

# **NEC ESMPRO ServerAgentService Ver. 2.5 Installation Guide (Windows)**

**Chapter 1 General Description**

**Chapter 2 Installation**

**Chapter 3 Uninstallation**

**Chapter 4 Appendix**

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# Conventions Used in This Document

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## Notations used in the text

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Three types of notations are used in this document. These notations have the following meanings.

<b>Important</b>	Indicates critical items that must be followed when handling operating software.
<b>Note</b>	Indicates items that must be confirmed when handling operating software.
<b>Tips</b>	Indicates information that is helpful to keep in mind.

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# Abbreviations of Operating Systems

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Windows Operating Systems are referred to as follows.

Notations in this document	Official names of Windows
Windows Server 2022	Windows Server 2022 Standard
	Windows Server 2022 Datacenter
Windows Server 2019	Windows Server 2019 Standard
	Windows Server 2019 Datacenter
Windows Server 2016	Windows Server 2016 Standard
	Windows Server 2016 Datacenter

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# Trademarks

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# Open-source software

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Software consented to based on following license is included in this product.

- **Apatch License**

- python-ilocest-library
  - jsonpatch-rw
  - recordtype

- **MIT License**

- urlparse2
  - validictory
  - six

- **Python Software Foundation License**

- Python2.7

- **Modified BSD License**

- jsonpatch
  - jsonpointer
  - ply3.8
  - decorator

See Chapter 4 (5 License) for the license.

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## Warnings and Additions to This Document

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Keep this document for future use.

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## Latest editions

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This document was created based on the information available at the time of its creation. The screen images, messages and procedures are subject to change without notice. Substitute as appropriate when content has been modified.



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# General Description

This chapter explains NEC ESMPRO ServerAgentService.

## 1. Introduction

## 2. System Requirements

Describes about the necessary system configuration.

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# ***1*. Introduction**

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Read this document so as to gain an adequate understanding of the contents.

The contents in this document are intended for users who fully understand features and operations of OS related to this utility.

If there is any unclear point, see Windows online help.

Software for monitoring the server. This works with NEC ESMPRO Manager. You can choose Service Mode or Non-Service Mode when installing this software. Service Mode resides as the OS service and Non-Service Mode does not use the OS service to reduce memory, CPU power and other OS resources.

For details of Service Mode and Non-Service Mode, see Chapter 2 (2.1 Service Mode and Non-Service Mode).

For details of NEC ESMPRO Manager, see "NEC ESMPRO Manager Installation Guide".

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## 2. System Requirements

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NEC ESMPRO ServerAgentService requires the following hardware and software.

- Hardware

- |                              |  |
|------------------------------|--|
| - Machine                    | Express5800 series<br>Scalable Modular Server DX2000 |
| - Memory                     | Memory required for running OS + 200MB or more       |
| - Free hard disk drive space | 50MB or more   |

- Software

- |                |  |
|----------------|--|
| - OS           | Windows Server 2022<br>Windows Server 2019<br>Windows Server 2016<br>* OS that is supported by the machine (product) is different. Check the manual of the server. |
| - OS component | SNMP (Simple Network Management Protocol)<br>.NET Framework 4 or later version by Microsoft support  |

**Important**

- When monitoring NEC ESMPRO ServerAgentService by NEC ESMPRO Manager, use following one of NEC ESMPRO Manager.
  - NEC ESMPRO Manager included in EXPRESSBUILDER or newer version than that.
  - Latest version on the web (recommended).
- Nano Server installation option is not supported.

**Tips**

SNMP Service is not essential function by Non-Service Mode of NEC ESMPRO ServerAgentService. For details of Service Mode and Non-Service Mode, see Chapter 2 (2.1 Service Mode and Non-Service Mode).

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# Installation

This chapter explains installation of NEC ESMPRO ServerAgentService.

## **1. Before Starting Installation**

Describes about necessary setting before installation.

## **2. Installation**

Describes about installation procedure.

## **3. After Finishing Installation**

Describes about necessary setting after installation.

---

# ***I.* Before Starting Installation**

---

Be sure to read this page before installing NEC ESMPRO ServerAgentService.

**Important**

- When using NEC ESMPRO ServerAgentService Service Mode in iLO model, invalidate Thermal Shutdown" on BIOS/Platform Configuration (RBSU). After a report, NEC ESMPRO ServerAgentService shutdown the server. When using NEC ESMPRO ServerAgentService Non-Service Mode or uninstalling NEC ESMPRO ServerAgentService in iLO model, validate "Thermal Shutdown".
- Do not change the setting of Encryption when using iLO model. When Production is not set, express report of a hardware fault is not performed.
- When installing NEC ESMPRO ServerAgentService, make the system locale of Windows OS the same one as an OS language.

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## ***I.I* Installation Method**

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NEC ESMPRO ServerAgentService has the following installation method.

### **◆ Pre-installation**

In Windows pre-installed model, NEC ESMPRO ServerAgentService is already installed.

To use follow a procedure of Chapter 2 (1.2.4 Settings of SNMP Service).

### **◆ Installation simultaneously with OS installation**

You can install NEC ESMPRO ServerAgentService automatically when Windows OS is installed with EXPRESSBUILDER.

To use follow a procedure of Chapter 2 (1.2.4 Settings of SNMP Service).

### **◆ Individual installation**

You can execute the setup program from EXPRESSBUILDER (or in case of Starter Pack by iLO model) and download.

To install NEC ESMPRO ServerAgentService, follow a procedure of Chapter 2 (1.2 Settings Before Installation).

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## ***1.2* Settings Before Installation**

---

Install NEC ESMPRO ServerAgentService after some components are set.

### ***1.2.1* Installing of Starter Pack by IPMI model**

---

Starter Pack is installed by IPMI model from EXPRESSBUILDER or from Driver Set of Support Kit. Details of Starter Pack, see "Installation Guide" in EXPRESSBUILDER or "Supplemental Installation Guide" in Support Kit.

### ***1.2.2* Setting of TCP/IP**

---

Set a static IP address for the server.

See Help from Windows for how to set TCP/IP.

## 1.2.3 Installing of SNMP Service

---

Installation of SNMP Service is indispensable by Service Mode of NEC ESMPRO ServerAgentService.  
The installing of SNMP Service is described below.

### Tips

- SNMP Service is not essential function by Non-Service Mode of NEC ESMPRO ServerAgentService. For details of Service Mode and Non-Service Mode, see Chapter 2 (2.1 Service Mode and Non-Service Mode).
- If uninstall SNMP Service after installation of NEC ESMPRO ServerAgentService, install SNMP Service again. Then uninstall and install NEC ESMPRO ServerAgentService.

### ◆ Windows Server OS

1. Click [Programs and Features] in [Control Panel].
2. Click [Turn Windows features on or off].  
"Add Roles and Features Wizard" window appears.
3. Click [Features].  
Click [Next], when [Features] cannot be clicked.
4. Check [SNMP Service] check box.  
Click [Add Features]. When the dialogue of the confirmation to which the function is added is indicated.
5. Click [Next].
6. Click [Install].  
Installing, it becomes more effective, it starts.
7. Click [Close].

### Tips

In the case of Server Core installation, execute the following command.  
"Dism /online /enable-feature /featurename:SNMP"

## 1.2.4 Settings of SNMP Service

---

### Tips

This setting is needed for the event log monitoring system. Also, this setting is needed for the function which cooperate with other product, so be sure to set.

At all except for server core installation,"◆ Setting preparation of SNMP Service" is unnecessary.  
Follow the procedure of the next "◆ To change the settings of SNMP Service".

### ◆ Setting preparation of SNMP Service

The setting change of SNMP Service of the server that executes, Server Core installation is done from PC for Management by way of the network.

1. Connected preparation is done on the server side.

Execute the following command at the command prompt on the server.

```
"netsh advfirewall firewall set rule group="File and Printer Sharing" new enable=Yes"
```

2. Install SNMP Service on PC for Management.

(Operation by "PC for Management" after.)

About the method of installing SNMP Service, see Chapter 2 (1.2.3 Installing SNMP Service).

3. The session from PC for Management to the server is established.

Execute the following command at the command prompt on PC for Management side.

```
"Net use * ¥¥ <ServerName> ¥c$ /u: <UserName>"
```

### Tips

- ServerName is a name of the server that executes Server Core installation.
- UserName is a name of the administrator account.

4. Click "Computer Management" in "Administrative Tools".
5. Right-click on the tree of the left pane, and click "Connect to another PC..."
6. The computer name of the server that executes Server Core installation is input to "Select Computer" box, and click "OK".  
Connected to "Computer Management" of the server that executes Server Core installation.



## ◆ To change the settings of SNMP Service

1. Double-click [Services] at [Administrative Tools] in [Control Panel].
2. Click [SNMP Service] from the service list and then [Properties] in [Action] menu.  
"SNMP Properties" dialog box appears.

### Tips

- When a list of Windows service is opened when installing SNMP Service, [Traps] property sheet, [Agent] property sheet and [Security] property sheet of "SNMP Properties" dialog box are not indicated. When a property is not indicated right, close a list of Windows service and open a list of Windows service again.
- When not installing Feature Administrative Tools of SNMP Service, "SNMP Properties" dialog box is not indicated right. Add [SNMP Tool] from [Control Panel] [Programs and Features] - [Turn Windows features on or off] - [Features] - [Remote Server Administration Tools] - [Feature Administration Tools].

3. Enter "public" or an arbitrary name in [Community name] box of [Traps] property sheet and click [Add to list].  
To change the community name of traps to be received from the default "\*" in NEC ESMPRO Manager side, enter the same name as the community name newly set in NEC ESMPRO Manager side.  
To receive trap from NEC ESMPRO ServerAgentService at NEC ESMPRO Manager, both community names must be the same.
4. Click [Add].
5. Click [Add...] in [Trap destinations]. After entering IP address of NEC ESMPRO Manager of the send destination in [Host name, IP or IPX address] box, click [Add].  
When a designated IP address (or host name) is designated by setting of Manager Alert (TCP/IP) in the trap destination, the message to warn to overlap is indicated.  
The alert overlaps by this setting, and is reported to NEC ESMPRO manager of a designated IP address (or host name).
6. Click [OK] Terminate the network setup.

### **1.2.5 Monitoring RAID System**

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Monitoring RAID system uses Universal RAID Utility or Smart Storage Administrator. For details, see the manual of each utility.

### **1.2.6 Backup of System Event Log**

---

In case of IPMI model, SEL (System Event Log) of EXPRESSSCOPE Engine is cleared by installation of NEC ESMPRO ServerAgentService. When necessary, save the backup of SEL. See the manual of EXPRESSSCOPE Engine about the backup procedure of SEL.

### **1.2.7 Monitoring function of Storage device**

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For iLO model, use the management utility Smart Storage Administrator. See several manual of Smart Storage Administrator.

---

## 2. Installation

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Start installing after the system starts completely. If installation is conducted right after the system startup, it may fail. Wait for a while and retry if the error message appears.

### Tips

The version of installed NEC ESMPRO ServerAgentService can be confirmed by [NEC ESMPRO ServerAgentService] - [About NEC ESMPRO] from Start menu (or Apps Start window).

---

### 2.1 Service Mode and Non-Service Mode

---

Installation method of NEC ESMPRO ServerAgentService has a Mode of two kinds, "Service Mode" and "Non-Service Mode".

### Tips

Mode selection is performed in installation program. To use another mode of NEC ESMPRO ServerAgentService, run uninstall once and run installation.

---

#### 2.1.1 Service Mode

---

Installation mode of default. Mode to Install all feature of NEC ESMPRO ServerAgentService.

On preinstallation or Installation simultaneously with OS installation, Service Mode is chosen automatically.

---

#### 2.1.2 Non-Service Mode

---

The mode without Windows service program. The monitoring service and the report engine are not installed.

To choose Non-Service Mode, run setup program from [Applications].

### 2.1.3 Comparison of Service Mode and Non-Service Mode

#### [OS Component]

	Service Mode	Non-Service Mode	Note
.NET Framework	Indispensable	Indispensable	
SNMP Service	Indispensable	Unnecessary	

#### [Monitoring Function]

	Service Mode	Non-Service Mode	Note
CPU load monitoring	Installed	Installed	Not reported in case of Non-Service Mode.
CPU/Memory Fallback monitoring	Installed	Not Install	
Memory usage monitoring	Installed	Installed	Not reported in case of Non-Service Mode.
File system monitoring	Installed	Installed	Not reported in case of Non-Service Mode.
Storage monitoring	Installed	Installed	Not reported in case of Non-Service Mode.
S2D Disk Monitoring	Installed	Not Install	

#### [Resident Service]

	Service Mode	Non-Service Mode	Note
Start Monitor Service	Installed	Not Install	ESMCommonService
Monitoring hardware log Service	Installed	Not Install	ESM System Management Service
S2D Disk monitoring Service	Installed	Not Install	ESMS2DMonitor
Communication base Service	Installed	Not Install	Alert Manager Main Service Alert Manager Socket(S) Service
Express Report Service	Possible to install	Impossible to install	Alert Manager ALIVE(S) Service
Express Report Service (HTTPS)	Possible to install	Impossible to install	none

#### Tips

In case of Non-Service Mode, the monitoring interval cannot be changed from NEC ESMPRO Manager.

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## 2.2 Start of the Setup Program

---

Starting the Setup Program from Starter Pack (iLO model), EXPRESSBUILDER or download.

### 2.2.1 Starting the Setup Program from Starter Pack

---

**Tips**

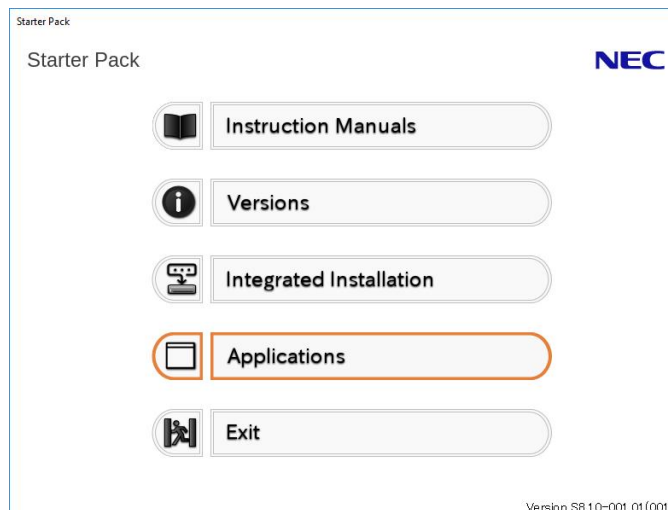
When upgrading NEC ESMPRO ServerAgentService using Starter Pack of the new version, start a setup program by a procedure in this chapter.

1. Sign-in to the system with the administrator account.
2. Starter Pack Menu is started.

**Tips**

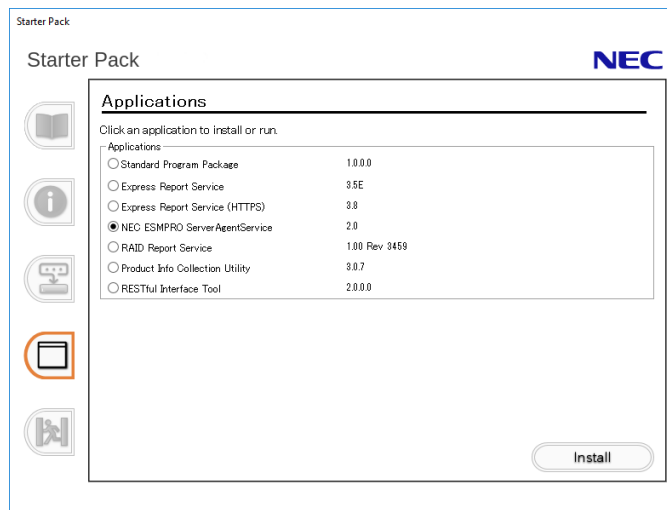
See "Maintenance Guide" for initiation method on Menu.

3. Click [Applications].



4. Click [NEC ESMPRO ServerAgentService] and then [Install].

Setup screen of NEC ESMPRO ServerAgentService starts.



## 2.2.2 Starting the Setup Program from EXPRESSBUILDER

---

### Tips

On Server Core system, start the setup program with a procedure of "EXPRESSBUILDER Command Line Interface User's Guide".

1. Sign-in to the system with the administrator account.
2. EXPRESSBUILDER Autorun Menu is started.

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

### Tips

After installing Starter Pack in the server, a shortcut of "EXPRESSBUILDER" is created.

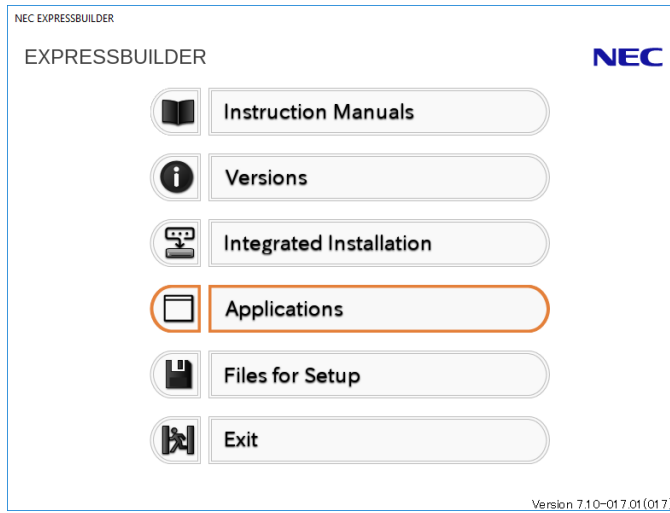
- The equipment by which EXPRESSBUILDER DVD isn't standard.

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

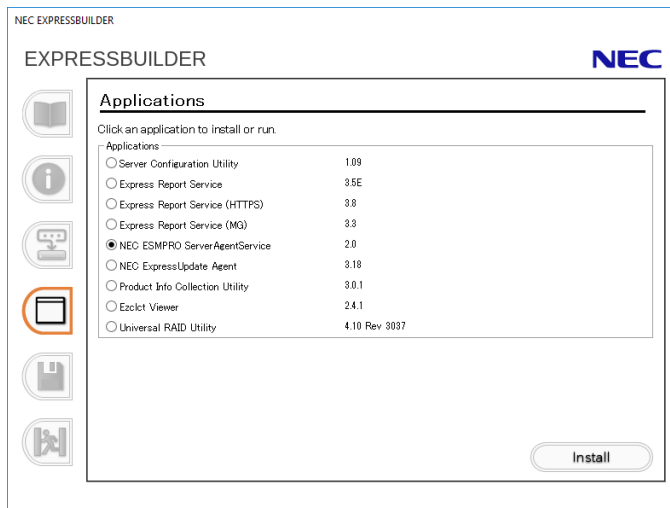
- The equipment by which EXPRESSBUILDER DVD is standard.

Insert EXPRESSBUILDER DVD into Optical disk drive.

3. Click [Applications].



4. Click [NEC ESMPRO ServerAgentService] and then [Install].  
Setup screen of NEC ESMPRO ServerAgentService starts.



### 2.2.3 Starting the Setup Program from Download

---

**Tips**

Without uninstalling NEC ESMPRO ServerAgentService of the old version, you can upgrade it.

1. Sign-in to the system with the administrator account.

2. Unzip the downloaded setup program.

Save the downloaded "SAS25\_E.zip" file in a folder of your choice, and unzip it. Use the shallow hierarchy (C:\TEMP) for a folder. When the hierarchy of the folder is too deep, the setup program cannot unzip.

3. Double click the setup program "SAS25\_EAGENTsetup.exe".

Setup screen of NEC ESMPRO ServerAgentService starts.

**Tips**

- You may see a prompt for source (i.e. "Please insert the disk: 1") when performing a Minor Upgrade when you are upgrading with a CD image where the installer resides on a subfolder of the removable media. You should put the setup program (setup.exe) on the local disk.
- When installing from a drive on the network. A network drive must be allocated firstly and then double-click "SAS25\_EAGENTsetup.exe" to install.



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## 2.3 Execution of the Setup Program

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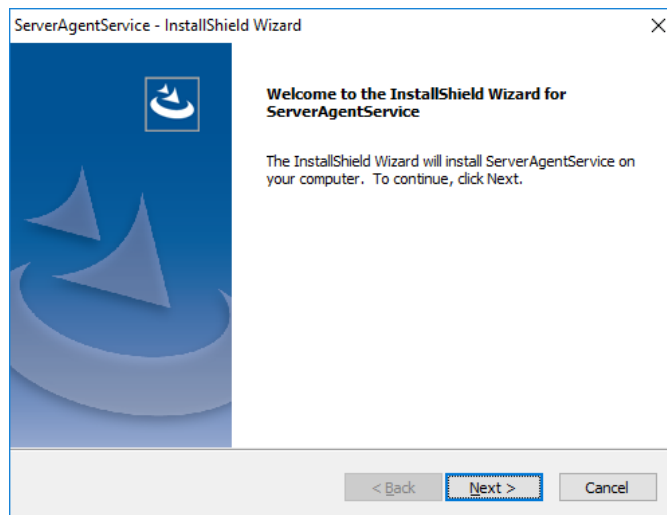
Install with directions of a screen of the setup program.

To change a destination folder and installation mode, choose Custom setup type on Setup Type screen.

### Tips

- When upgrading, setup.exe display the message box which confirms whether you want to continue upgrade. The message shown to a welcome window will be "Resuming the InstallShield Wizard for ServerAgentService". There is no operation until an end window is indicated.
- Be sure to close the Alert Manager settings tool when installing.

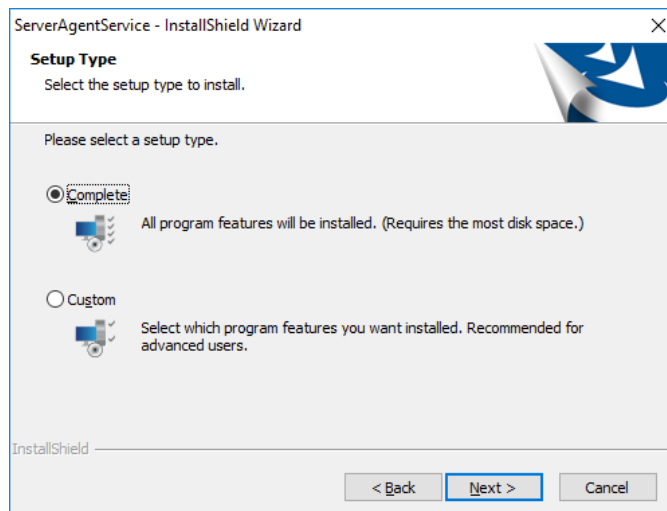
1. Click [Next].



2. Chose the setup type, and click [Next].

To install with default destination folder and installation mode, choose "Complete" setup type.

Skip to 5. To change a destination folder or installation mode, choose "Custom" setup type.



**Tips**

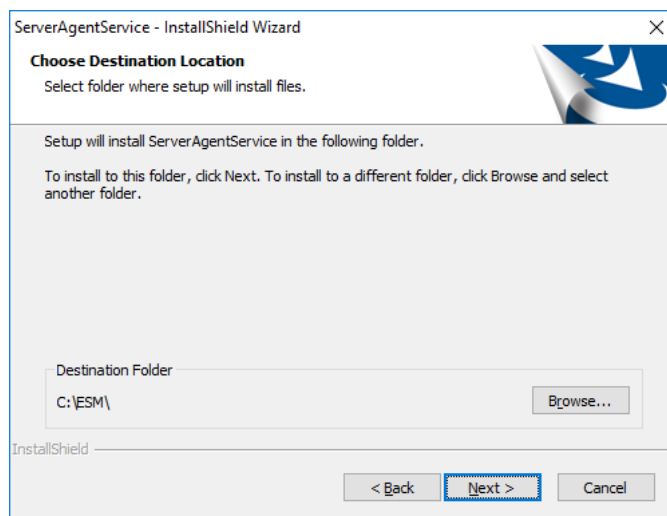
Default value of destination folder and installation mode as follows;  
Destination folder : C:\ESM  
Installation mode : Service Mode

3. Choose Destination Location screen is indicated. If need, change the installation destination, and click [Next].

**Tips**

Do not choose following path as installation destination.

- A removable disk
- A network drive
- Path that includes multi-byte character like Japanese language
- Path that includes ";" (Semicolon)



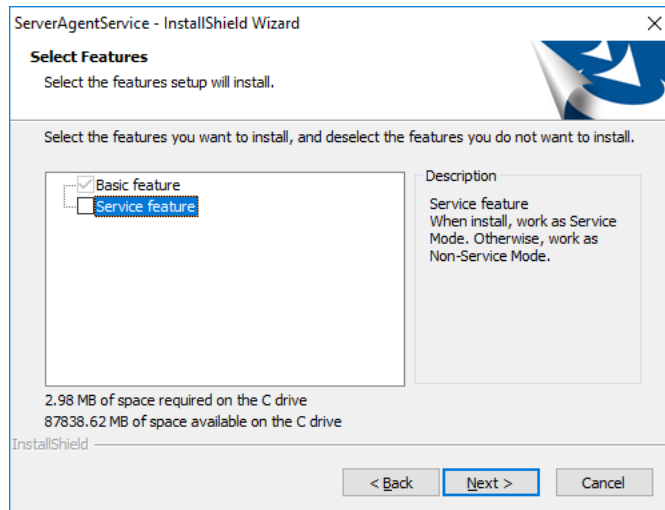
- Select Feature screen is indicated. If need, change status of Service feature check box, and click [Next].

For Service Mode installation, put a tick on the check box.

For Non-Service Mode installation, remove a check of the check box.

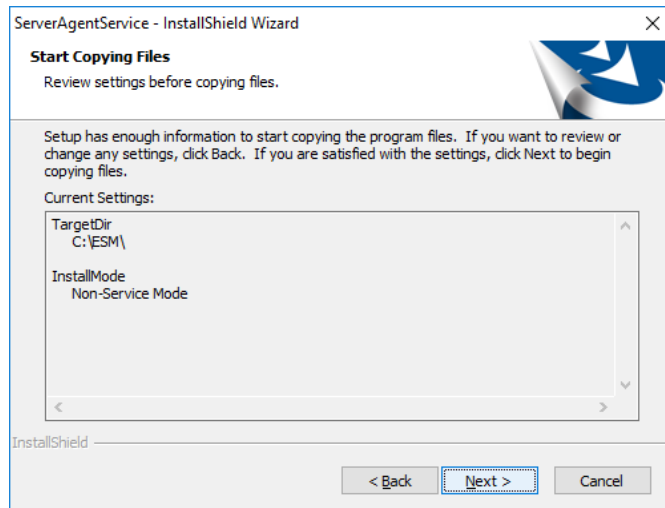
#### Tips

Basic feature check box is always on because it is an indispensable feature.

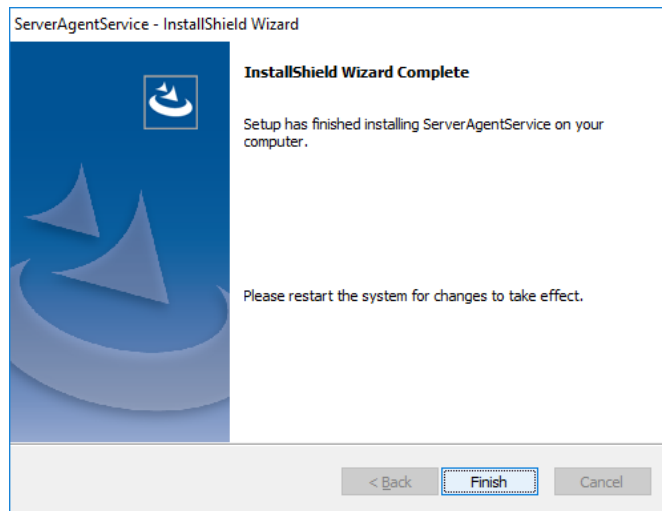


- Click [Next].

Start of installation.



6. When the installation end window appears, click [Finish].



Installed NEC ESMPRO ServerAgentService becomes enabled after a restart the system.  
The installation completed.

**Tips**

Depending on OS installing NEC ESMPRO ServerAgentService the message that "Windows Explorer has stopped working" might be displayed. However, installation was normally completed. There is no problem in system operation.

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## 3. After Finishing Installation

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Be sure to read this page after installing NEC ESMPRO ServerAgentService.

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### 3.1 Operations Check

---

The setup program of NEC ESMPRO ServerAgentService enable Windows remote management (WinRM) and change settings. The setup program execute the following WinRM command in installation process.

```
winrm quickconfig -q
winrm set winrm/config/service @{AllowUnencrypted="true"}
winrm set winrm/config/service/auth @{Basic="true"}
```

By running winrm quickconfig -q, The following registry will be registered and UAC remote restrictions will be disabled.

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System
Name : LocalAccountTokenFilterPolicy [REG_DWORD]
Data : 1
```

See the following site about LocalAccountTokenFilterPolicy Registry.

```
https://learn.microsoft.com/en-us/windows/security/identity-protection/access-control/local-accounts
'Enforce local account restrictions for remote access'
```

In uninstallation process, the setup program does not change these settings. If you need, change settings to use by WinRM command.

---

## 3.2 Port Setting

---

A use port (5985/tcp) in WS-Man monitoring by NEC ESMRPO Manager is opened from after OS installation, but an accessible machine is restricted to only a machine in the local sub-net depending on installed OS or network environment. When monitoring in NEC ESMPRO Manager in the different sub-net, open WS-Man access from NEC ESMPRO Manager with the following procedure.

1. Double click [Administrative Tools]-[Windows Firewall with Advanced Security] in [Control Panel].
2. Click [Inbound Rules].
3. Select [Windows Remote Management (HTTP-In)], then Click [Properties] in the [Action] menu.

Windows Remote Management (HTTP-In) properties" window appears.

**Tips**

Depending on OS, [Windows Remote Management (HTTP-In)] is divided into plural by a network profile. Select rule for your network environment.

4. Select "Any IP address" in [Remote IP address] box of [Scope] property sheet.  
When choosing [these IP addresses], add IP address of NEC ESMPRO Manager.
5. Click [OK].

---

## 3.3 HTTPS Setting

---

NEC ESMPRO ServerAgentService uses HTTP or HTTPS for WS-Man communication with NEC ESMPRO Manager. When NEC ESMPRO ServerAgentService is installed, HTTP is used as the default value. Considering the security, HTTPS is recommended. When you're using the machines on the secure environment (e.g. standalone or closed network), you can also use HTTP.

### 3.3.1 Setting Method

---

How to connect with NEC ESMPRO Manager using HTTPS is as the following one procedure.

**Important** Using HTTPS for a connection with NEC ESMPRO Manager is recommended. Because if you used HTTP, username and the password of Basic authentication to use WS-Man communication would be flowed by plain text on the network.

**Tips** CA-signed certificate is recommended to use.

During the HTTPS setting, the following event log is registered. However, there is no problem in system operation.

Source : HttpEvent  
Event ID : 15301  
Level : Warning  
Description : SSL Certificate Settings created by an admin process for Port : 0.0.0.0:5986.

Source : HttpEvent  
Event ID : 15300  
Level : Warning  
Description : SSL Certificate Settings deleted for Port : 0.0.0.0:5986.

## ◆ The way to use the HTTPS SETTING TOOL

Use the HTTPS SETTING TOOL to create a Self-Signed certificate and set HTTPS setting by the following procedure.

1. Sign-in to the server of NEC ESMPRO ServerAgentService with the administrator account.
2. Run the command prompt by the administrator account.
3. Execute the following command.

```
cd %EsmDir%¥tool
ESMHttps.bat -p IPAddress
```

Example:

```
In case of the server's IP Address is 192.168.1.100.
ESMHttps.bat -p 192.168.1.100
```

### Tips

The certificate is generated with PowerShell command. The expiration date of the certificate is set to 10 years.

## ◆ The way to use a CA-Signed certificate

In case of using a CA-Signed certificate, you have to install the certificate with the way that a certificate authority indicated.

1. Get a CA-Signed certificate from a certificate authority.
2. Sign-in to the server of NEC ESMPRO ServerAgentService with the administrator account.
3. Store the CA-Signed certificate in %EsmDir%¥tool.
4. Run the command prompt by the administrator account.
5. Execute the following command.

```
cd %EsmDir%¥tool
ESMHttps.bat -c certificate_file
```



## ◆ The way to use "keytool.exe"

Create a Self-Signed certificate on a PC for management in which NEC ESM PRO Manager was installed. After that set HTTPS setting on the server in which NEC ESM PRO ServerAgentService was installed. "keytool.exe" is bundled by NEC ESM PRO Manager.

1. Sign-in to the PC for management of NEC ESM PRO Manager with the administrator account.
2. Run the command prompt by the administrator account.
3. Execute the following command.

In case of Installing NEC ESM PRO Manager in C:\Program Files (x86)\ESM PRO on 64bit OS  
"C:\Program Files (x86)\ESM PRO\ESMWEB\java\bin\keytool.exe" -genkey -  
keystore -storepass -validity -keyalg RSA -keysize -storetype pkcs12 -ext EKU=serverAuth  
-dname "CN=IP Address"

Example:

In case of the server's IP Address is 192.168.1.1.

"C:\Program Files (x86)\ESM PRO\ESMWEB\java\bin\keytool.exe" -genkey -  
keystore C:\temp\esmpro.pfx -storepass secret -validity 3650 -keyalg RSA -keysize 2048  
-storetype pkcs12 -ext EKU=serverAuth -dname "CN=192.168.1.1"

### Tips

- In case of an example, esmpro.pfx is made in C:\temp. Make C:\temp folder beforehand.
- In case of on 32bit OS, paraphrase "Program Files (x86)" as "Program Files".

4. Sign-in to the server of NEC ESM PRO ServerAgentService with the administrator account.
5. Store the created certificate in %EsmDir%\tool.
6. Run the command prompt by the administrator account.
7. Execute the following command.

```
cd %EsmDir%\tool  
ESMHttps.bat -c certificate_file password
```

Example:

```
ESMHttps.bat -c esmpro.pfx secret
```

## ◆ The way to use "makecert.exe"

"makecert.exe" is available by installing Windows SDK, and it is possible to use it. Create a Self-Signed certificate and set HTTPS setting by the following procedure.

**Important** Use "makecert.exe" of file version 6 or later.

**Tips** See the following site about makecert.exe.  
- Makecert.exe (Certificate Creation Tool)  
<https://docs.microsoft.com/en-us/windows/win32/seccrypto/makecert?redirectedfrom=MSDN>

1. Sign-in to the server of NEC ESM PRO ServerAgentService with the administrator account.
2. Store the makecert.exe in %EsmDir%\%tool.
3. Run the command prompt by the administrator account.
4. Execute the following command.

```
cd %EsmDir%\%tool
ESMHttps.bat -m IPAddress Validity (mm/dd/yyyy)
```

Example:

```
ESMHttps.bat -m 192.168.1.100 12/31/2040
```

### 3.3.2 Open a port

---

Open a port to use HTTPS connection.

1. Double click [Administrative Tools]-[Windows Firewall with Advanced Security] in [Control Panel].
2. Right-click [Inbound Rules] and click [New Rule].
3. Select [Port] and click [Next].
4. Select [TCP] and [Specific local ports], input 5986 in port number and click [Next].
5. Select [Allow the connection] and click [Next].
6. Select a profile that is used for a connection with NEC ESMPRO Manager from [Domain], [Private] or [Public].
7. Input [Name] and [Description] and click [Finish].

Example:

Name: NEC ESMPRO ServerAgentService (HTTPS)

Description: Inbound rule for NEC ESMPRO ServerAgentService to allow data transfer using HTTPS [TCP 5986]

### 3.3.3 NEC ESMPRO Manager Setting

---

If using Self-Signed certificate, change a setting of NEC ESMPRO Manager to allow Self-Signed certificate by WS-Man communication. If using a CA-Signed certificate, the following procedure is unnecessary.

1. Select [Login] of NEC ESMPRO Manager.
2. Select [Environment].
3. Select [Network] tab and click [Edit].
4. Select [WS-Man Communication]-[Self Signed Certificate]-[Allow] and click [Apply].

---

## 3.4 Operations Check

---

Confirm whether the setting of NEC ESMPRO ServerAgentService.

1. Run the command prompt by the administrator account on another server .
2. Execute the following command to set WinRM.

```
winrm quickconfig
winrm set winrm/config/Client @{AllowUnencrypted="true"}
winrm set winrm/config/Client/Auth @{Basic="true"}
winrm set winrm/config/Client @{TrustedHost="IPAddress"}
```

3. Execute the following command.

```
winrm identify -r:http://IPAddress:port -u:username -p:password
winrm e wmi/root/cimv2/Win32_ComputerSystemProduct -r:http://IPAddress:port -
u:username -p:password
winrm e wmi/root/ESMPRO/AS/ESM_GeneralInformation -r:http://IPAddress:port -
u:username -p:password
```

### Tips

- When connecting HTTPS, designate HTTPS as "-r" instead of HTTP.
- The port is HTTP/5985 or HTTPS/5986.
- Input username and password of OS' sign-in account.
- When connecting a server that have been set HTTPS connection by Self-Signed certificate, add "skipCACheck" to the command as follows. WinRM identify -r:http://IPAddress:port -u:username -p:password -skipCACheck.

4. When an error occurred in the previous procedure, there is a possibility that setting of NEC ESMPRO ServerAgentService is wrong. Confirm the setting with the following.

- \* In case of using HTTPS for a connection of NEC ESMPRO Manager  
Redo setting of a HTTPS connection with Chapter 2 (3.3 HTTPS Setting).

- \* In case of using HTTP for a connection of NEC ESMPRO Manager  
Run the command prompt by the administrator account and execute the following command on the server in which NEC ESMPRO ServerAgentService was installed. If an error number and message are not shown the prompt, it is success.

```
winrm quickconfig
```

```
winrm set winrm/config/service @{AllowUnencrypted="true"}
```

5. Execute the command of procedure 3 by the administrator account of a different server, and confirm whether it is possible to connect to the server you installed.

---

## 3.5 Monitoring S2D Disk

---

If you are using Storage Spaces Direct (S2D), you can monitor the failure of the disk unit of S2D. It can be an active monitoring in the following procedure.

1. Double click [Control Panel] - [Administrative Tools] - [Services].
2. Select "ESMS2DMonitor" from the list of services, and open the properties of the service.
3. ESMS2DMonitor Properties - [General] Change the "Startup Type" from "Manual" to "Automatic".
4. Start ESMS2DMonitor.
5. Click [OK], and close ESMNVMeMonitor Properties.

### Tips

The S2D disk monitoring function will register event logs, report to NEC ESMPRO Manager, and carry out Express Reports when the "Usage" of the S2D disk mounted on the local server (node) is set to "Retired". The S2D disk monitoring function also works if the "Usage" is set to "Retired" when replacing the S2D disk during hardware maintenance. In order to halt such reports during maintenance that involves S2D disk "Usage" operations, temporarily stop the monitoring service (ESMS2DMonitor).

- Temporarily stop the monitoring service

1. Before maintenance, select [ESMS2DMonitor] from the list of services above and click "Stop" or "Pause" to stop the service.
2. After completing the maintenance, click "Start" or "Resume" to start the service.

---

## 3.6 iLO Host Authentication

---

When iLO Host Authentication is enabled on iLO models, target products that acquires data from iLO will not be able to access the iLO. If iLO Host Authentication is enabled, register iLO account information (login user name, password) with NEC iLO Account Registration Tool.

1. Sign in (Log on) to the system with Administrators rights.
2. Run Command Prompt.
3. Move the current directory to the stored folder of this tool.

```
cd %EsmDir%\iLO
```

4. Execute the following command to register your iLO account information.

```
iLOUserSet -u "UserName" -p "Password"
```

Each command option is not optional. If you do not have a password, specify "" as follows:

```
iLOUserSet -u "UserName" -p ""
```

5. If "Registered" is displayed at the command prompt, registration is complete.  
No system reboot is required. Check the command prompt and if there are no errors, registration is complete.

---

---

# Uninstallation

This chapter explains uninstallation of NEC ESMPRO ServerAgentService.

## 1. Before Starting Uninstallation

Describes about necessary setting before uninstallation.

## 2. Uninstallation

Describes about uninstallation procedure.

## 3. After Finishing Uninstallation

Describes about necessary setting after uninstallation.



---

---

# ***1.* Before Starting Uninstallation**

---

---

Be sure to read this page before uninstalling NEC ESMPRO ServerAgentService.

---

## ***1.1* Confirmation of .NET Framework**

---

Installation of .NET Framework 4 or later version are indispensable to uninstallation of NEC ESMPRO ServerAgentService. If uninstall .NET Framework after installation of NEC ESMPRO ServerAgentService, install .NET Framework again.

---

## ***1.2* Confirmation of Express Report Service / Express Report Service (HTTPS)**

---

When Express Report Service / Express Report Service (HTTPS) are installed, Express Report Service / Express Report Service (HTTPS) must be uninstalled prior to uninstalling of NEC ESMPRO ServerAgentService.

---

## 2. Uninstallation

---

Start uninstalling after the system starts completely. If uninstallation is conducted right after system startup, it may fail. Wait for a while and retry if error message appears.

Be sure to close the Alert Manager settings tool when uninstalling.

The uninstallation procedure of NEC ESMPRO ServerAgentService is common to Service Mode and Non-Service Mode.

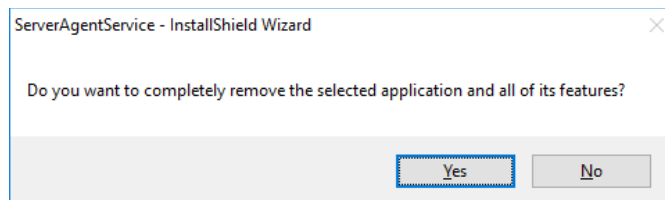
---

### 2.1 Full Install OS

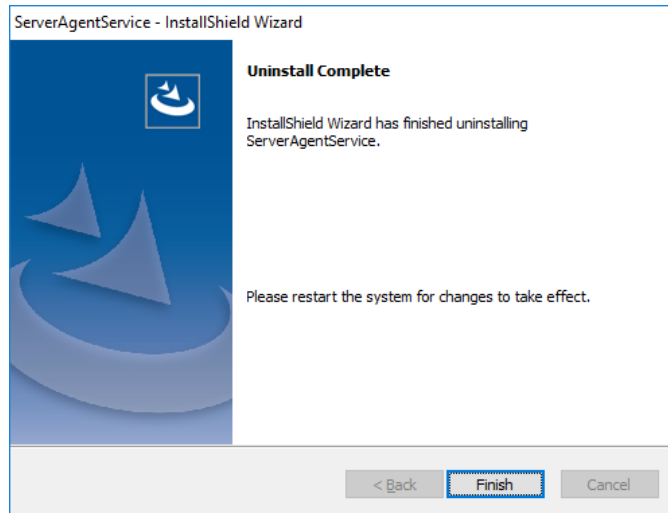
---

1. Sign-in to the system with the administrator account.
2. Click [Programs and Features] or [Add or Remove Programs] from [Control Panel].
3. Select [NEC ESMPRO ServerAgentService] and click [Uninstall/Change] (or [Change/Remove]).
4. The window which confirms the execution of remove is indicated, click [Yes].

Uninstallation is start.



5. When the uninstallation end window appears, click [Finish].



The uninstallation completed. Restart the system is required.

#### Tips

- If uninstallation is conducted right after the system startup, it can fail. Wait for a while and retry if the error message appears. [AMIRTUpt.dll] file can remain solely in the installation folder. In this case, delete it manually. If files other than [AMIRTUpt.dll] also remain, do not delete them.
- Due to InstallShield failure, the error message "C:\PROGRAM~1\INSTAL~1\{6342F~1\setup.exe" is indicated only at the first startup after uninstallation.
- Depending on OS uninstalling NEC ESMPRO ServerAgentService the message that "Windows Explorer has stopped working" might be displayed. However, uninstallation was normally completed. There is no problem in system operation.
- After uninstalling, the following file is sometimes left in "C:\Windows\SysWOW64\wbem" (32-bit: %System32%\wbem). When you access to WMI information using a tool like wbemtest.exe, classes and name space still exist. However, there is no problem in system operation.
  - ESMCpu\_v4.0.30319.mof
  - esmfs\_v4.0.30319.mof
  - ESMGeneralInformation\_v4.0.30319.mof
  - ESMReportSetting\_v4.0.30319.mof
  - esmstrg\_v4.0.30319.mof
  - ESMWorkstationMonitor\_v4.0.30319.mof
  - ESMMemory\_v4.0.30319.mof
- If fail to stop service(s) during uninstallation, try to run uninstallation after stopping the service(s). To stop service, you can use the sc.exe or the [Administrative tools]. When stopping service, also stop service dependent on the service.

---

## 2.2 Server Core Install OS

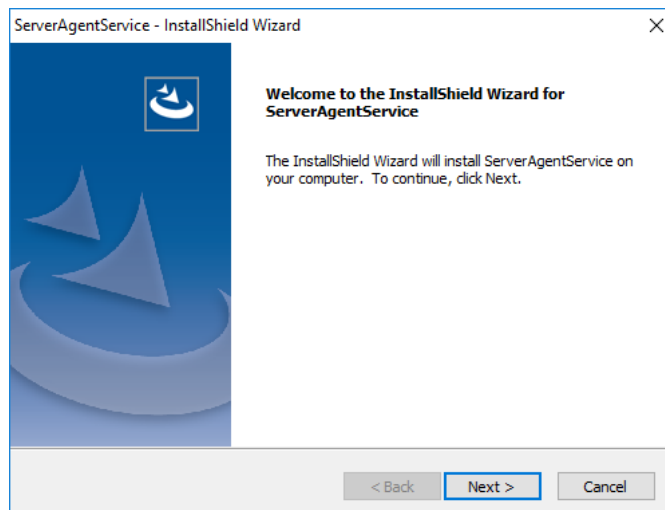
---

The setup program is started from EXPRESSBUILDER by Server Core installation.

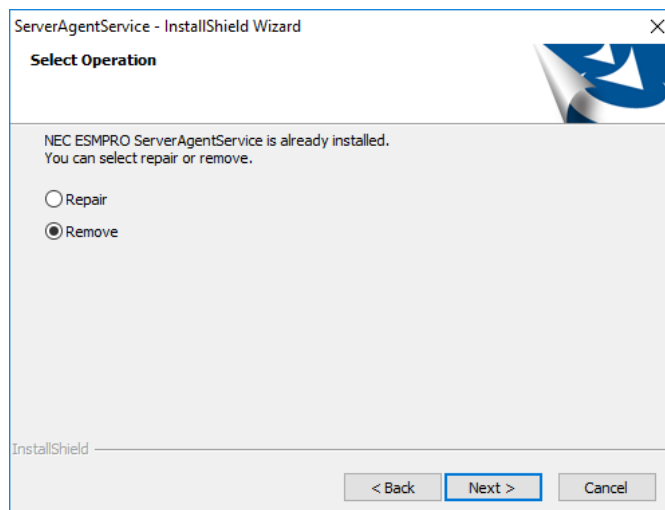
**Tips**

Uninstall NEC ESMPRO ServerAgentService using the setup program. About how to start the setup program, see Chapter 2 (2.2.3 Starting the Setup Program from Download).

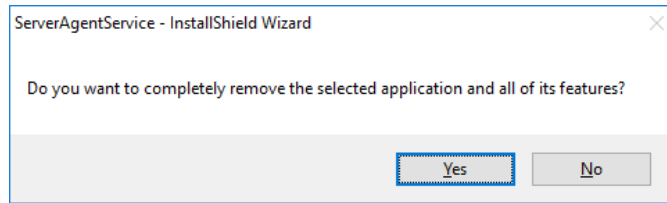
1. Sign-in to the system with the administrator account.
2. The setup program of NEC ESMPRO ServerAgentService is started with a procedure of EXPRESSBUILDER Command Line Interface User's Guide.
3. Click [Next].



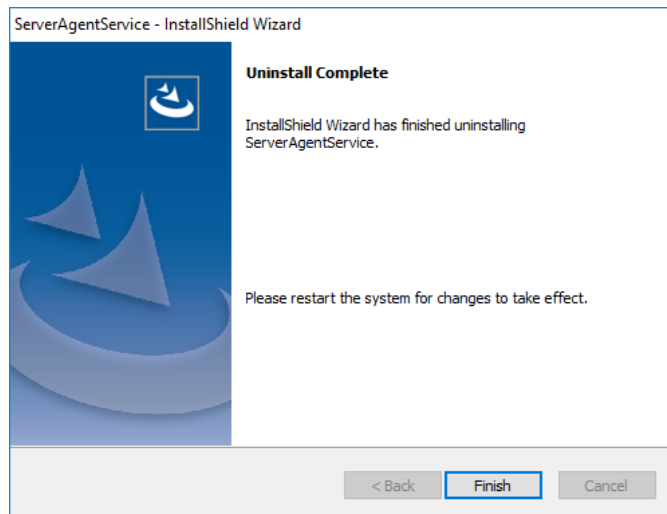
4. Chose a [Remove], and click [Next].



5. The window which confirms the execution of remove is indicated, click [Yes].  
Uninstallation is start.



6. When the uninstallation end window appears, click [Finish].



The uninstallation completed. Restart the system is required.

## Tips

- If uninstallation is conducted right after the system startup, it can fail. Wait for a while and retry if the error message appears, [AMIRTUpt.dll] file can remain solely in the installation folder. In this case, delete it manually. If files other than [AMIRTUpt.dll] also remain, do not delete them.
- Due to InstallShield failure, the error message "C:\PROGRAM~1\INSTAL~1\{6342F~1\setup.exe" is indicated only at the first startup after uninstallation.
- Depending on OS uninstalling NEC ESMPRO ServerAgentService the message that "Windows Explorer has stopped working" might be displayed. However, uninstallation was normally completed. There is no problem in system operation.
- After uninstalling, the following file is sometimes left in "C:\Windows\SysWOW64\wbem" (32-bit: \System32\wbem). When you access to WMI information using a tool like wbemtest.exe, classes and name space still exist. However, there is no problem in system operation.
  - ESMCpu\_v4.0.30319.mof
  - esmfs\_v4.0.30319.mof
  - ESMGeneralInformation\_v4.0.30319.mof
  - ESMReportSetting\_v4.0.30319.mof
  - esmstrg\_v4.0.30319.mof
  - ESMWorkstationMonitor\_v4.0.30319.mof
  - ESMMemory\_v4.0.30319.mof
- If fail to stop service(s) during uninstallation, try to run uninstallation after stopping the service(s). To stop service, you can use the sc.exe or the [Administrative tools]. When stopping service, also stop service dependent on the service.

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## **3. After Finishing Uninstallation**

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### **3.1 Undo WinRM Settings**

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As described in Chapter 2 (3.1 Operations Check) of Installation, Even if NEC ESMPRO ServerAgentService is uninstalled, Windows Remote Management (WinRM) is practicable. If you don't use WinRM by other application, and when you'd like to stop using WinRM, carry out the following procedure.

#### **◆ In case of WS-MAN communicate with HTTPS**

1. Run the command prompt by the administrator account.
2. Execute the following command.  

```
winrm delete winrm/config/listener?Address=*+Transport=HTTPS
```
3. Double click [Administrative Tools] - [Services] in [Control Panel].
4. To disable "WS-MAN service", change [Startup Type] to [Disabled] of [Windows Remote Management (WS-Management)].
5. Delete the rule of Windows Firewall established of Chapter 2 (3.3.2 Open a port).

#### **◆ In case of WS-MAN communicate with HTTP**

1. Run the command prompt by the administrator account.
2. Execute the following command.  

```
winrm delete winrm/config/listener?Address=*+Transport=HTTP
```
3. Double click [Administrative Tools] - [Services] in [Control Panel].
4. To disable "WS-MAN service", change [Startup Type] to [Disabled] of [Windows Remote Management (WS-Management)].
5. Select [Windows Firewall] in [Control Panel], click [Allow a program or feature through Windows Firewall]. And turn off a check box [Windows Remote Management].

---

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# Appendix

## 1. Notes

Describes about notes.

## 2. Port Number / Protocol List

Describes about the port and the protocol.

## 3. Services List

Describes about the service list.

## 4. Starting and Stopping Services

Describes about the starting procedure and stopping procedure.

## 5. License

Describes about the license of the software.



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# **I. Notes**

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## **I.I Event Log**

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### **◆ Alert Manager WMI Service hang-up or ESMCommonService Start Failure event log (System)**

The following log may be registered on the eventlog by the situation of the system - for example, you installed NEC ESMPRO Manager and NEC ESMPRO ServerAgentService on the same machine.

Source	:	Service Control Manager
Event ID	:	7022
Level	:	Error
Description	:	Alert Manager WMI Service hang-up

ESMCommonService of NEC ESMPRO ServerAgentService may not start properly then. But "Automatic (Delayed Start)" and "automatic restart at failure" are set at ESMCommonService. When service shifts to a start state (running) by an automatic restart at failure, there is no problem in system operation.

### **◆ In an environment with a large number of CPU cores, the "ESMCpuPerf" event log registered immediately after system startup**

In an environment with a large number of CPU cores, the following CPU load monitoring error event logs may be registered.

Source	:	ESMCpuPerf
Event ID	:	9000
Level	:	Error
Description	:	ESMCpuPerf Internal Error

This event occurs because the initialization process of the performance counter rarely fails when the number of CPU cores is large, but since the monitoring retry process is performed, the CPU load monitoring function works correctly even if this event log is registered. In addition, the operation of the system is not affected.

### ◆ Event log (System) which is registered when connecting NEC ESMPRO Manager by HTTP connection

When connecting NEC ESMPRO Manager by HTTP connection, the following event log is registered.

Source	:	Microsoft-Windows-WinRM
Event ID	:	10120
Level	:	Information
Description	:	The WinRM service has received an unsecure HTTP connection from 192.168.1.1. This is not a secure configuration. User Action Set AllowUnencrypted to False in WinRM configuration to ensure packets are encrypted on the wire.

When this event log is registered, there is no problem in system operation. However, the system is not secure. If you construct a secure system and configure HTTPS connection, see Chapter 2 (3.3 HTTPS Setting). Then, this event log is not registered.

### ◆ Event log (Application) which is registered when communicating with NEC ESMPRO Manager

When connecting NEC ESMPRO manager under the environment of the logical processors beyond 64, the following event log is registered. However, there is no problem in system operation.

Source	:	Microsoft-Windows-PerfNet
Event ID	:	2006
Level	:	Error
Description	:	Unable to read Server Queue performance data from the Server service. The first four bytes (DWORD) of the Data section contains the status code, the second four bytes contains the IOSB.Status and the next four bytes contains the IOSB.Information.

## ◆ Event log (system) of WinRM which is registered when doing shut down

When you shut down the machine in which NEC ESMPRO ServerAgentService was installed, the following event log is registered. However, there is no problem in system operation.

Source : Windows Remote Manager  
Event ID : 10149  
Level : Warning  
Description : The WinRM service is not listening for WS-Management requests.

If you did not intentionally stop the service, execute the following command to see WinRM configuration:

```
winrm enumerate winrm/config/listener
```

When the WS-Management listener stopped, this event is registered. Windows Remote Manager service is stopped at shutdown, so this event is registered.

## ◆ Event log (Application) which is registered during the Setup

During the installation of NEC ESMPRO ServerAgentService, the following event log is registered. However, there is no problem in system operation.

Source : WMI  
Event ID : 63  
Level : Warning  
Description : A provider, xxxx, Version=y.y.y, Culture=neutral, PublicKeyToken=zzzz, has been registered in the Windows Management Instrumentation namespace root¥ESMPRO¥AS to use the LocalSystem account. This account is privileged and the provider may cause a security violation if it does not correctly impersonate user requests.  
xxxx : provider name  
yyyy : provider version  
zzzz : PublicKeyToken

If the Remote Desktop Services, formerly Terminal Services, of Windows OS is installed, during uninstallation of NEC ESMPRO ServerAgentService the same event log is registered. However, there is no problem in system operation.

When WMI provider which runs under Local System account is registered, this event occur. Some of WMI providers included in NEC ESMPRO ServerAgentService run under Local System account. Therefore, these events are registered.

### ◆ Monitors hardware log (SEL)

Monitors hardware log (SEL) by NEC ESMPRO ServerAgentService uses Windows Management Instrumentation (WMI) Service. Therefore when WMI Service stopped or restarted, NEC ESMPRO ServerAgentService cannot monitor any more.

When WMI Service stopped or restarted, the following event is registered with event log (Application).

Source	:	Application Error
Event ID	:	1000
Level	:	Error
Description	:	Faulting application name: svchost.exe

When WMI Service stopped or restarted, restart the system. Or restart of ESM System Management Service from Control Panel, then "Administrative Tools", then Services.

(NEC ESMPRO ServerAgentService reconnects to WMI Service by restarting ESM System Management Service)

## ◆ Report monitoring event

- The alert function is based on the event information registered in the event log of the system.  
Thus, set the event log process on the event viewer to [Overwrite events as needed] or [Archive the log when full, do not overwrite events]. The monitoring event is not alerted in the setting other than that.
  
- The event registered in the monitoring event tree of Alert Manager setting tool is not alerted to the manager if Alert Manager Main Service does not operate. Even when the service is operating, if the enabled/disabled flag of each alerting ways is disabled, the event is not alerted.  
The alert enabled/disabled flag is set by selecting [Base Setting] - [Report] Properties from [Setting] of Alert Manager. Also the event occurred before Event log Service started at the time of system startup cannot be alerted.
  
- You can set the time to the shutdown by selecting [Base Setting] - [Other] of Alert Manager setting tool.  
The initial value is 20 seconds.  
When you set smaller value than this, the alert cannot be performed at the time of shutdown.
  
- When an alert failure occurs at the time of alerting of monitoring target event, an error message is logged in the event log. If newly log the error message which occurs at the time of alerting as a monitoring target event, the error at the time of alerting will be alerted again.  
As a result, large number of alerts will be sent when recovering the failure. This leads to the increase of system load and the degradation of the performance. Do not register the events especially which are produced by the following alert function services as the monitoring target.
  - Alert Manager Main Service
  - Alert Manager Socket(S) Service
  - (Alert Manager ALIVE(S) Service)\*

(\*) Alert Manager ALIVE(S) Service is the service registered only when Express Report Service or NEC ESMPRO Manager is installed.
  
- On Manager Alert (SNMP) in alert report function, the length of messages should be up to 511 bytes.  
When reporting a message with the length longer than 512 bytes, the 512th and the later message do not appear on the alert viewer. Check the 512th and the later message on the event viewer on the machine that sends the report.  
If you want to display all the messages later than the 512th, use Manager Alert (TCP/IP In-Band).

---

## **1.2 Monitoring Storage device / File system**

---

### **Tips**

For iLO model, the storage monitoring function of NEC ESMPRO ServerAgentService will not be installed. The described note in this section are precautions on the model where the storage monitoring function is installed.

### **◆ SATA Optical disk drive**

In the case of using LSI Embedded MegaRAID or Smart Software RAID, information of SATA Optical disk drive does not displayed of [Information of server state/constitution] of NEC ESMPRO Manager.

### **◆ Information displayed in "Resource" of SCSI controller**

Incorrect information appear in the [Resource] window displayed from [SCSI Controller] of [Information of server state/constitution] of NEC ESMPRO Manager.

Check the information of resource using "Device Manager" and "System Information (winmsd.exe)" of OS.

### **◆ Storage Devices other than SCSI/IDE Device**

NEC ESMPRO ServerAgentService does not monitor storage devices other than SCSI/IDE devices (e.g., USB device).

### **◆ Configuration changes to the file system monitoring and storage monitoring**

To change the settings, NEC ESMPRO Manager (Ver. 6.05 or later) is required. And set by NEC ESMPRO Manager monitoring interval, hard disk drive pre-failure prediction monitoring enable / disable, file system free space threshold monitoring does not take effect immediately if you change. Setting configuration changes after you have changed in the next monitoring interval of monitoring function of each is enabled.

#### ◆ **Monitoring the failures of the tape device is desired**

NEC ESMPRO ServerAgentService does not monitor the failures of the tape device. If want to conduct monitoring, use backup software or tape monitoring application. Using the event monitoring function of NEC ESMPRO ServerAgentService allows you to monitor the event log of backup software or applications. Also, depending on the SAS controller you are using, information about the tape device may not be displayed under the [Storage] tree of NEC ESMPRO Manager of [Information of server state/constitution] - [Constitution Information].

#### ◆ **Network drive is not displayed of [Information of server state/constitution] of NEC ESMPRO Manager**

The drive connected to network is not displayed under the file system tree in [Information of server state/constitution] of NEC ESMPRO Manager.

#### ◆ **Changing mode of Hard disk drive pre-failure prediction**

Turning on/off the mode of hard disk drive pre-failure prediction, all hard disk drives work in the same mode in either case. Cannot set the mode of each hard disk drive individually.

#### ◆ **Displays the status of the file system free space as " icon : ? (Unknown) "**

When changing the file system configuration (volume addition or deletion etc), the status of the drive may be displayed as " icon:?(Unknown) ". This display indicates that free space monitoring is not covered, and does not indicate that there is a problem with the drive.

#### ◆ **File system information of media insertion**

When you insert media such as a DVD or a floppy disk, NEC ESMPRO Manager as the file system information of [Information server state/constitution] to display information such as volume label and capacity information. So "GB" the smallest unit of information capacity, there is a case to display, "0.0GB" capacity of the media such as a floppy disk capacity is small.

#### ◆ **File system free-space monitoring capacity less than 100MB**

In NEC ESMPRO ServerAgentService, capacity does not support free-space monitoring the file system of less than 100MB. Free space monitoring configuration of such a file system, is "disabled (not monitor)" and from the beginning.

---

## 1.3 I/O Device

---

### ◆ Serial Port

For the models supporting serial ports, note the following. NEC ESMPRO ServerAgentService has multiple features that use serial ports. When using these features, the ports can become insufficient. The serial ports available for each feature are as follows.

- UPS : COM1-10
- APCU : COM1-2
- (ALIVE Maintenance)\* : COM1-9

(\* ) Alive Maintenance uses Remote Access Service.

The available serial ports when using Remote Access Service for Manager Report (TCP/IP Out-of-Band) are as follows.

- Manager Report: COM1-10

Among those above, only the following combination can share the serial ports.

- Alive Maintenance + Remote Access Service used by a user

When one of the features uses the line, the other feature cannot be used.

#### Tips

Manager Report (TCP/IP Out-of-Band), which uses Remote Access Service, can be unable to notify failure information when sharing other serial port. Ensure not to share serial ports.

---

## 1.4 Coexistence with Other Product

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### ◆ Using with AMS (Agentless Management Service)

If you configure SNMP Service for NEC ESMPRO ServerAgentService on the environment on which AMS (Agentless Management Service) is running, several HW events are sent to NEC ESMPRO Manager as SNMP traps from AMS and iLO. In this case, NEC ESMPRO Manager receives two snmp traps for one HW event. So, see one of these two snmp traps.

### ◆ File System monitoring cannot be inherited on the system using EXPRESSCLUSTER

If a failover occurs, the settings of the threshold for the empty space monitoring function and the enable / disable of monitoring of the operating sever are not inherited to the standby server. Make sure to reset the threshold and the enable / disable of monitoring on the standby server.



### ◆ Using with Oracle Products

When Oracle product is installed, the startup of SNMP Service can be changed to "Manual". In such a case, restore it to "Automatic" and configure the appropriate settings according to the instructions of Oracle product.

### ◆ Exclusion of the virus check

Processing may be delayed by virus scanning. Exclude "%ESMDIR%" folder and NEC ESMPRO ServerAgentService processes from the virus scan regardless of the version. See Chapter 4 (3. Services List) about NEC ESMPRO ServerAgentService process.

### ◆ Common module folder

In the related product of NEC ESMPRO Manager and NEC ESMPRO ServerAgentService, the product installed first makes a folder of a common module in its installation folder. If you want to move the folder of a common module, you will need to uninstall all of the related products temporarily.

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## **1.5** Report

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### ◆ Detail information of alert

Detail information of some alert displayed on the alert viewer can be shown as "Unknown".

### ◆ General client report

"General client report" cannot be used.

Though no error appears even if you enable this method, it does not work.

### ◆ Display of Report Settings

When installed on the same machine NEC ESMPRO Manager and NEC ESMPRO ServerAgentService, [Report Settings] will be displayed only to the [Start] menu on NEC ESMPRO Manager.

---

## 1.6 OS Dependence

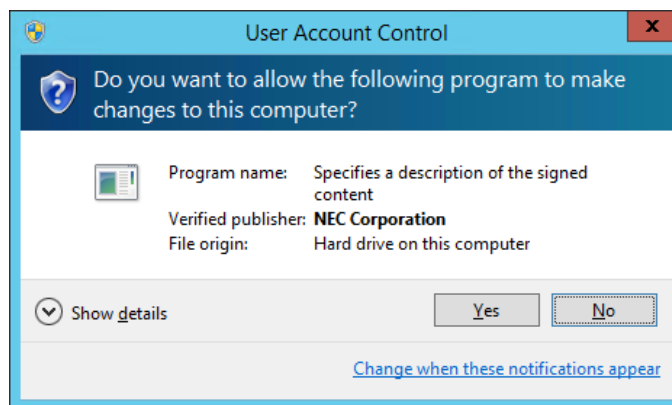
---

### ◆ Notes on Server Core Installation

- "Manager (TCP/IP Out-of-Band)" method cannot be used.
- On Windows Server 2016 or later, a screen of "Combobox", "Radiobutton," and "Checkbox" of Alert Manager setting tool (amsadm.exe) is not indicated right. But you can set all of parameters correctly, and use all Alert Reporting function.

### ◆ User Account Control

User Account Control is turned on, if you start NEC ESMPRO ServerAgentService Control Panel or collect.exe program, [User Account Control] dialog box will appear. Click [Continue] to start the program.



## ◆ Notes on host OS of Virtualization environment

When NEC ESMPRO ServerAgentService detects dangerous trouble information continuous to operate, OS is shutdown in the setting of default. (If it is installed as Non-Service Mode, OS is not made shutdown)

The shutdown not anticipated from Guest OS was generated because the service console shutdown without shutting down Guest OS in the environment to operate Guest OS in the virtualization environment.

Invalidate the shutdown function by the report from NEC ESMPRO ServerAgentService, and shutdown from Guest OS by manual at the failure when the normal termination of Guest OS is valued.

[Setup steps of shutdown function by report]

1. Sign-in to the system with the administrator account.
2. Click [Report Settings] in start menu.  
Displays Alert Manager.
3. Click [Setting]-[Base Setting].
4. Confirms "Shutdown Delay" item of [Other] is the invalid (red).  
When being valid (green), click an icon and change it to invalid (red).
5. Click [OK] Setting Terminate.

---

## **1.7** Others

---

### ◆ Update .NET Framework

NEC ESMPRO ServerAgentService works on the .NET Framework 4 or after version.

Access the following article to check the .NET Framework lifecycle policy of Microsoft.

- Lifecycle FAQ—.NET Framework

<https://learn.microsoft.com/en-US/lifecycle/faq/dotnet-framework>

## ◆ Delete of CIM-Indication Report Setting

If you delete the managed component from NEC ESMPRO Manager, CIM-Indication Report Setting of NEC ESMPRO ServerAgentService is deleted automatically.

But CIM-Indication Report Setting is not deleted in the following case.

- When the management PC on which NEC ESMPRO Manager is installed was removed without deleting the managed component from NEC ESMPRO Manager.
- When you delete the managed component from NEC ESMPRO Manager without being able to communicate with NEC ESMPRO ServerAgentService.

If CIM-Indication Report Setting of NEC ESMPRO ServerAgentService is not deleted, the following matters occur.

- If CIM-Indication Report occurs, the unnecessary packets is sent.
- [Component] of an alert is displayed as {unknown server} on AlertViewer.

\* Coping method

1. Sign-in to the server of NEC ESMPRO ServerAgentService with the administrator account.
2. Run the command prompt by the administrator account.
3. Execute the following command.

```
%EsmDir%tool\ESMDelCim.bat
```

This procedure delete all CIM-Indication Report Setting of NEC ESMPRO ServerAgentService. When NEC ESMPRO ServerAgentService has been registered with different NEC ESMPRO Manager, execute "Check Connection" on NEC ESMPRO Manager. CIM-Indication Report Setting of NEC ESMPRO ServerAgentService is created by executing "Check Connection" on NEC ESMPRO Manager.

## ◆ Fail registration by WS-Man with NEC ESMPRO Manager Ver. 6.00

If registration by WS-Man of NEC ESMPRO Manager Ver. 6.00 is fail, confirm Windows remote management (WinRM) settings.

1. Sign-in to the server of NEC ESMPRO ServerAgentService with the administrator account.
2. Run the command prompt by the administrator account.
3. Execute the following command.  

```
winrm quickconfig -q
```
4. Execute the following command.  

```
winrm get winrm/config/service
```
5. Confirm the following value is "true" or not.  
- Basic value under auth
6. If value to confirm is "false", execute the following command.  

```
winrm set winrm/config/service @{AllowUnencrypted="true"}
```
7. Execute the following command.  

```
winrm get winrm/config/service
```
8. Confirm the following value.  
- AllowUnencrypted
9. By which to use HTTP or HTTPS to connect with NEC ESMPRO Manager, execute the following WinRM command to use NEC ESMPRO ServerAgentService.  
  - If you use HTTPS to connect with NEC ESMPRO Manager;  
See Chapter2 (3.3 HTTPS Setting).  

```
winrm set winrm/config/service @{AllowUnencrypted="false"}
```
  - If you use HTTP to connect with NEC ESMPRO Manager;  

```
winrm set winrm/config/service @{AllowUnencrypted="true"}
```

### ◆ Monitoring component's hardware from NEC ESMPRO Manager

Registering BMC or iLO to NEC ESMPRO Manager and setting up SNMP Alert configuration are required to monitor component's hardware error.

### ◆ Failed in the Auto Registration of NEC ESMRPO ServerAgentService by NEC ESMPRO Manager

See Chapter 2 (3.4 Operations Check), confirm setting of NEC ESMPRO ServerAgentService.

### ◆ Monitoring S2D Disk

The S2D disk monitoring function will register event logs, report to NEC ESMPRO Manager, and carry out Express Reports when the "Usage" of the S2D disk mounted on the local server (node) is set to "Retired". The S2D disk monitoring function also works if the "Usage" is set to "Retired" when replacing the S2D disk during hardware maintenance. In order to halt such reports during maintenance that involves S2D disk "Usage" operations, temporarily stop the monitoring service (ESMS2DMonitor).

- Temporarily stop the monitoring service

1. Before maintenance, select [ESMS2DMonitor] from the list of services above and click "Stop" or "Pause" to stop the service.
2. After completing the maintenance, click "Start" or "Resume" to start the service.

### ◆ WinRM settings

By running winrm quickconfig -q, The following registry will be registered and UAC remote restrictions will be disabled.

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System
Name : LocalAccountTokenFilterPolicy [REG_DWORD]
Data : 1
```

See the following site about LocalAccountTokenFilterPolicy Registry.

<https://learn.microsoft.com/en-us/windows/security/identity-protection/access-control/local-accounts>

'Enforce local account restrictions for remote access'

### ◆ Restart after Hardware trouble occurs

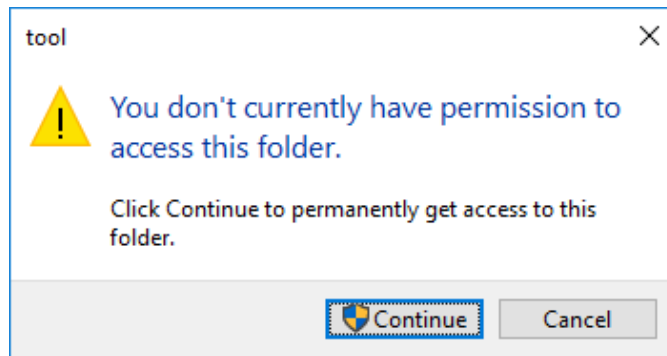
When abnormality of Hardware is detected, OS is shutdown.

When OS is restarted without action/recovering trouble after shutdown, shutdown is done just after the restart.

### ◆ Run [About NEC ESMPRO] tool

When click [About NEC ESMPRO] on [NEC ESMPRO ServerAgentService] from Start menu (or Apps Start window), You may get the error 'The item referred to by this shortcut cannot be accessed. You may not have the appropriate permissions.'

In that case, double-click the installation destination Tool (C:\ESM\Tool) folder in Explorer and click [Continue] in the following pop-up that appears.



After clicking [Continue], you can start the About tool by clicking [About NEC ESMPRO] in the start menu.

### ◆ When Performing Duplex System Management

To perform duplex system management by EXPRESSCLUSTER, install NEC ESMPRO ServerAgentService on a local disk on both the operating and standby servers. The installation procedure for NEC ESMPRO ServerAgentService is same as a normal installation, except that install on two servers.

## 2. Port Number / Protocol List

NEC ESMPRO ServerAgentService uses the following port numbers and communication protocols.

To use NEC ESMPRO ServerAgentService with Windows Firewall enabled, open the required ports.

### [NEC ESMPRO Manager <-> NEC ESMPRO ServerAgentService]

Function	NEC ESMPRO Manager	Direction	NEC ESMPRO ServerAgentService	Remarks
Auto Registration Server Monitoring (WS-MAN/HTTP)	Auto-assignment	-> <-	5985/tcp	HTTP
Auto Registration Server Monitoring (WS-MAN/HTTPS)	Auto-assignment	-> <-	5986/tcp	HTTPS
SNMP report to Manager	162/udp	<-	Auto-assignment	SNMP-trap
TCP/IP report to Manager	31134/tcp	<- ->	Auto-assignment	
CIM-Indication report to Manager	6736/tcp (configurable)	<-	Auto-assignment	
(CIM-Indication report setting)*	Ping (ICMP)	-> <-	-	Ping (ICMP)

(\*) WS-Man is used for CIM-Indication setting. But Ping communication is needed.

### [Express Report Service <-> Mail Server]

Function	NEC ESMPRO ServerAgentService	Direction	Main Server	Remarks
Express Report Service (Internet Mail)	Auto-assignment	->	25/tcp	SMTP
		<-		
		<-	110/tcp	(POP3)*
		->		

(\*) Only when "POP before SMTP" is used.

### [Express Report Service <-> Web Server]

Function	NEC ESMPRO ServerAgentService	Direction	Web Server	Remarks
Express Report Service (HTTPS)	Auto-assignment	->	443/tcp	(HTTPS)*
		<-		

(\*) If HTTPS port (443) is closed, Change the firewall setting, open port 443, set up the connection state of https.

- In case of two-way protocol, upper arrow shows that connection starts, and lower arrow shows that connection turns.
- The port number used by TCP/IP report to Manager or Express Report Service can be changed in set screen of report.
- In case of port number unknown, unused port is used to start connection.



## 3. Services List

NEC ESMPRO ServerAgentService uses the following services.

Services	Process name	Start-up	Function	Remarks
Alert Manager Main Service	AMVMain.exe	Automatic (Delayed Start)	Manage Various trouble reports.	
Alert Manager Socket(S) Service	amvscks.exe	Manual	Report to Manager by using TCP/IP.	When either of "Manager (TCP/IP In-Band) and Manager (TCP/IP Out-of-Band)" is set to valid (green) at Base Setting Window, the service is started. When both settings are set to invalid (red), the service is stop.
ESMCommonService	ESMCommon.exe	Automatic (Delayed Start)	Enable NEC ESMPRO monitoring function.	
ESM System Management Service	esmsmsrv.exe	Automatic	Monitors hardware log	IPMI model and iLO model.
ESMS2DMonitor	esms2d.exe	Manual	Monitors failures of disk unit of S2D.	

---

## 4. Starting and Stopping Services

---

To stop or start services, perform the following procedure.

On some model of server, some service cannot exist.

Non-Service Mode does not register service.

[order]	[stopping services]	[starting services]
1.	ESMCommonService	ESMCommonService
2.	ESM System Management Service	ESM System Management Service
3.	(ESMS2DMonitor)*1	(ESMS2DMonitor)*1
4.	(Alert Manager ALIVE(S) Service)*2	SNMP Service
5.	Alert Manager Main Service	(Alert Manager ALIVE(S) Service)*2
6.	Alert Manager Socket(S) Service	Alert Manager Main Service
7.	SNMP Service	Alert Manager Socket(S) Service

(\*1) S2D in your environment, but only if you are starting ESMS2DMonitor.

(\*2) Alert Manager ALIVE(S) Service is the service registered only when Express Report Service or NEC ESM PRO Manager is installed.

---

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Version 2.0, January 2004

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```
# PLY (Python Lex-Yacc)                               Version 3.11

[[[Build Status]](https://travis-ci.org/dabeaz/ply.svg?branch=master)](https://travis-ci.org/dabeaz/ply)

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### A. HISTORY OF THE SOFTWARE

=====

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <http://www.cwi.nl>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see

<https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

All Python releases are Open Source (see <http://www.opensource.org> for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release	Derived from	Year	Owner	GPL-compatible? (1)
0.9.0 thru 1.2		1991-1995	CWI	yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
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2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2 and above	2.1.1	2001-now	PSF	yes

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#### **python-iloest-library**

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## six

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## urlparse2

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NEC ESMPRO ServerAgentService Ver. 2.5  
Installation Guide (Windows)

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