor. *2 Relative Absolute	Absolute
Keyboard Language	Select the Keyboard Language. Japanese(JP) English(US) French(FR) German(DE)	English(US) *3
Remote Media	Remote Media setting	
Encryption	Select Enable/Disable of Encryption.	Enable
Remote CD/DVD Port (No Encryption)	Set the Remote CD/DVD Port when Encryption is enabled. *1	5120
Remote USB Memory Port (No Encryption)	Remote USB Memory Port is displayed. (Remote CD/DVD Port + 2)	
Remote FD Port (No Encryption)	Remote FD Port is displayed. (Remote CD/DVD Port + 3)	
Remote CD/DVD Port (Encryption)	Set the Remote CD/DVD Port when Encryption is disabled. *1	5124
Remote USB Memory Port (Encryption)	Remote USB Memory Port is displayed. (Remote CD/DVD Port + 2)	
Remote FD Port (Encryption)	Remote FD Port is displayed. (Remote CD/DVD Port + 3)	

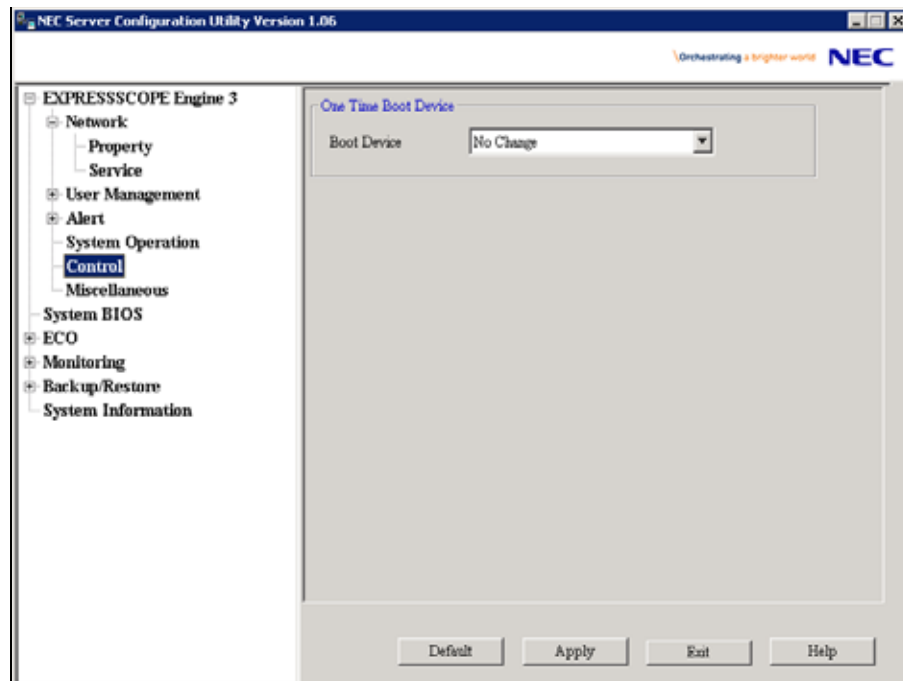
\*1: Each port number must not overlap.

\*2: Ordinary recommends Absolute Mode. Please adjust by changing to Relative Mode if the mouse is not synchronized.

\*3: When the language of OS is Japanese, the default value is Japanese(JP).

### 4.2.13 Control

Control the server. This setting is applied at the next booting time of the server.  
This setting does not exist in the case of EXPRESSSCOPE Engine SP3.



Item	Description	Default Value
One Time Boot Device	One Time Boot Device setting	
Boot Device *1	Select the Device used at next boot.	No Change

\*1: The Boot Devices are as follows:

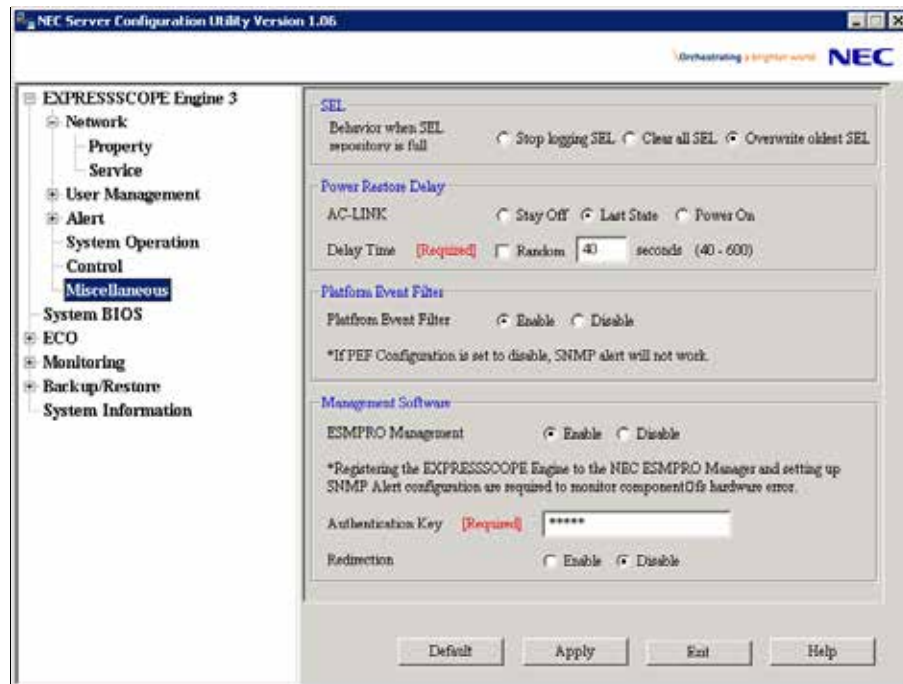
Boot Device	Description
No Change	It follows the setting of System BIOS of the server.
PXE	PXE Boot is done.
HDD	It starts from the hard disk connected to the server.
CD/DVD	It starts from the CD/DVD drive connected to the server.
Remote FD	It starts from the FD drive (media) connected by the remote media function.
Remote CD/DVD	It starts from the CD/DVD drive (media) connected by the remote media function.
Remote USB Memory	It starts from USB Memory connected by the remote media function.
FD	It starts from the FD drive or the removable mass storage connected to the server.

#### CHECK:

- This setting item does not exist in Off-line TOOL.

## 4.2.14 Miscellaneous

This screen displays and sets the various functions.



Item	Description	Default Value
SEL	SEL setting	
Behavior when SEL repository is full	Select the Behavior when SEL repository is full. *1 Stop logging SEL : SEL is not recorded any more. Clear all SEL : Delete all SEL and record SEL newly. Overwrite oldest SEL : Old SEL is overwritten with new SEL.	Overwrite oldest SEL *8
Power Restore Delay	Power Restore Delay setting	
AC-Link	Select the AC-Link setting. Stay Off : DC is not turned on. Last State : It becomes the same as time when AC was turned off. Power On : DC on always.	Last State *2
Delay Time	Set the value or specify the Random. The range is from "Minimum value" to "600"[Sec], *3	Minimum value
PEF	PEF setting	
Platform Event Filter	Select Enable/Disable of Platform Event Filter. *4	Enable
Management Software	Management Software setting	
ESMPRO Management	Select Enable/Disable of ESMPRO Management. *5	Current value
Authentication Key	Set the Authentication Key. *6 *7	guest
Redirection	Select Enable/Disable of Redirection. *6 If Redirection is set to "Enable", BIOS Redirection Port in Console Redirection Configuration of BIOS is set to "Serial Port B".	Enable

- \*1: When this item is changed to the other from "Overwrite oldest SEL", or is changed to "Overwrite oldest SEL" from the other, all log records in the SEL Repository are cleared.
- \*2: When the "Standby Power Save" function of System BIOS is Enable, it is set to "Power On". And the default value is changed to "Power On".
- \*3: It is not possible to set when AC-Link is "Stay Off" or the system is Blade Server. Delay time from turning on AC to turning on DC is specified. It is possible to set up to 600(seconds). Minimum value is different according to the system. It is possible to set "Random" when the system supports it.
- \*4: "Enable" and "Disable" of the report function from BMC are set. It makes SNMP Alert be impossible when it sets to "Disable".
- \*5: When BMC can be managed directly from NEC ESMPRO Manager (Ver.6 or later), it must be set to "Enable". If it sets to "Enable", Authentication Key also must be set.
- \*6: It is possible to set when NEC ESMPRO Management is set "Enable".
- \*7: It is Authentication key when managing from NEC ESMPRO Manager (Ver.6 or later). It is possible to set less than 16 half-size alphanumeric characters.
- \*8: In the case of EXPRESSSCOPE Engine SP3, the default value is "Stop logging SEL".

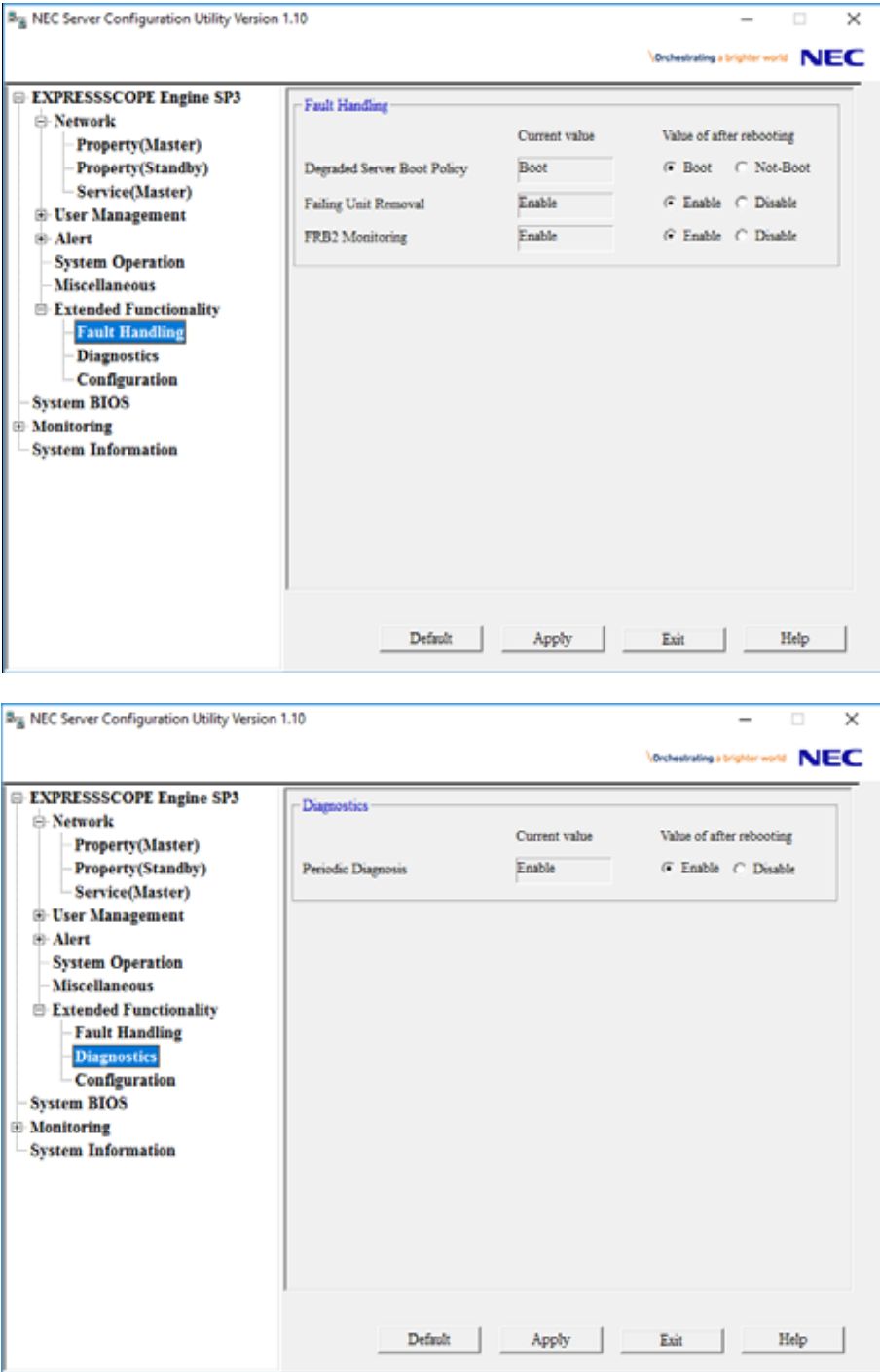
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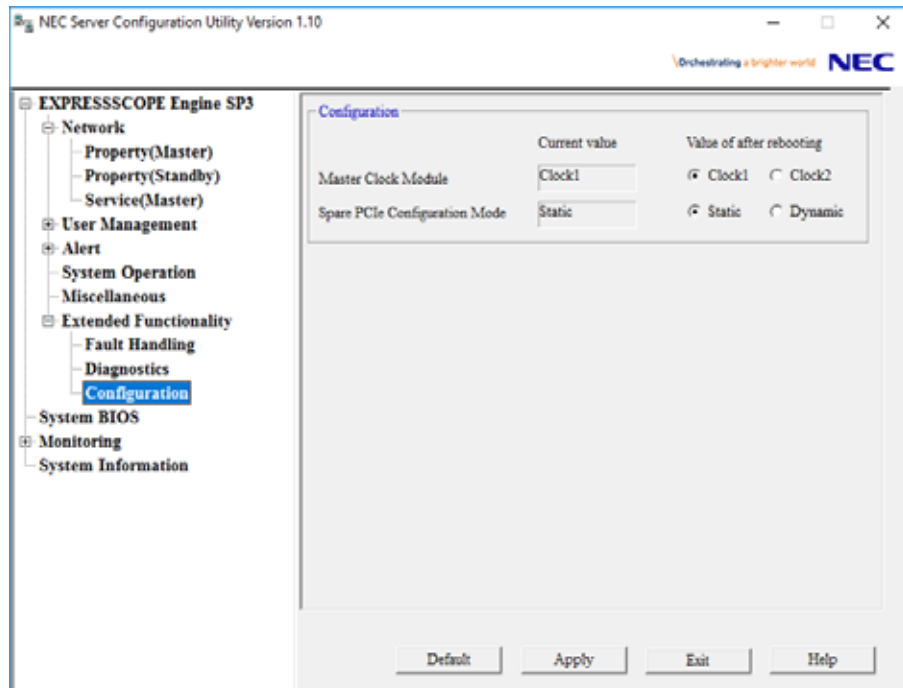
**CHECK:**

- Power Restore Delay settings do not exist in Off-line TOOL.
-

### 4.2.15 Extended Functionality

This screen displays and sets the extended functions.  
This settings only exists in the case of EXPRESSSCOPE Engine SP3.  
Please refer to the User's Guide of the server for details of the item.  
This setting is applied at the next booting time of the server.





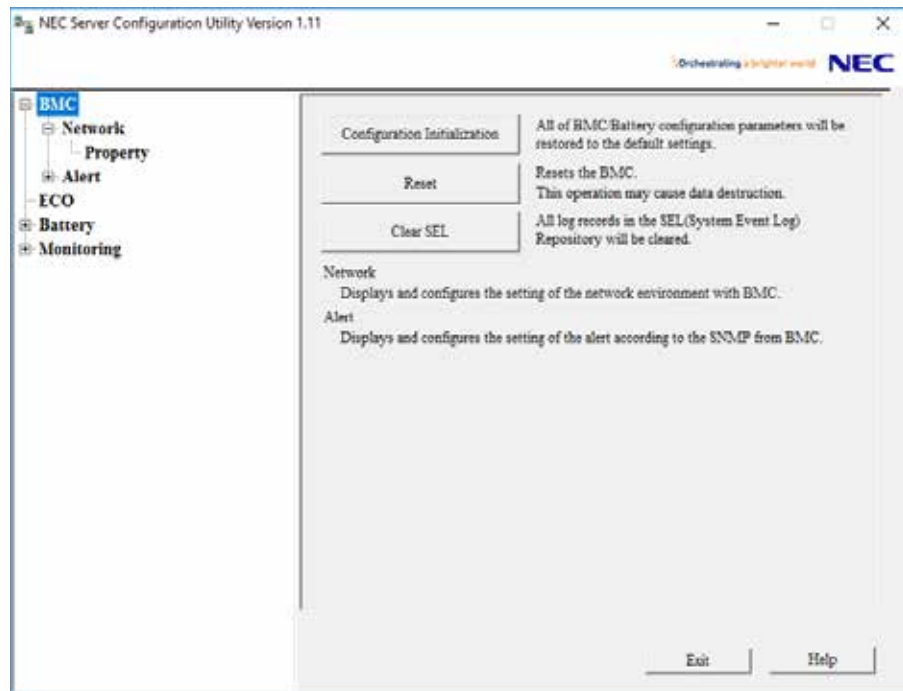
Item	Description	Default Value
Fault Handling	Fault Handling function setting	
Degraded Server Boot Policy	Select the Degraded Server Boot Policy. Boot Not-Boot	Not-Boot
Failing Unit Removal	Select Enable/Disable of Failing Unit Removal. Enable Disable	Enable
FRB2 Monitoring	Select Enable/Disable of FRB2 Monitoring. Enable Disable	Enable
Diagnostics	Diagnostics function setting	
Periodic Diagnosis	Select Enable/Disable of Periodic Diagnosis. Enable Disable	Enable
Configuration	Various other setting	
Master Clock Module	Select the Master Clock Module. Clock1 Clock2	Clock1
Spare PCIe Configuration Mode	Select the Spare PCIe Configuration Mode. Static Dynamic	Static

## 4.3 BMC

This chapter explains the items of BMC which is not EXPRESSSCOPE Engine.

Refer to set more detailed settings.

Further, refer to "4.2 EXPRESSSCOPE Engine 3, SP3" in case of EXPRESSSCOPE Engine.



Item	Description
Configuration Initialization *1 *3	You can restore all of configuration parameters to the default settings. It will take a few minutes to restart BMC.
Reset *2 *3	You can reset BMC without rebooting system. It will take a few minutes to restart BMC.
Clear SEL	You can clear all records of System Event Log.

\*1: This operation may cause data destruction. If the server is equipped with a battery, battery configuration parameters are also initialized.

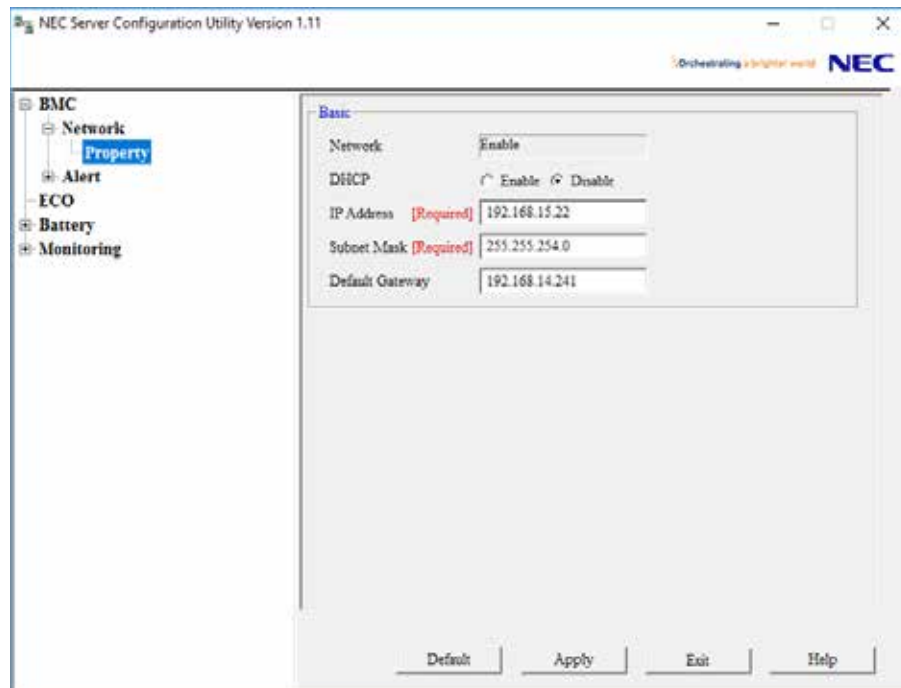
\*2: Please use this operation when you cannot operate the BMC functions correctly or if necessary. This operation does not clear the configuration settings.

\*3: False HW error information may be detected on the server if Shutdown, Reboot, or any other operation is executed during a few minutes after this operation. Please refer to the server's User's Guide to get more information, because the occurrence of the false HW error detection depends on the model of the server.



### 4.3.1 Network Property

This screen displays and sets the network environment.



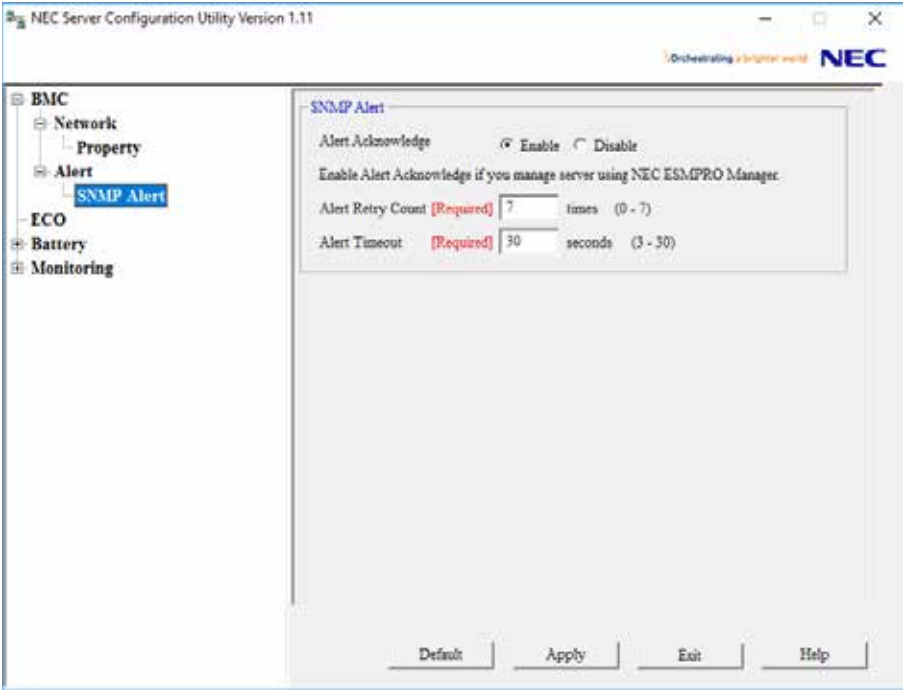
Item	Description	Default Value
Basic	Network Property Basic setting	
Network	Network status is displayed. Enable / Disable	
DHCP	Select Enable/Disable of DHCP. *1	Enable
IP Address	Set the BMC IP address of the BMC LAN. *1 *2	192.168.1.1
Subnet Mask	Set the Subnet Mask of the BMC LAN. *1 *2	255.255.255.0
Default Gateway	Set the Default Gateway IP Address of the BMC LAN. *1 *2 If you set this item, it is necessary for applying configuration information that the gateway is connected on network.	0.0.0.0

\*1: It is possible to set when Network is "Enable".

\*2: It is possible to set when DHCP is "Disable".

### 4.3.2 SNMP Alert

This screen displays and sets the behavior of SNMP Alert.



Item	Description	Default Value
SNMP Alert	SNMP Alert setting	
Alert Acknowledge	Select Enable/Disable of Alert Acknowledge.	Enable
Alert Retry Count	Set the count of Alert retry. *1	3
Alert Timeout	Set the seconds to alert timeout. *1	6

\*1: It is possible to set when Alert Acknowledge is "Enable".

## 4.4 System BIOS

This screen displays and sets System BIOS settings of the server.  
This settings only exists in the case of EXPRESSSCOPE Engine 3 or EXPRESSSCOPE Engine SP3.  
Please refer to the User's Guide of the server for details of the item.  
This setting is applied at the next booting time of the server.

NEC Server Configuration Utility Version 1.06

Orchestrating a brighter world **NEC**

EXPRESSSCOPE Engine 3

- Network
  - Property
  - Service
- User Management
- Alert
  - System Operation
  - Control
- Miscellaneous
- System BIOS**
- ECO
- Monitoring
- Backup/Restore
- System Information

**Basic Configuration**

	Current value	Value of after rebooting
POST Error Pause	Enable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Memory Error	Boot	<input type="radio"/> Halt <input checked="" type="radio"/> Boot
CLI Setup	Disable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Standby Power Save	Disable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Advanced Fan Control	Disable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable

**Serial Port A Configuration**

	Current value	Value of after rebooting
Serial Port A	Enable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Serial A Base IO	3F8h	3F8h
Serial A Interrupt	IRQ 4	IRQ 4

**Serial Port B Configuration**

	Current value	Value of after rebooting
Serial Port B	Enable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Serial B Base IO	2F8h	2F8h
Serial B Interrupt	IRQ 3	IRQ 3

Default Apply Exit Help

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Orchestrating a brighter world **NEC**

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- System BIOS**
- ECO
- Monitoring
- Backup/Restore
- System Information

**Console Redirection Configuration**

	Current value	Value of after rebooting
Serial Port B	Enable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Serial B Base IO	2F8h	2F8h
Serial B Interrupt	IRQ 3	IRQ 3

**Console Redirection Configuration**

	Current value	Value of after rebooting
BIOS Redirection Port	Serial Port B	Serial Port B
Terminal Type	PC-ANSI	PC-ANSI
Baud Rate	19200	19200
Data Bits	8	8
Stop Bits	1	1
Parity	None	None
Flow Control	Hardware RTSCTS	Hardware RTSCTS
Continue C.R. after POST	Enable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable

Default Apply Exit Help

Item	Description	Default Value *1
Basic Configuration *3	Basic Configuration setting	
POST Error Pause	Select Enable/Disable of POST Error Pause.	Enable
Memory Error *2	Select Halt/Boot of Memory Error.	Boot
CLI Setup *2	Select Enable/Disable of CLI Setup.	Disable
Standby Power Save *2	Select Enable/Disable of Standby Power Save.	Disable
Advanced Fan Control *2	Select Enable/Disable of Fan Control.	Disable
Serial Port A Configuration	Serial Port A Configuration setting	
Serial Port A	Select Enable/Disable of Serial Port A.	Enable
Serial A Base I/O	Select Base I/O Address of Serial Port A. It must be different from Serial Port B.	3F8h
Serial A Interrupt	Select IRQ of Serial Port A. It must be different from Serial Port B.	IRQ 4
Serial Port B Configuration	Serial Port B Configuration setting	
Serial Port B	Select Enable/Disable of Serial Port B.	Enable
Serial B Base I/O	Select Base I/O Address of Serial Port B. It must be different from Serial Port A.	2F8h
Serial B Interrupt	Select IRQ of Serial Port B. It must be different from Serial Port A.	IRQ 3
Console Redirection Configuration	Console Redirection Configuration setting	
BIOS Redirection Port	Select BIOS Redirection Port. You cannot select "Disable" Port.	Disabled
Terminal Type	Select Terminal Type.	VT-100+
Baud Rate	Select Baud Rate.	115200
Data Bits	Select Data Bits.	8
Stop Bits	Select Stop Bits	1
Parity	Select Parity.	None
Flow Control	Select Flow Control.	Hardware RTS/CTS
Continue C.R. after POST	Select Enable/Disable of Continue Console Redirection after POST.	Enable

\*1: The value might be different according to the system.

\*2: It is not displayed when the system does not support this function.

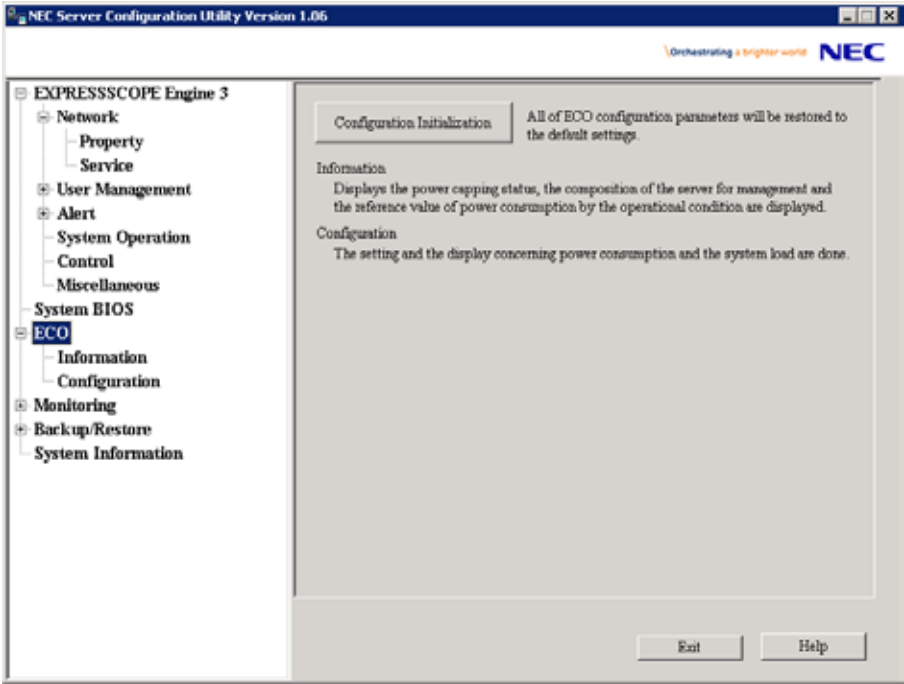
\*3: It is not displayed in the case of EXPRESSSCOPE Engine SP3.

**CHECK:**

- This setting item does not exist in Off-line TOOL.

# 4.5 ECO

This chapter explains “ECO” items. Refer to set more detailed settings.  
This setting does not exist in the case of EXPRESSSCOPE Engine SP3.  
When BMC is not EXPRESSSCOPE Engine 3, only Configuration Initialization is supported.

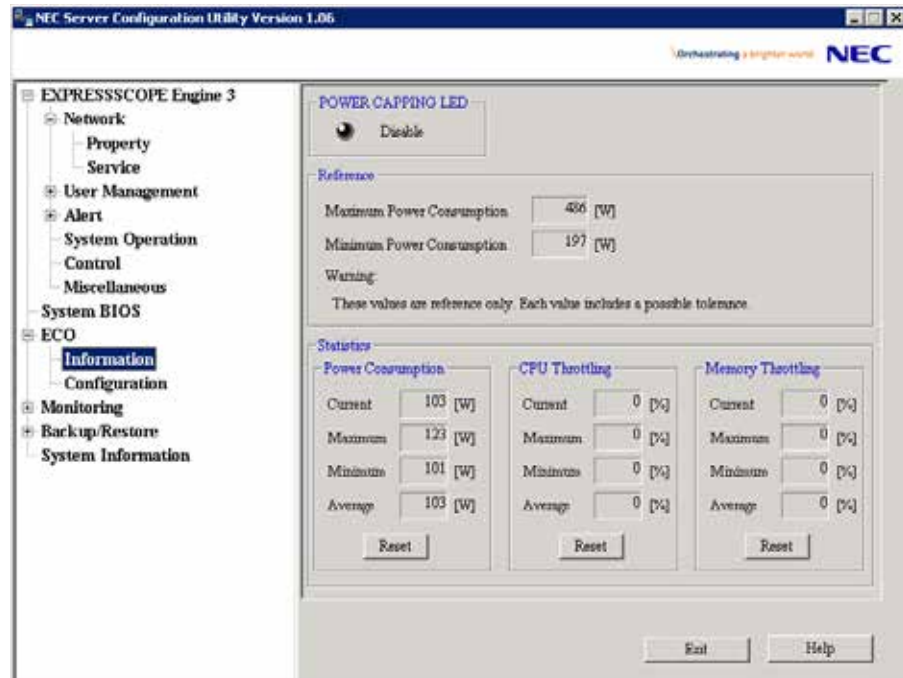


Item	Description
Configuration Initialization	You can clear all of ECO configuration parameters.

- CHECK:**
- The ECO screen is not displayed if the system does not support this function.

### 4.5.1 ECO Information

This screen displays the reference value and the statistics value of the server according to its HW configuration and systemload.



Item	Description
POWER CAPPING LED	Present status of POWER CAPPING is displayed.
Maximum Power Consumption *1	Maximum system power consumption.
Minimum Power Consumption *1	Maximum system power consumption.
Power	The power consumption of the server is displayed.
Current	Present power consumption.
Maximum	Maximum power consumption.
Minimum	Minimum power consumption.
Average	Average value of power consumption.
CPU Throttling *2	CPU throttling rate of the server is displayed.
Current	Present CPU throttling rate.
Maximum	Maximum CPU throttling rate.
Minimum	Minimum CPU throttling rate.
Average	Average value of CPU throttling.
Memory Throttling *2 *3	Memory Throttling rate of the server is displayed.
Current	Present Memory Throttling rate.
Maximum	Maximum Memory Throttling rate.
Minimum	Minimum Memory Throttling rate.
Average	Average value of Memory Throttling.
Reset	The statistics values are reset.

\*1: These values are reference purpose only. Each value might be different from the actual value which depends on your precise server configuration.

\*2: Technology that decreases frequency or duty cycle of clock, and suppresses power consumption.

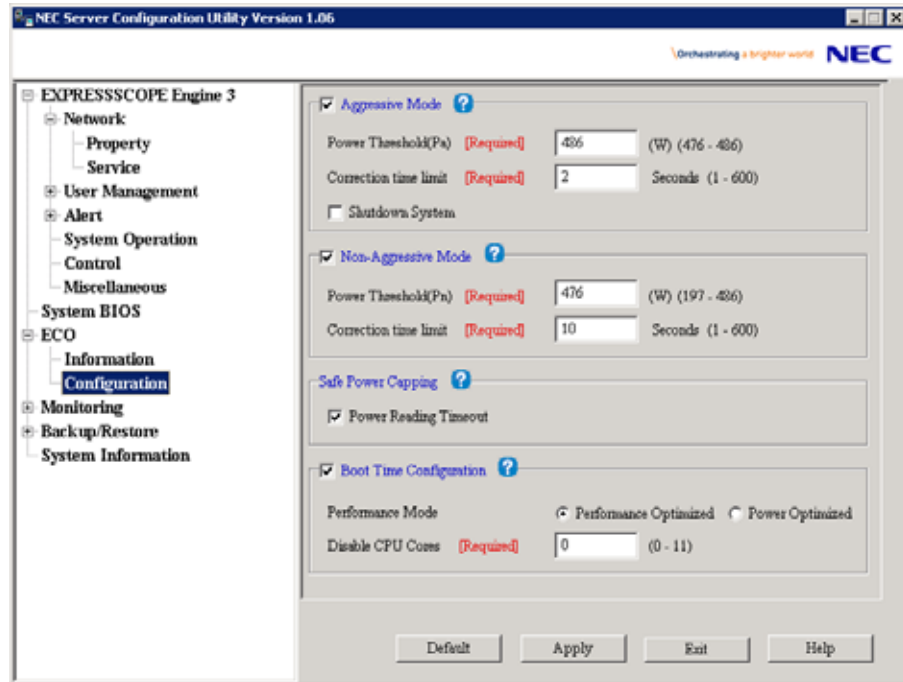
\*3: It is not displayed when the system does not support this function.

## 4.5.2 ECO Configuration

This screen displays and sets the items concerning the power consumption and the systemload.

### TIPS:

- Please refer to 6.8 ECO setting.



Item	Description	Default Value
Aggressive Mode (Critical Power Cap)	Aggressive Mode brings the system power consumption under the specified upper limit threshold. This function reduces power consumption by changing CPU clock, throttling CPU clock and throttling Memory clock instead of lowering the system performance. If the power consumption has been exceeded over the Power Threshold(Pa) during the period specified in the Correction time limit, it will be able to generate System Event Log, send alert, and Shutdown System.	
Aggressive Mode (Critical Power Cap)	Select Enable/Disable of Aggressive Mode.	Disable
Power Threshold(Pa) (Power Cap Value(Pc))	Set the Power consumption upper limit threshold of Aggressive Mode. The range is from AAA to Maximum Power Configuration.[Watt] *1 *2 *9	Maximum Power Configuration [*9]
Correction time limit	Set the maximum time to take corrective actions in order to bring the system power consumption back to the specified Power Threshold(Pa) before generating System Event Log, sending alert and Shutdown System. The range is from NNN to MMM.[Sec] *1 *3 *9	2 or Minimum value, whichever is greater. [*9]
Shutdown System (Exception Action)	Select Enable/Disable of the action if the power consumption has been exceeded over the Power Threshold(Pa) during the period specified in the Correction time limit. *1	Disable

Item	Description	Default Value
Non-Aggressive Mode (Non-Critical Power Cap)	Non-Aggressive Mode brings the system power consumption under the specified upper limit threshold without extremely decreasing system performance. This function reduces power consumption by changing only CPU clock in order to reduce the deterioration of the system performance compared with Aggressive Mode. If the power consumption has been exceeded over the Power Threshold(Pn) during the period specified in the Correction time limit, it will be able to generate System Event Log and send alert.	
Non-Aggressive Mode (Non-Critical Power Cap)	Select Enable/Disable of Non-Aggressive Mode.	Disable
Power Threshold(Pn) (Power Cap Value(Pn))	Set the Power consumption upper limit threshold of Non-Aggressive Mode. The range is from Minimum Power Configuration to BBB.[Watt] *4 *5 *9	Power Threshold(Pa) - 10 or Minimum Power Configuration + 10, whichever is greater. [*9]
Correction time limit	Set the maximum time to take corrective actions in order to bring the system power consumption back to the specified Power Threshold(Pn) before generating System Event Log and sending alert. The range is from NNN to MMM.[Sec] *4 *9	10 or Minimum value, whichever is greater. [*9]
Safe Power Capping	Safe Power Capping brings the system power consumption down forcibly when the system is unable to obtain the power readings. This function is considered for the case where the sharp increase of power consumption causes circuit breaker tripping while the system power consumption is not readable.	
Safe Power Capping (Power Reading Timeout)	Select Enable/Disable of Safe Power Capping.	Disable
Boot Time Configuration *7	Boot Time Configuration can set the performance of the system in booting. Also can set disable CPU cores per sockets.	
Boot Time Configuration	Select Enable/Disable of Boot Time Configuration.	Disable
Performance Mode	Select the performance of the system in booting. *8 Performance Optimized Power Optimized	Performance Optimized
Disable CPU Cores	Set the CPU Core number(s) to disable. *8 *9	0

\*1: It is possible to set when Aggressive Mode is "Enable".

\*2: AAA is "Minimum Power Configuration" or "Power Threshold(Pn)".

\*3: When "Power Threshold(Pa)" is not equal to "Power Threshold(Pn)", NNN is the minimum value of the system. When "Power Threshold(Pa)" is equal to "Power Threshold(Pn)", NNN is "Correction time limit" of Non-Aggressive Mode. MMM is the maximum value of the system.

\*4: It is possible to set when Non-Aggressive Mode is "Enable".

\*5: BBB is "Maximum Power Configuration" or "Power Threshold(Pa)".

\*6: NNN is the minimum value of the system. MMM is the maximum value of the system.

\*7: It is not displayed when the system does not support this function.

\*8: It is possible to set when Boot Time Configuration is "Enable".

\*9: The range and value is different according to the system.



## 4.6 Battery

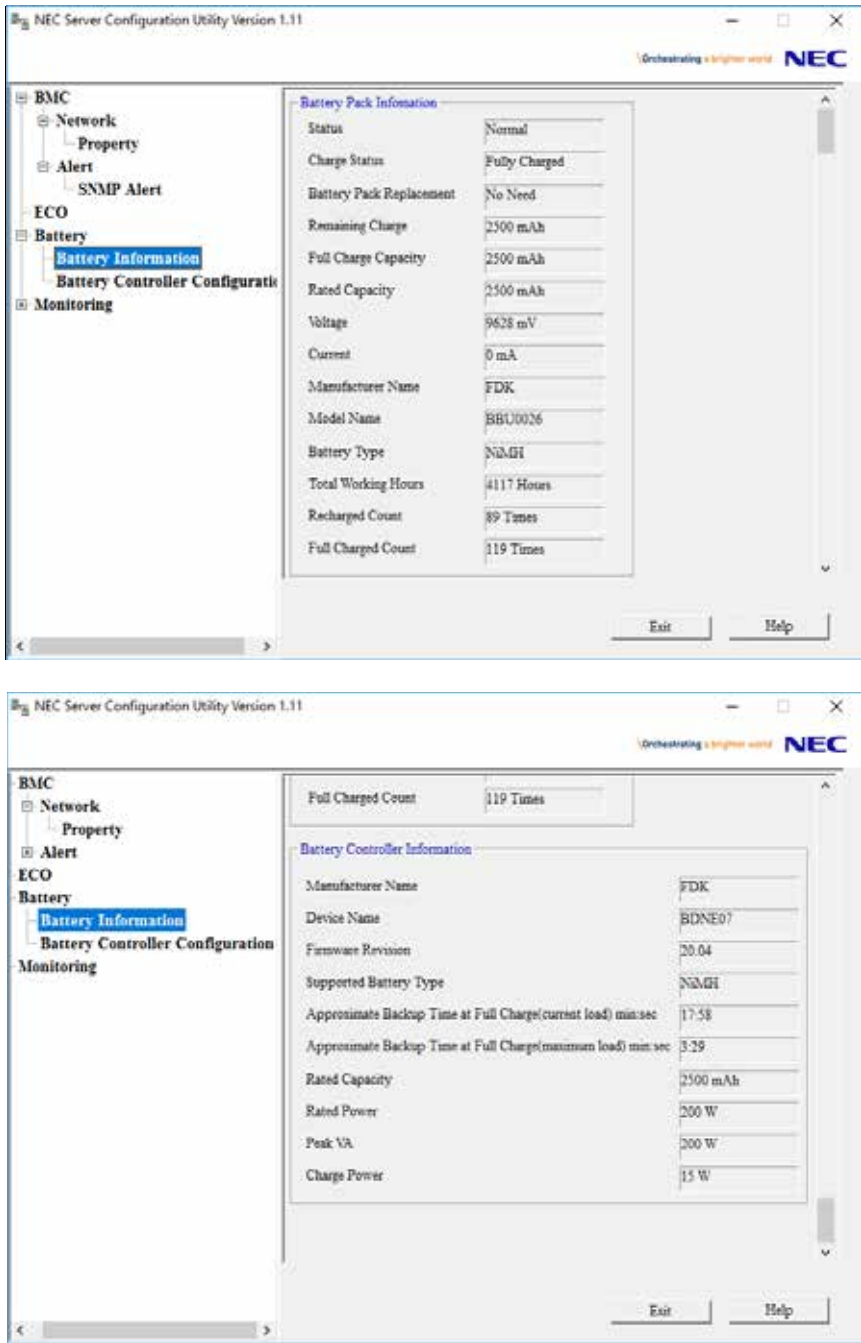
This chapter explains "Battery" items. Refer to set more detailed settings.  
This setting does not exist in the case of EXPRESSSCOPE Engine 3.

**CHECK:**

- This setting does not exist if the server is not equipped with a battery.
- This setting does not exist in Linux.

### 4.6.1 Battery Information

This screen displays the information of the battery pack and the battery controller.



Item	Description
Battery Pack Information	Displays the information of the Battery Pack.
Status	The detected state of the battery pack is displayed. Normal / Warning / Error / Not Mounted
Charge Status	The charge status of the battery pack is displayed. *1 Fully Charged / Charging / Discharging(%) / Unknown
Battery Pack Replacement	The necessity of the battery pack replacement is displayed. *1 Need / No Need
Remaining Charge	The remaining charge [mAh] of the battery pack is displayed. *1 Remaining Charge : The remaining capacity for the Full Charge Capacity.
Full Charge Capacity	The full charge capacity [mAh] of the battery pack is displayed. *1 Full Charge Capacity : The battery capacity that could be discharged to the voltage at the end of discharge from full charge.
Rated Capacity	The rated capacity [mAh] of the battery pack is displayed. *1 Rated Capacity : The minimum capacity of the battery pack based on the charge and discharge conditions of JIS C8708 2007.
Voltage	The measured voltage [mV] of the battery pack is displayed. *1
Current	The measured current [mA] of the battery pack is displayed. *1
Manufacturer Name	The manufacturer name of the battery pack is displayed. *1
Model Name	The model name of the battery pack is displayed. *1
Battery Type	The type of the battery pack is displayed. *1
Total Working Hours	The total working hours of the battery pack is displayed. *1
Recharged Count	The recharged count of the battery pack is displayed. *1
Full Charged Count	The full charged count of the battery pack is displayed. *1
Battery Pack Information	Displays the information of the Battery Pack.
Manufacturer Name	The manufacturer name of the battery controller is displayed.
Device Name	The device name of the battery controller is displayed.
Firmware Revision	The firmware revision of the battery controller is displayed.
Supported Battery Type	The type of the battery controller is displayed.
Approximate Backup Time at Full Charge(current load)	The approximate backup time [minutes:seconds] in fully charged state at current load of the battery controller is displayed. *2 *3
Approximate Backup Time at Full Charge(maximum load)	The approximate backup time [minutes:seconds] in fully charged state at maximum load of the battery controller is displayed. *2 *3
Rated Capacity	The rated capacity [mAh] of the battery controller is displayed. Rated Capacity : The minimum capacity of the battery controller based on the charge and discharge conditions of JIS C8708 2007.
Rated Power	The rated power [W] of the battery is displayed.
Peak VA	The peak power [W] of the battery is displayed.
Charged Power	The power [W] required for charging is displayed.

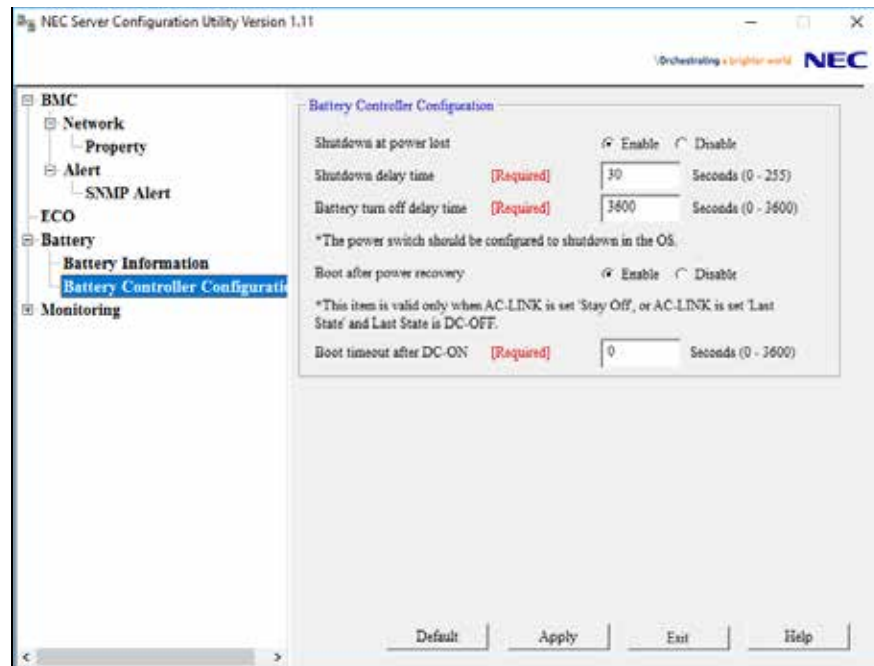
\*1: It is not displayed when the battery pack is not mounted.

\*2: If the approximate backup time is unknown, "-" is displayed.

\*3 'Approximate Backup Time at Full Charge' is a reference value when the server's environment temperature is 25 degrees Celsius. This value may be different from actual operating time caused by temperature differences.

## 4.6.2 Battery Controller Configuration

This screen displays and sets the functions of the battery controller.



Item	Description	Default Value
Battery Controller Configuration	Battery Controller setting	
Shutdown at power lost	Select Enable/Disable of the ability to shutdown at the power failure. *1	Enable
Shutdown delay time	Set the timeout period until the shutdown will be started at the power failure. *2 *3	30
Battery turn off delay time	Set the timeout period until the shutdown will be finished at the power failure. *2 *3	3600
Boot after power recovery	Select Enable/Disable of the ability to boot after the power recovery. *2 *4	Enable
Boot timeout after DC-ON	Set the timeout period until the boot is complete after DC-ON. *2 *3 *5	0

\*1: The POWER Switch should be configured to shutdown in the OS.

\*2: It is possible to set only if Shutdown at power lost is set to "Enable".

\*3: The battery output period may be briefer in duration than the each configured time in this item, depending on the remaining charge.

\*4: This item is valid only when AC-LINK is set 'Stay Off', or AC-LINK is set 'Last State' and Last State is DC-OFF.

\*5: This item is valid at DC-ON after the shutdown system by 'Shutdown at power lost'. (DC-ON by 'Boot after power recovery' or manually)

## 4.7 Monitoring

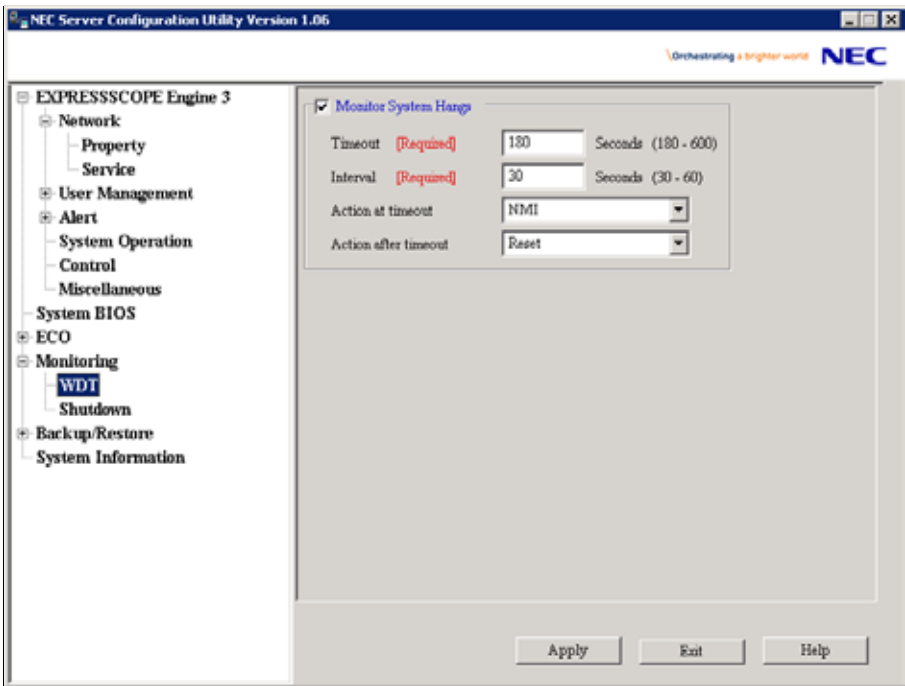
This chapter explains "Monitoring" items. Refer to set more detailed settings.

**CHECK:**

- NEC System Management Controller driver must be run to set.
- This setting item does not exist in Linux and Off-line TOOL.

### 4.7.1 WDT

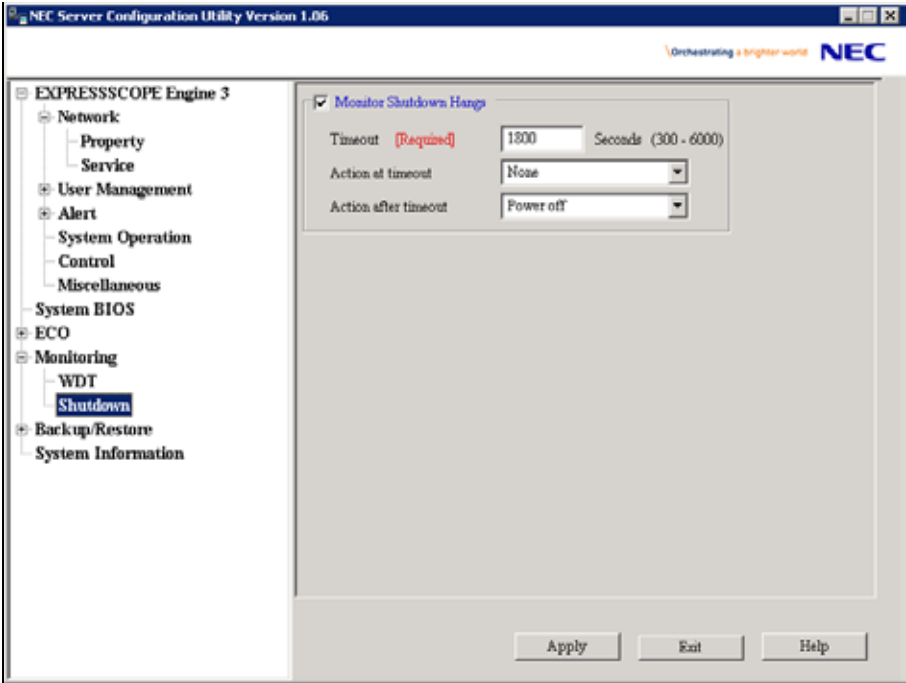
This screen displays and sets the Monitor System Hangs.



Item	Description
Monitor System Hangs	WDT monitoring setting
Timeout	Set the timeout period of monitoring.
Interval	Set the interval period of monitoring.
Action at timeout	Select the action at timeout. None NMI
Action after timeout	Select the action after timeout. System Reset Power off Power cycle

### 4.7.2 Shutdown

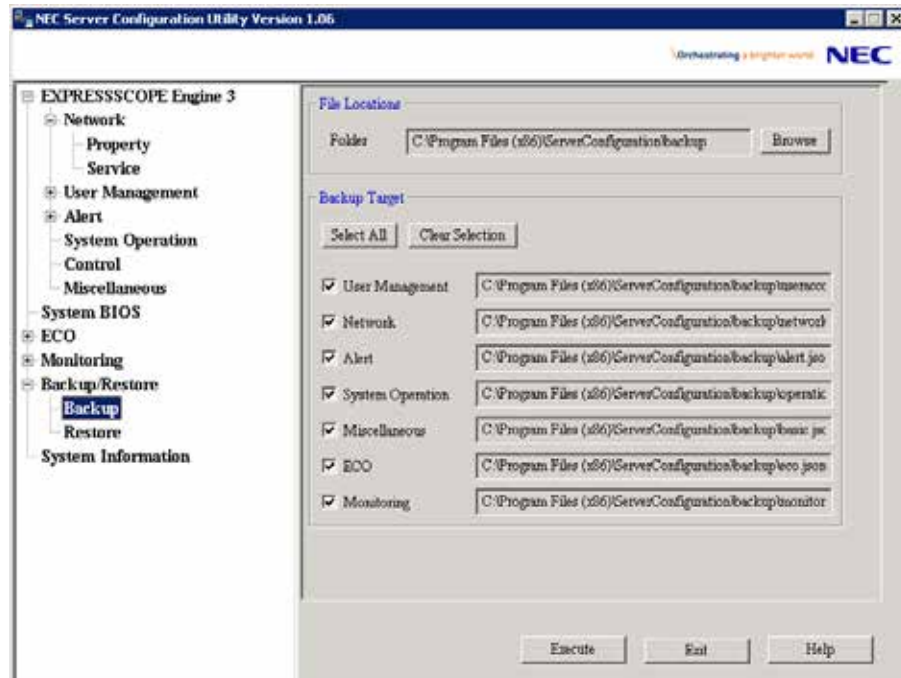
This screen displays and sets the Monitor Shutdown Hangs.



Item	Description
Monitor Shutdown Hangs	Shutdown monitoring setting
Timeout	Set the timeout period of monitoring.
Action at timeout	Select the action at timeout. None NMI
Action after timeout	Select the action after timeout. System Reset Power off Power cycle

## 4.8 Backup

Back up the configurations to files. Select the backup target and click [Execute].  
This function only exists in the case of EXPRESSSCOPE Engine 3.



Item	Description
File Locations	Set the location of backup files.
Folder	The preservation folder of the file is displayed.
Browse	It changes the preservation folder.
Backup Target	Select the backup target.
User Management	Select whether backup User settings or not, and display the backup file name.
Network	Select whether backup Network settings or not, and display the backup file name.
Alert	Select whether backup Alert settings or not, and display the backup file name.
System Operation	Select whether backup System Operation settings or not, and display the backup file name.
Miscellaneous	Select whether backup Miscellaneous settings or not, and display the backup file name.
ECO *1	Select whether backup ECO settings or not, and display the backup file name.
Monitoring *1	Select whether backup Monitoring settings or not, and display the backup file name.

\*1: It is not displayed when the system does not support this function. Monitoring is supported only on Windows.

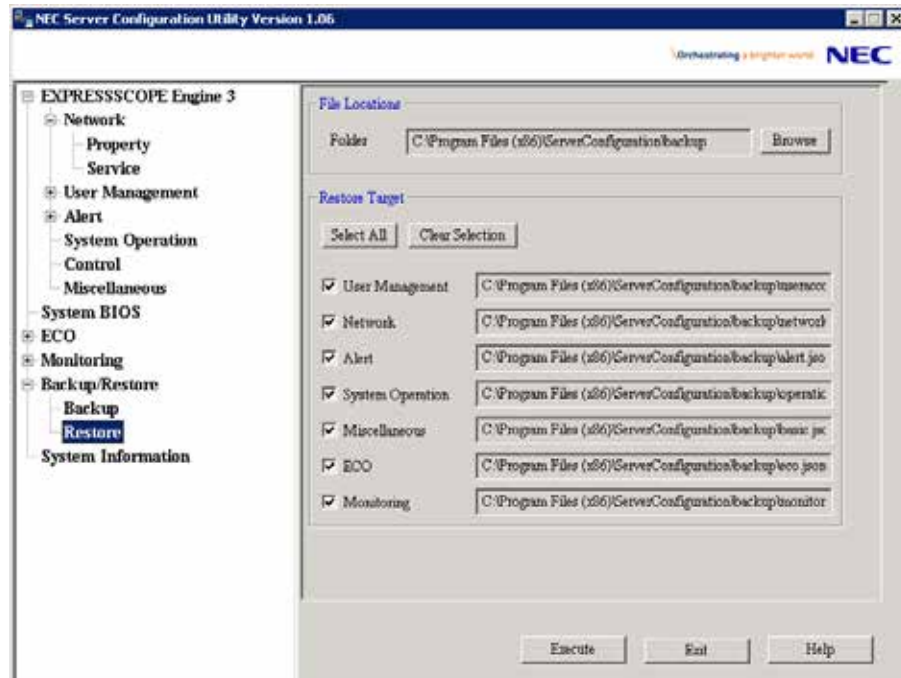
### CHECK:

- Off-line TOOL has no backup function.

## 4.9 Restore

Restore the configurations from files. Select the restore target and click [Execute].

This function only exists in the case of EXPRESSSCOPE Engine 3.



Item	Description
File Locations	Set the locations of files.
Folder	The preservation folder of the file is displayed.
Browse	It changes the preservation folder.
Restore Target	Select the restore target.
User Management	Select whether restore User settings or not. Only when the target backup file exists, the file name is displayed and able to be selected.
Network	Select whether restore Network settings or not. Only when the target backup file exists, the file name is displayed and able to be selected.
Alert	Select whether restore Alert settings or not. Only when the target backup file exists, the file name is displayed and able to be selected.
System Operation	Select whether restore System Operation settings or not. Only when the target backup file exists, the file name is displayed and able to be selected.
Miscellaneous	Select whether restore Miscellaneous settings or not. Only when the target backup file exists, the file name is displayed and able to be selected.
ECO *1	Select whether restore ECO settings or not. Only when the target backup file exists, the file name is displayed and able to be selected.
Monitoring *1	Select whether restore Monitoring settings or not. Only when the target backup file exists, the file name is displayed and able to be selected.

\*1: It is not displayed when the system does not support this function. Monitoring is supported only on Windows.

### CHECK:

- Off-line TOOL has no restore function.

## 5. Functions for Many-core Server

---

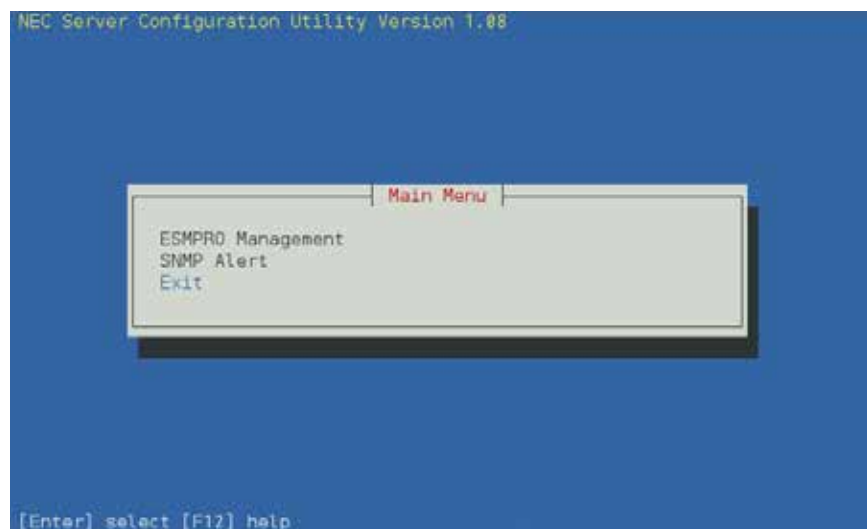
This chapter describes the functions of Server Configuration Utility of if you use Many-core Server.  
Please refer to chapter 4 when you use a standard server.

### 5.1 Start procedure

After the installation is completed, do the following operation as root user to start Server Configuration Utility.

```
/opt/nec/ServerConfiguration/svconf
```

The following screen shows example.



---

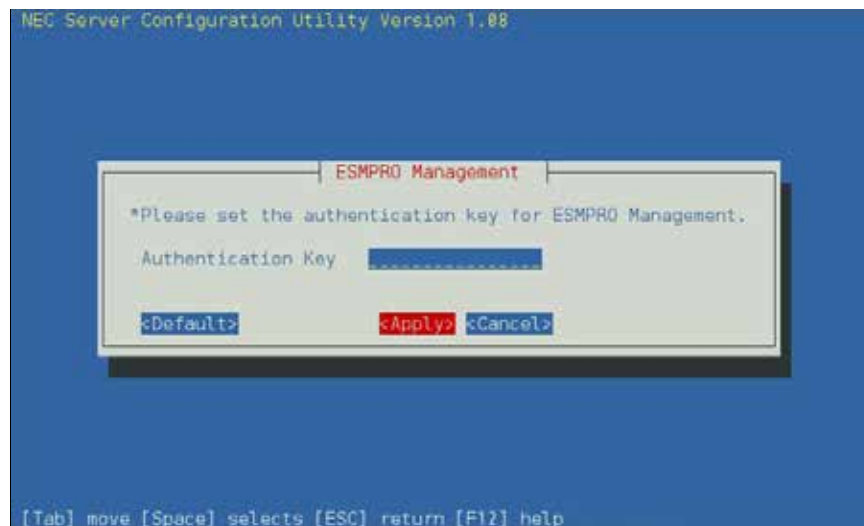
**TIPS:**

- Refer to the following to see Server Configuration Utility help information.  
Open the setting of Server Configuration Utility and press F12 key on the screen displayed "[F12] help" at the bottom.
-



## 5.2 ESMPRO Management

This screen sets the managed server for remote management with NEC ESMPRO Manager.

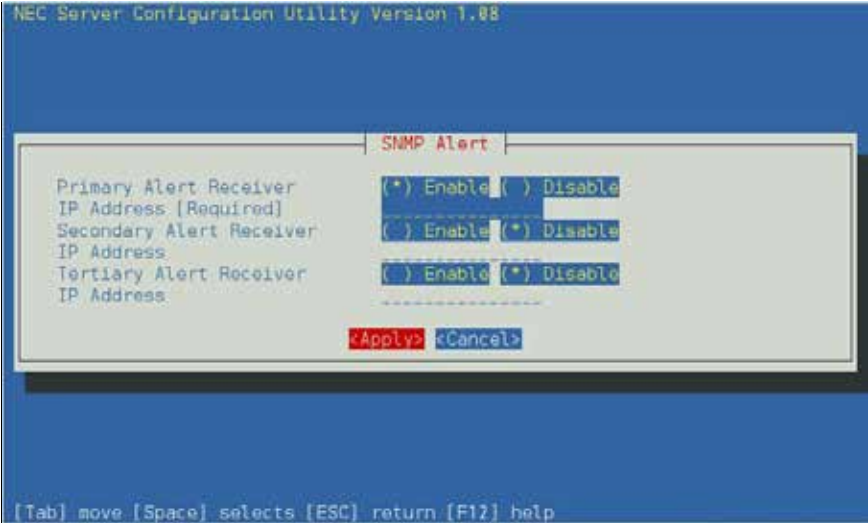


Item	Description	Default Value
ESMPRO Management	Setting to manage from NEC ESMPRO.	
Authentication Key	Set the Authentication Key. *1	guest

\*1: It is Authentication key when managing from NEC ESMPRO Manager (Ver.6.16 or later). It is possible to set less than 16 half-size alphanumeric characters.

### 5.3 SNMP Alert

This screen sets the alert by SNMP.



Item	Description
SNMP Alert	SNMP Alert setting.
Primary IP Address	Select Enable/Disable of Primary IP Address.
IP Address	Set the IP Address of Primary. *1
Secondary IP Address	Select Enable/Disable of Secondary IP Address.
IP Address	Set the IP Address of Secondary. *1
Tertiary IP Address	Select Enable/Disable of Tertiary IP Address.
IP Address	Set the IP Address of Tertiary. *1

\*1: It is possible to set when each Alert Receiver is "Enable".

## 6. Precautions for Use

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### 6.1 Installation

- Server Configuration Utility 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.

### 6.2 General settings of EXPRESSSCOPE Engine 3, SP3

- When you apply the configuration parameters, it may take time to complete the configuration of the BMC firmware depending on the settings. The following message will be displayed during the application, please wait one minute from several tens of seconds.
  - Windows / Linux : Applying the parameters.
  - Off-line TOOL : Updating the parameters.

### 6.3 HTTP/HTTPS settings

- HTTP alone cannot be set to "Enable". When HTTP is set to "Enable", HTTPS is also set to "Enable" automatically.

### 6.4 Redirection setting

- If Redirection of Management Software setting in Miscellaneous is applied to "Enable", the Value of after rebooting of BIOS Redirection Port in BIOS Console Redirection Configuration is set to "Serial Port B".

### 6.5 PEF setting and SNMP Alert setting

- If Platform Event Filter in Miscellaneous is applied to "Disable", SNMP Alert is set to "Disable". And if SNMP Alert is applied to "Enable", Platform Event Filter is set to "Enable".

### 6.6 Alert form BMC

- In the case that the item "Alert" is enabled, BMC will alert directly to the specified alert receiver when the event specified in Alert Level is occurred. If NEC ESMPRO Manager or NEC ESMPRO Manager Association Module is installed on the alert receiver, the SNMP alert from BMC is registered on Alert Manager.
- Sending the alert from BMC depends on exist of NEC ESMPRO Agent.
  - (1) In the case of 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) In the case of NEC ESMPRO Agent has not been installed on the managed server.
    - BMC sends the alert whenever the specified event happens.

### 6.7 Alert Test

- Please send a test alert after completing all the settings of the Alert Configuration. You may be unable to use the alert function due to network environment and settings.

## 6.8 ECO setting

- The electric power value might not necessarily reach even the value of Power Threshold. The electric power control lowers the power consumption of the system by lowering the frequency of CPU/Memory. When CPU/Memory Throttling value reaches 100%, the electric power value does not fall any more.
- The server may not boot correctly if you configure too low value to the Aggressive Mode "Power Threshold(Pa)" and enable the Shutdown System option. When validating this setup, it is recommended to fully consider the value of "Power Threshold(Pa)" to be specified.

## 6.9 Management LAN setting

- When set to "Shared BMC LAN", the management LAN port is disabled.
- When set to "Shared BMC LAN", the network performance may be reduced because the data of both LANs must be transmitted or received.

## 6.10 Connection Type setting

- When both of the following has been set, Server Configuration Utility fails to change "Connection Type".
  - Management LAN is set to "Shared BMC LAN".
  - Boot Mode of BIOS SETUP (To press F2 key on POST) is set to "UEFI".You can change the configuration of "Connection Type" is available when Boot Mode is "Legacy". Change Boot Mode configuration from "UEFI" to "Legacy" before changing "Connection Type" configuration, and then restore Boot Mode to "UEFI" (after changing "Connection Type").

## 6.11 Network setting

- When you change the Network setting (Property or Service) on the EXPRESSSCOPE Engine SP3, an error may occur depending on the load status of the system. In this case, please check the setting and set again as needed.

## 6.12 Default setting

- Please refer to the appropriate EXPRESSSCOPE Engine User's Guide about differences between BMC Configuration's default values and values which "BMC Configuration Initialization" function will set.

## 6.13 Key input

- If you select the keyboard type "Japanese" in Off-line TOOL startup, you are not able to enter the key of "¥", "|" and "\_".
- In Server Configuration Utility for Windows, if you want to apply a string containing "%", you must specify "%%" instead of "%".

## 6.14 Run on Linux(x64)

- When starting Server Configuration Utility on Linux(x64), the following message is displayed by system library, and then Server Configuration Utility fails to be started.
  - Aborted (core dumped)In this case, please delete the following file, and then start Server Configuration Utility.
  - /dev/shm/sem.BIOS\_LOGFILE\_MUTEX

## 6.15 Exclusions setting of security software

- When using security software, please exclude following installation folder or directory of this software from a target of scan. Because this software may not work right by influence of security software. Further please refer to the manual of security software about setting of exclusion.

### 1.on Windows

The following folder is the default folder. If you changed the installation folder, please exclude the changed folder.

- (32bit Edition) <system drive>\Program Files\ServerConfiguration
- (64bit Edition) <system drive>\Program Files (x86)\ServerConfiguration

### 2.on Linux

- /opt/nec/ServerConfiguration

## Revision History

1.00	2014/08/19	Initial edition
1.01	2014/12/01	Adds Connection Type setting Precautions. Corrects writing errors.
1.02	2014/12/12	Adds Red Hat Enterprise Linux Server 7. Changes Installation and Uninstallation for Linux. Changes System BIOS setting.
1.03	2015/12/04	Changes System Requirement. Changes Installation for Windows and Linux. Changes Network and Mail Alert setting. Changes Cover. Corrects writing errors.
1.04	2016/12/15	Changes Summary. Changes System Requirement. Adds Functions for Many-core Server. Corrects writing errors.
1.05	2017/02/23	Adds Windows Server 2016. Changes Start Procedure on Windows. Changes Active Directory, Mail Alert, SNMP Alert and Monitoring setting. Adds Linux(x64) and security software Precautions. Corrects writing errors.
1.06	2017/07/21	Changes System Requirement. Corrects writing errors.
1.07	2018/02/27	Changes Summary. Changes System Requirement. Adds EXPRESSSCOPE Engine SP3. Adds Network setting Precautions. Corrects writing errors.
1.08	2018/10/15	Changes Summary. Changes System Requirement. Changes Installation. Adds BMC (not EXPRESSSCOPE Engine) and Battery setting. Changes EXPRESSSCOPE Engine and ECO setting. Corrects writing errors.
1.09	2019/03/22	Adds Windows Server 2019 and SUSE Linux Enterprise Server 15. Corrects writing errors.

