NEC ESMPRO Manager Ver. 6
Installation Guide (Windows)

Chapter 1 General Description

Chapter 2 Installation

Chapter 3 Uninstallation

Chapter 4 Appendix

E6.66-01-STD
© NEC Corporation 2024

Contents

Contents 2

Conventions Used in This Document 3
Notations used in the text 3
Abbreviations of Operating Systems 4

Trademarks 5

Warnings and Additions to This Document 6
Latest editions 6
External Libraries 7

General Description 12

1. Introduction 13

2. About Download of Latest NEC ESMPRO 14

3. System Requirements 15
3.1 PC for Management 15
3.2 Managed server 17
3.3 Requirements for connection between PC for Management and managed server 19
3.4 Notes on managed servers and network devices 20

Installation 22

1. Before Installation 23

2. Installation 27
2.1 Installation procedure 27
2.2 Notes on installation 35

3. After Installation 36

Uninstallation 48

1. Uninstallation 49
1.1 Uninstallation procedure 49
1.2 Notes on Uninstallation 51

Appendix 52

1. Notes 53
1.1 NEC ESMPRO Manager 53
1.2 NEC ExpressUpdate 69
1.3 Managed Servers 70
1.4 BMC Configuration 77
1.5 Web client 79

2. Port numbers / Protocols 81

3. Services 86

4. Procedure to disable the Windows application setting 90

Conventions Used in This Document

Notations used in the text

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

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

Abbreviations of Operating Systems

Windows Operating Systems (OS) 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
Windows 11	Windows 11 Pro 64-bit Edition
Windows 10	Windows 10 Pro 64-bit Edition

Trademarks

EXPRESSCLUSTER is a registered trademark of NEC Corporation.

Microsoft, Windows, Windows Server are registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.

VMware, VMware ESXi are registered trademarks or trademarks of VMware, Inc. in the United States and other countries.

Intel and Intel vPro are registered trademarks or trademarks of Intel Corporation in the United States and other countries.

All other product, brand, or trade names used in this publication are the trademarks or registered trademarks of their respective trademark owners.

Warnings and Additions to This Document

1. Unauthorized reproduction of the contents of this document, in part or in its entirety, is prohibited.
2. This document is subject to change at any time without notice.
3. Do not make copies or alter the document content without permission from NEC Corporation.
4. If you have any concerns, or discover errors or omissions in this document, contact your sales representative.
5. Regardless of article 4, NEC Corporation assumes no responsibility for effects resulting from your operations.
6. The sample values used in this document are not the actual values.

Keep this document for future reference.

Latest editions

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.

External Libraries

This product contains libraries (“external libraries”) provided by the third party suppliers ("suppliers"). Assume and agree these libraries' license documents and NOTICE files before using this product.

License documents and NOTICE files of external libraries are stored in the following folders:

*<The folder in which this product is installed>¥ESMWEB¥wbserver

*<The folder in which this product is installed>¥ESMWEB¥wbserver¥webapps¥axis2¥WEB-INF¥lib

*<The folder in which this product is installed>¥ESMWEB¥wbserver¥webapps¥esmpro¥WEB-INF¥lib

* LICENSE under the<The folder in which this product is installed>¥ESMWEB¥java¥r1¥legal

If the external libraries require to include their source code with this product, see the folder below.

a) Downloaded NEC ESMPRO Manager setup program
   ¥SM666_E¥MANAGER¥SRC

b) NEC ESMPRO Manager setup program in EXPRESSBUILDER
   <revision folder>
   (¥tools)¥win¥ESMPRO¥EN¥MANAGER¥EXPRESSBUILDER7_02091000_xxx.zip¥MANAGER¥SRC
   in EXPRESSBUILDER (xxx:hash value)

- As for <revision folder>, confirm the number in the parenthesis of the version displayed on the lower right of Autorun Menu.
  For example, if the version is "Version 7.10-020.05 (024)", then <revision folder> is 024.
- If Autorun Menu does not launch, double-click ¥autorun¥dispatcher_x64.exe from EXPRESSBUILDER.
- If the model selection window is displayed, select the model which you are using.

External Libraries are listed in "External Libraries and their copyright."

Notwithstanding any of the terms in the Agreement or any other agreement you may have with NEC:

a) "Suppliers" provide the libraries WITHOUT WARRANTIES OF ANY KIND and, such Suppliers DISCLAIM ANY AND ALL EXPRESS AND IMPLIED WARRANTIES AND CONDITIONS INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF TITLE, NON-INFRINGEMENT OR INTERFERENCE AND THE IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE EXTERNAL LIBRARIES;

b) In no event are the suppliers liable for any direct, indirect, incidental, special, exemplary, punitive or consequential damages, including but not limited to lost data, lost savings, and lost profits, with respect to the external libraries; and,

c) NEC and the suppliers are not liable to you, and will not defend, indemnify, or hold you harmless for any claims arising from or related to the external libraries.

♦ External Libraries and their Copyright

activation	Copyright©Sun Microsystems, Inc.
annogen	Copyright©The Codehaus.
antlr	Developed by jGuru.com, http://www.ANTLR.org and http://www.jGuru.com, Copyright©Terence Parr
Apache Axiom	Copyright©The Apache Software Foundation
Apache Axis	Copyright©The Apache Software Foundation
Apache Axis2	Copyright©The Apache Software Foundation
Apache Commons BeanUtils	Copyright©The Apache Software Foundation
Apache Commons BSF	Copyright©The Apache Software Foundation
Apache Commons Chain	Copyright©The Apache Software Foundation
Apache Commons Collections	Copyright©The Apache Software Foundation
Apache Commons Digester	Copyright©The Apache Software Foundation
Apache Commons Discovery	Copyright©The Apache Software Foundation
Apache Commons Lang	Copyright©The Apache Software Foundation
Apache Commons Validator	Copyright©The Apache Software Foundation
Apache commons-codec	Copyright©The Apache Software Foundation
Apache commons-fileupload	Copyright©The Apache Software Foundation
Apache commons-httpclient	Copyright©The Apache Software Foundation
Apache commons-io	Copyright©The Apache Software Foundation
Apache commons-logging	Copyright©The Apache Software Foundation
Apache Derby	Copyright©The Apache Software Foundation
Apache geronimo-activation	Copyright©The Apache Software Foundation
Apache geronimo-annotation	Copyright©The Apache Software Foundation
Apache geronimo-java-mail	Copyright©The Apache Software Foundation
Apache geronimo-stax-api	Copyright©The Apache Software Foundation
Apache httpcore	Copyright©The Apache Software Foundation
Apache httpcore-nio-4.0	Copyright©The Apache Software Foundation
Apache HttpMime	Copyright©The Apache Software Foundation
Apache Log4J	Copyright©The Apache Software Foundation
Apache Neethi	Copyright©The Apache Software Foundation
Apache Rampart	Copyright©The Apache Software Foundation
Apache Struts	Copyright©The Apache Software Foundation
Apache Tiles	Copyright©The Apache Software Foundation
Apache Tiles request	Copyright©The Apache Software Foundation

Apache Tomcat	Copyright©The Apache Software Foundation
Apache Woden	Copyright©The Apache Software Foundation
Apache WSS4J	Copyright©The Apache Software Foundation
Apache Xalan	Copyright©The Apache Software Foundation
Apache Xerces	Copyright©The Apache Software Foundation
Apache XML Schema	Copyright©The Apache Software Foundation
Apache XML Security	Copyright©The Apache Software Foundation
Apache XMLBeans	Copyright©The Apache Software Foundation
Apache xml-commons	Copyright©The Apache Software Foundation
asm	Copyright©INRIA, France Telecom
asm-attrs	Copyright©INRIA, France Telecom
Autotag - Core runtime	Copyright©The Apache Software Foundation
backport-util-concurrent	Copyright©Distributed Computing Laboratory, Emory University
bcprov-jdk	Copyright©The Legion Of The Bouncy Castle (http://www.bouncycastle.org)
BeanShell	Copyright©Patrick Niemeyer
beanvalidation-api	Copyright©Patrick Niemeyer
c3p0	Copyright©Machinery For Change, Inc.
cglib	Copyright©The Apache Software Foundation
dom4j	Copyright©MetaStuff, Ltd.
DWR	Copyright©Joe Walker
ehcache	Copyright©Terracotta
EZMorph	https://kordamp.org/ezmorph/
Flot	Copyright©IOLA and Ole Laursen
Force Redraw	Copyright©Pascal Beyeler
FreeMarker	Copyright©The Apache Software Foundation
Hibernate	Copyright©Red Hat Middleware, LLC.
imrsdk	Copyright© Intel Corporation
jackson	Copyright©2009-2011 FasterXML, LLC
jalopy	Copyright©Marco Hunsicker.
Java Annotation Indexer	https://smallrye.io
Java Service Launcher for Windows	http://www.roeschter.de/index.html
JavaServer Pages Standard Tag Library (JSTL)	Copyright©The Apache Software Foundation

Javassist	Copyright©1999- Shigeru Chiba.
jaxb-api	Copyright©Sun Microsystems, Inc.
jaxb-impl	Copyright©Sun Microsystems, Inc.
jaxb-xjc	Copyright©Sun Microsystems, Inc.
jaxen	Copyright©The Werken Company.
JAX-RPC	http://java.net/projects/jax-rpc
JAX-WS	Copyright©Sun Microsystems, Inc.
JBoss Logging	Copyright©community.jboss.org
jboss-transaction-api_1.2_spec	Copyright©2014, Oracle and/or its affiliates.
JCIFS	Copyright©The JCIFS Project
jettison	Copyright©Envoi Solutions LLC
jibx-bind	Copyright©Dennis M. Sosnoski
jibx-run	Copyright©Dennis M. Sosnoski
Jline	Copyright©Marc Prud'hommeaux
JNA	https://github.com/twall/jna#readme
JQuery	Copyright©John Resig
JQuery UI	Copyright ©2011 Paul Bakaus, http://jqueryui.com/
JRE	Copyright©Amazon.com Inc.
JSch	Copyright©JCraft, Inc.
JSONIC	Copyright©Hidekatsu Izuno
JSON-lib	https://kordamp.org/json-lib/
jsr173-api	Copyright©The Apache Software Foundation
jta	Copyright©Sun Microsystems, Inc.
KVMLib	Copyright©Intel Corporation
libiconv	Copyright©Free Software Foundation, Inc.
libxml2	Copyright©Daniel Veillard. All Rights Reserved.
mail	Copyright©Sun Microsystems, Inc.
mimepull	Copyright©Sun Microsystems, Inc
msvcp90	Copyright©Microsoft
msvcr90	Copyright©Microsoft
MXParser	Copyright©2020 XStream committers.
Newtonsoft.Json	Copyright©James Newton-King
Objectify Struts2 Tags	Copyright©2009 Steve Chaloner
OGNL - Object Graph Navigation Library	Copyright©OpenSymphony

OpenSAML	Copyright©Internet2.
prototype.js	Copyright©Sam Stephenson
sblim cim-client	http://sourceforge.net/apps/mediawiki/sblim/index.php?title=CimClient
SLF4J	Copyright©2004-2022 QOS.ch
SNMP4J	Copyright©Frank Fock.
SOAP with Attachments API for Java (SAAJ)	Copyright©Sun Microsystems, Inc
sortable	Copyright©Stuart Langridge
stax-ex	Copyright©Sun Microsystems, Inc
Table Drag and Drop JQuery plugin	Copyright©Denis Howlett <denish@isocra.com>
Treeview JQuery plugin	Copyright©2007 Jörn Zaefferer
VMware vSphere Management SDK	https://developer.vmware.com/sdk/vsphere-management
WISEMAN	Copyright©Sun Microsystems, Inc.
WSDL4J	Copyright©IBM Corp
wstx	Copyright©The Codehaus Foundation
Xstream	Copyright©2006-2020, XStream Committers
zlib	Copyright©Jean-loup Gailly and Mark Adler

NEC ESMPRO Manager Ver. 6

1 General Description

This chapter explains NEC ESMPRO Manager.

1. Introduction

2. About Downloading Latest NEC ESMPRO

Describes about Downloading Latest NEC ESMPRO.

3. System Requirements

Describes about the need environment of NEC ESMPRO Manager.

I. Introduction

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 you want to know operations of OS, or if there is any unclear point, see the online help of each OS.

NEC ESMPRO Manager is a software designed for reducing operational management costs by remotely managing servers.

NEC ESMPRO Manager has the following features.

Note Some models of managed servers may not support all functions. See "Managed Server" at "System Requirements".

- **Rebuilding even if OS on the managed server has failed.**

  Even if OS on the managed server is inoperable (in the state of OS's stall, BIOS Power On Self Test (POST), or DC OFF), NEC ESMPRO Manager allows you to collect the managed server's hardware information and control the power supply.

- **Operation while viewing the managed server's screen.**

  While key-in and mouse operations are enabled, the managed server's screen can be viewed on the remote browser at any time during POST just after the managed server is turned ON and even after Windows or Linux has been booted.

  Note After Windows or Linux starts up, login to EXPRESSSCOPE Engine series, key input and mouse operation are possible from remote KVM.

- **Operation of more than one managed server at a time.**

  By specifying a group, you can provide power control or change a setting for managed servers through a single operation.

- **Specification of remote operation time.**

  The managed server can be turned OFF or information can be collected at pre-specified time, so NEC ESMPRO Manager is available for nighttime batch processing.

- **Easy operation through the Internet.**

  The managed server can be operated with a web browser. If you use Internet's standard Secure Socket Layer (SSL) for NEC ESMPRO Manager, you enable secure remote operation from an external network.

- **Update of firmware and software on the managed server. (NEC ExpressUpdate)**

  NEC ExpressUpdate is the function that manages versions of modules like firmware and software on the managed server and that updates the modules.

  NEC ExpressUpdate can download the update packages automatically for the managed server, and install them without stopping the system.

2. About Download of Latest NEC ESMPRO

See the following URL for NEC ESMPRO information. You can download the latest version of NEC ESMPRO from URL.

http://www.58support.nec.co.jp/global/download/index.html

3. System Requirements

NEC ESMPRO Manager requires the following hardware and software:

3.1 PC for Management

Important

About product license
NEC ESMPRO Manager can be used on a single OS per license.

• Hardware

- Machine	A computer on which OS supported by NEC ESMPRO Manager can be installed
- CPU	2-core CPU or higher on a CPU that meets the system requirements for OS installations supported by NEC ESMPRO Manager. [Recommended CPU] Intel Xeon processor 4-core CPU, or CPU with equivalent or higher specs.
- Memory	Memory required for running OS plus 4GB or more
- Free hard disk space	1GB or more

• Software

- OS *1

Windows Server 2022
Windows Server 2019
Windows Server 2016
Windows 11
Windows 10
VMware ESXi 7 (Guest OS)
VMware ESXi 8 (Guest OS)
Windows Hyper-V (Guest OS)

*1 Supports only 64-bit Edition

Important

- Before installing NEC ESMPRO Manager, the following software is required on the PC for Management.
  .NET Framework 4 and above , Versions supported by Microsoft
- NEC ESMPRO Manager is available on neither Server Core, nor Minimal Server Interface.

- Web client

Internet Explorer 11.0

Firefox ESR 115 (Windows / Linux)

Important

- Microsoft Edge is not supported.
- 1024 by 768 pixels or more are recommended as a screen area in display properties.
- The browser must be latest status such as applying a patch.
  If the status is not updated such as preinstalled, some pages may not be displayed correctly.

• Number of managed servers

Addition of server licenses permits a single NEC ESMPRO Manager to manage a maximum of 1000 servers. In case that you register VMware ESXi servers to NEC ESMPRO Manager, number of managed maximum servers is 500 servers.

3.2 Managed server

A server to be managed by NEC ESMPRO Manager is as follows:

- Baseboard Management Controller (BMC)

  About the managed server integrated BMC, see "Appendix D Managed Components Summary" in " NEC ESMPRO Manager Ver.6 Setup Guide".

  Note The required environment varies depending on the connection type with the managed server. See "Chapter1 3.3 Requirements for Connection between PC for Management and Managed Server".

- Integrated Lights-Out (iLO)

  About the managed server integrated iLO, see "Appendix D Managed Components Summary" in "NEC ESMPRO Manager Ver.6 Setup Guide"

- NEC ESMPRO Agent

  If you use Simple Network Management Protocol (SNMP) monitoring function, the following software is need on managed server. (No matter if BMC is integrated or not.)

  - NEC ESMPRO Agent (Ver. 4.1 or later)
  - The following ft server is supported.

    Express5800/ft server [R320c-M4 / R320c-E4 / R320d-M4 / R320e-M4 / R320e-E4 / R320f-M4 / R320f-E4 / R310g-E4 / R320g-M4 / R320g-E4 / R320h-M4 / R320h-E4]

- NEC ESMPRO ServerAgentService

  If you use WS-Management monitoring function, the following software is need on managed server. (No matter if BMC is integrated or not.)

  - NEC ESMPRO ServerAgentService (Ver. 1.0 or later)

- NEC ExpressUpdate Agent or EXPRESSSCOPE Engine 3

  If you use NEC ExpressUpdate function that manages versions of modules like firmware and software, the following software or firmware is required on the managed server.

  - NEC ExpressUpdate Agent
  - EXPRESSSCOPE Engine 3

- VMware ESXi

  If you manage the managed server installed ESXi, the following ESXi is required on the managed server.

  - VMware ESXi7.0 / 7.0u1 / 7.0u2 / 7.0u3
  - VMware ESXi8.0 / 8.0u1 / 8.0u2

Note The management of VMware ESXi8 is supported ESMPRO/ServerManager Ver.6.61.
When the VMware ESXi7 server registered on NEC ESMPRO Manage is updated by VMware ESXi8, refer to "10.4 update to VMware ESXi8" of NEC ESMPRO Manager Ver.6 Setup Guide.

- RAID system

  If you manage RAID system using Universal RAID Utility on the managed server, the following software is required on the managed server.

  - Universal RAID Utility Windows Edition (Ver4.0 or later)
  - Universal RAID Utility Linux / VMware ESX Edition (Ver4.0 or later)

  If you manage RAID system on the managed server installed ESXi, the following ESXi is required on the managed server.

  In such a case, Universal RAID Utility is not required on the managed server.

  - VMware ESXi7.0 or later

- vPro

  About the managed server based on vPro, see "Appendix D Managed Components Summary" in "NEC ESMPRO Manager Ver.6 Setup Guide".

- ExpEther

  NEC ESMPRO Manager needs the following software to manage the ExpEther board and the ExpEther I/O expansion unit.

  - ExpEther Manager
  - ExpEtherConfig tool

  ExpEther Manager must connect to the network which has been connected to NEC ESMPRO Manager, or ExpEther Manager must be installed on the server on which NEC ESMPRO Manager has been installed.

Note

- If Windows Firewall is enabled, communication will be interrupted.
  See Appendix "Chapter4 2 Port numbers / Protocols" and open the required ports.
- NEC ESMPRO Manager and a managed server needs to be the same OS language.

3.3 Requirements for connection between PC for Management and managed server

Provide an environment in accordance with the connection type to be used.

- **LAN connection**
  - **TCP/IP network**

Note

- Do not use a cross cable to connect PC for Management and managed server.
- If you use the managed server integrated BMC, LAN port that BMC uses depends on the type of BMC. Some BMC uses standard LAN port. Other BMC uses a Management LAN Port. There are 2 types of managed servers on that BMC uses standard LAN port to connect with NEC ESMPRO Manager: one type is permitted to use only LAN1 port, and the other type is permitted to use both LAN1 and LAN2 ports. See "Appendix D Managed Servers Summary" in "NEC ESMPRO Manager Ver.6 Setup Guide".

- **Modem connection** (Only available for BMC connection)
  - **Phone line**
  - **Modem**

Use a modem that supports the following functions:

Baud rate	:	19.2Kbps
Data bits	:	8bit
Parity	:	None
Stop bits	:	1bit
Flow control	:	Hardware (CTS/RTS)

Note

- Use the modem recommended for NEC Express 5800 series on the managed server.
- Connect the modem to the serial port 2 on the managed server.

  - **Other Information**

When BMC send alert to PC for Management via modem, it is necessary the following:

- Dial-up router or PPP server

- **Direct connection** (Only available for BMC connection)
  - **RS-232C cross cable**

The serial port for direct connection on NEC ESMPRO server. NEC ESMPRO Manager must be set following on OS.

Bits per speed	: Be set a same value with a value of BMC configuration on a managed server. The default value of BMC configuration is 19.2Kbps.
Data bits	: 8bit
Parity	: None
Stop bits	: 1bit
Flow control	: Hardware (CTS/RTS)

Important

- Do not use an interlink cable.
- Connect RS-232C cross cable to serial port 2 on the managed server.
- Some models of managed servers do not permit use of any RS-232C cross cable other than the specified one. See Maintenance Guide provided with the server.

3.4 Notes on managed servers and network devices

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

- **Use of network switch / router**

  If the managed server installed BMC that uses a standard LAN port or loaded Advanced Remote Management Card, and there is network switch / router between PC for Management and the managed servers, set the network switch / router to receive Gratuitous ARP. See each document of the switch / router about how to set it.

  If Gratuitous ARP cannot be received, managed server that is power-off status is not connected.

- **Use of a layer-2 / layer-3 switching hub**

  Set "Disable" for Spanning Tree Protocol (STP) function of the switching hub or STP of the port to which a managed server is connected.

  Set "Enable" for the auto-negotiation function of the port to which a managed server is connected.

- **Use of DHCP**

  In case that BMC on the managed server uses a standard LAN port, communication between NEC ESMPRO Manager and System BIOS or BMC is not compatible with a DHCP environment.

  Be sure to use a fixed IP address with NEC ESMPRO server in which NEC ESMPRO Manager is to be installed.

  To use a managed server in a DHCP environment, start DianaScope Agent or NEC ESMPRO Agent Extension.

- **Setting of Teaming for LAN that DianaScope Agent or NEC ESMPRO Agent Extension uses with OS (providing redundancy or multiplexing with multiple network adapters) on the managed server installed BMC that uses a Management LAN port**

  If the teaming setting is made available for LAN port that DianaScope Agent uses on the managed server installed BMC that uses a Management LAN port, see "Appendix B B.2 On the managed server that BMC uses a Management LAN port" in "NEC ESMPRO Manager Ver.6 Setup Guide".

- **Change of the hardware of a default gateway or an alert receiver**

  In case that there is a gateway between a PC for Management and a managed server, re-configure BMC on the managed server after the change the hardware of the gateway. In case that there is not gateway between an alert receiver and a managed server, re-configure BMC on the managed server after the change the hardware of the alert receiver. BMC on the managed server can know MAC address of the new hardware by setting BMC configuration.

- **Use of a dialup router or a PPP server**

  If an alert receiver via modem uses Windows Remote Access Service, select "Allow any authentication including clear text" about the encryption on the Windows Remote Access Service properties.

- **Restrictions on use of the standard serial port 2 (COM2)**

  The standard serial port 2 (COM2) on a managed server cannot be used for connecting another device in the following cases because BMC occupies the serial port 2.

  - The managed server compatible with Serial over LAN (SOL) and set enable on following BMC Configuration items:

    "Remote control (WAN/Direct)"

    "Redirection (LAN)"

    "Redirection (WAN/Direct)"
  - Connection via modem or direct connection has been made.
  - Direct connection has been set in BMC configuration information. (Even if NEC ESMPRO Manager and managed server are not connected, BMC occupies the serial port 2 (COM2).)

  Note See "Appendix D Managed Components Summary" in "NEC ESMPRO Manager Ver.6 Setup Guide" to confirm whether that your server supports SOL.

NEC ESMPRO Manager Ver. 6

2 Installation

This chapter explains installation of NEC ESMPRO Manager.

1. Before Installation

Describes about necessary setting before NEC ESMPRO Manager installation.

2. Installation

Describes about installation procedure of NEC ESMPRO Manager.

3. After Installation

Describes about necessary setting after NEC ESMPRO Manager installation.

I. Before Installation

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

♦ Confirming NEC ESMPRO Manager version

Use the version or later of NEC ESMPRO Manager which is stored in NEC EXPRESSBUILDER for the managed component when you manage the managed component.

Tips

The latest version is recommended.
You can download the latest version of NEC ESMPRO Manager from the URL.
http://www.58support.nec.co.jp/global/download/index.html

♦ Confirming the disk space required for operation

Prepare sufficient free space in the folder you specified at installation. By default, the installation folder is "¥Program Files (x86)¥ESMPRO" on the system drive.

The following files are added at operation. See them before you calculate the required disk space.

- About 10MB as a management area.
- About 10KB per server.
- Maximum of 60KB per IPMI information collection of a server.
- About 1KB per alert.
- About 3KB per power consumption measurement of a server.
  (Reading Interval = 60 seconds, Last Reading Period = 1 hour)

♦ Setting access permissions

When installing NEC ESMPRO Manager in an already existing folder, NEC ESMPRO Manager will not operate unless the access permissions required for NEC ESMPRO Manager operation have been set.

When installing NEC ESMPRO Manager in a folder that does not exist, the following access permissions are set by the installer:

Administrators Full Control(All)(All)
Everyone Read(RX)(RX)
SYSTEM Full Control(All)(All)

♦ Remote installation of NEC ESMPRO Manager

When installation of NEC ESMPRO Manager completes, you need to reboot the system.

Careful attention is needed to install the program in the environment where reboot cannot be performed from the Start menu, such as on Remote Desktop of Windows.

Tips

OS can be restarted by running the following command at Command Prompt:
Ex.) When you want to restart the system immediately: shutdown -r -t 0

♦ Installation for multisession terminal server or Remote Desktop Server access

Perform the following operation to install NEC ESMPRO Manager for multisession Terminal Server access on Windows Server:

- Use [Install Application on Remote Desktop Server] in [Control Panel].

Important If you do not follow the procedure above, a message indicating the occurrence of the error during the setup is displayed and the setup stops.

♦ If an older version of NEC ESMPRO Manager or DianaScope Manager has already been installed

- If NEC ESMPRO Manager Ver. 5.0 or later has already been installed, you can update it to this version. If the version older than the above or DianaScope Manager has been installed, uninstall it before installation.
- If you update it, the registered information of old NEC ESMPRO Manager is inherited.
  But, an icon of alert only managed component is not inherited.
  In this case, please register a component from the “Manual Registration” – “Alert Only Management” after update installation.
  For detailed procedure, see “Chapter11 Setup for the Alert only Component” in “NEC ESMPRO Manager Ver.6 Setup Guide”.
  If you register a component as “Alert Only Management”, note the following.
  - If an icon of alert only managed component is already registered manually on Operation Window, please delete the icon of alert only managed component on Operation Window before update installation.
    If you execute update installation without deleting the icon, the information of component may be unsuitable.

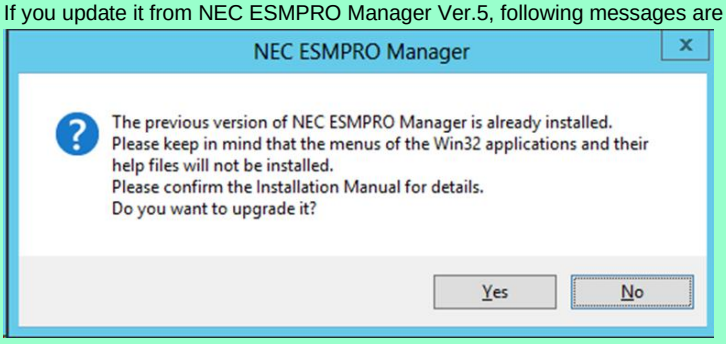
  If BMC Management is “Registered <enabled>” and the icon is registered manually (BMC IP address is set) on Operation Window, it is not necessary to register a component by “Alert Only Management”.
  Execute “Check Connection” on “Connection setting” of the component.
- If “DianaScope support” of EM Card is not enabled and the EM Card is managed on Operation Window of NEC ESMPRO Manager Ver.5, after update installation you should execute the following procedure to manage EM Card on NEC ESMPRO Manager.
  - Set “DianaScope support” of EM Card to “enable”.
  - Execute “Check Connection” on NEC EXMPRO Manager.

  For more information, see chapter6 EM Card and Chassis Management of “NEC ESMPRO Manager Ver.6 Setup Guide”.

- NEC ESMPRO Manager Ver.6 does not support the windows application (ex:Operation Window, etc) which was being supported by NEC ESMPRO Manager Ver.5. Therefore, a short cut of windows application on a start menu is not registered.
  (But it may be registered depend on the installation of a relative product.)

Note

If you update it from NEC ESMPRO Manager Ver.5, following messages are displayed.



And NEC ESMPRO Manager Ver.6 does not manage NEC ESMPRO Agent of less than Ver.4.1.
If server icons of NEC ESMPRO Agent of less than Ver4.1 are registered to Windows application, delete it manually before updating NEC ESMPRO Manager Ver.6.

[Some functions of Windows application that do not be used from NEC ESMPRO Manager Ver.6]

If you use following functions, these setting can not be used. Please invalid these functions before updating. (There is also no alternate function in Ver.6.)
For details, see "Chapter4 4. Procedure to disable the Windows application setting ".

- Automatic Data Collection
- Remote Manager
- Alert driven status control
- Alert Filter
- Script Component (Disabling this function is unnecessary)

Important

In NEC ESMPRO Manager Ver.6.02 or later, "Alert driven status control" can be used.
In NEC ESMPRO Manager Ver.6.17 or later, “Statistics Data Collection” that provides same function as “Automatic Data Collection” can be used.
If you use "Alert driven status control", go through the following above steps to delete it manually before updating NEC ESMPRO Manager.
Setting values of it are not inherited.

[Some functions of Windows application that are also used in NEC ESMPRO Manager Ver.6]

Setting values of following functions are inherited.

- Trap Transmission
- AlertLogAutoSave Settings

  But following functions are not inherited.

  - File Name
  - Fix the current filename
  - Maximum number of files:
  - Output items(Severity, Summary, Type, Manager, Component, Address, Generated, Received, Source, EventID, Detail, Action)
  - Output a Header

Important

The file created by alert log auto save function is created to the following path from NEC ESMPRO Manager Ver.6.
<The folder in which NEC ESMPRO Manager is installed>
¥ESMWEB¥wbserver¥webapps¥esmpro¥WEB-INF¥service¥alertlog
And all alert logs created in NEC ESMPRO Manager Ver.5 are copied to the above folder.
But if Log file directory has been changed from default directory in NEC ESMPRO Manager Ver.5, alert logs are not copied to the above folder. If you take over the alert logs, copy it manually.

♦ Changing language settings in Windows (ex. In the case of using MUI)

When changing the language settings in Windows, make sure "Japanese" is not selected in the settings below. "Japanese" is not supported, and therefore installation will fail.

You must also make consistent language settings, that is, choose the same language (except Japanese) in the settings below.

Control Panel - Language - Change date, time, or number formats - [Formats] tab
- [Location] tab
- [Administrative] tab

Important

Do not change language settings after installation of NEC ESMPRO Manager.
Otherwise it does not work properly.

2. Installation

This page describes fresh installation and update installation of NEC ESMPRO Manager.
Be sure to read "Before Installation" and install this product.

2.1 Installation procedure

1. **Sign-in (Log on) to the system with the built-in Administrator (or an account having administrative privilege).**
2. **Execute NEC ESMPRO Manager Setup.**

   If you install downloaded NEC ESMPRO Manager, go to step 3.

   If you install NEC ESMPRO Manager by using EXPRESSBUILDER, start EXPRESSBUILDER Auto run Menu. The way of starting the Autorun Menu is different depending on the server models.
   If the model to which EXPRESSBUILDER DVD isn't attached, go to step 6.
   If the model to which EXPRESSBUILDER DVD is attached, go to step 7.

   If you install NEC ESMPRO Manager by using DX2000 Utility Disk, run the setup program "¥tools ¥win¥ESMPRO¥JP¥ESMMENU¥SETUP.EXE" in DX2000 Utility Disk and go to step 5.

   If you install NEC ESMPRO Manager by using 53Xk/Y53Xk Backup Disk, run the setup program " ¥TOOL¥ESMPRO¥MANAGER¥JP¥ESMMENU¥SETUP.EXE" in 53Xk/Y53Xk Backup Disk and go to step 5.

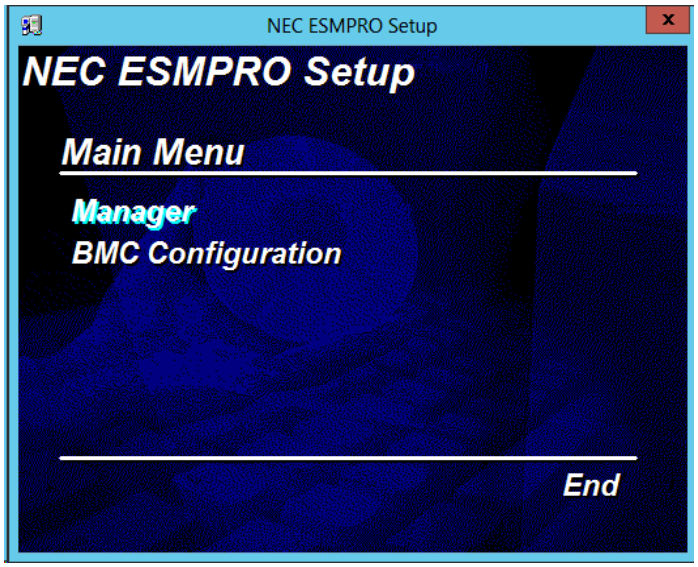
3. **Save the downloaded "SM666_E.ZIP" file in a folder of your choice, and unzip it.**

Important If you store the setup program in a folder that is too deep in the hierarchy, the program may not be run correctly.

4. **Run the setup program "¥SM666_E¥ESMMENU¥SETUP.EXE".**

   If User Account Control is enabled, User Account Control window appears. Click [Continue] to pro ceed.

5. **Click [Manager] on the main menu of NEC ESMPRO Setup window.**



Tips

- If you double-click the menu, two identical dialog boxes appear. Click [Exit] to close one of the dialog boxes.
- The displayed menu varies depending on the environment.

Go to step 8 and install NEC ESMPRO Manager.

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

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

[If you Install NEC ESMPRO Manager on the managed server]

Click [Applications] - [NEC ESMPRO Manager] - [Install].

Go to step 8 and install NEC ESMPRO Manager.

[If you Install NEC ESMPRO Manager on the PC for management]

Click [Maintenance] - [Copy the installation files to the specified folder.] - [Windows] - [NEC ESMPRO Manager] - [Copy] and copy NEC ESMPRO Manager in any folder.

After unzipping the copied file on the management PC, execute the "¥MANAGER¥setup.exe".

The installer will be started.

Go to step 8 and install NEC ESMPRO Manager.

7. Insert EXPRESSBUILDER into Optical disk drive.

EXPRESSBUILDER Autorun Menu is automatically displayed by Autorun function.

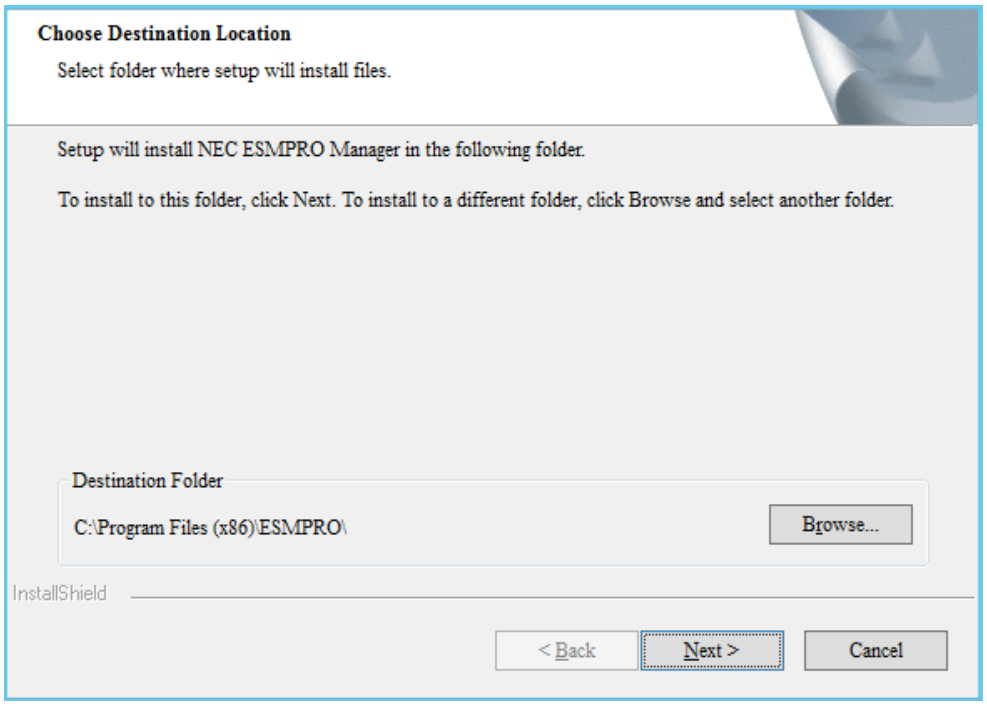
Tips If Autorun Menu does not launch, double-click ¥autorun¥dispatcher_x64.exe from EXPRESSBUILDER.

Click [Applications] - [NEC ESMPRO Manager] - [Install].

Go to step 8 and install NEC ESMPRO Manager.

8. **Select the installation destination.** (For update installation, this is not displayed.)

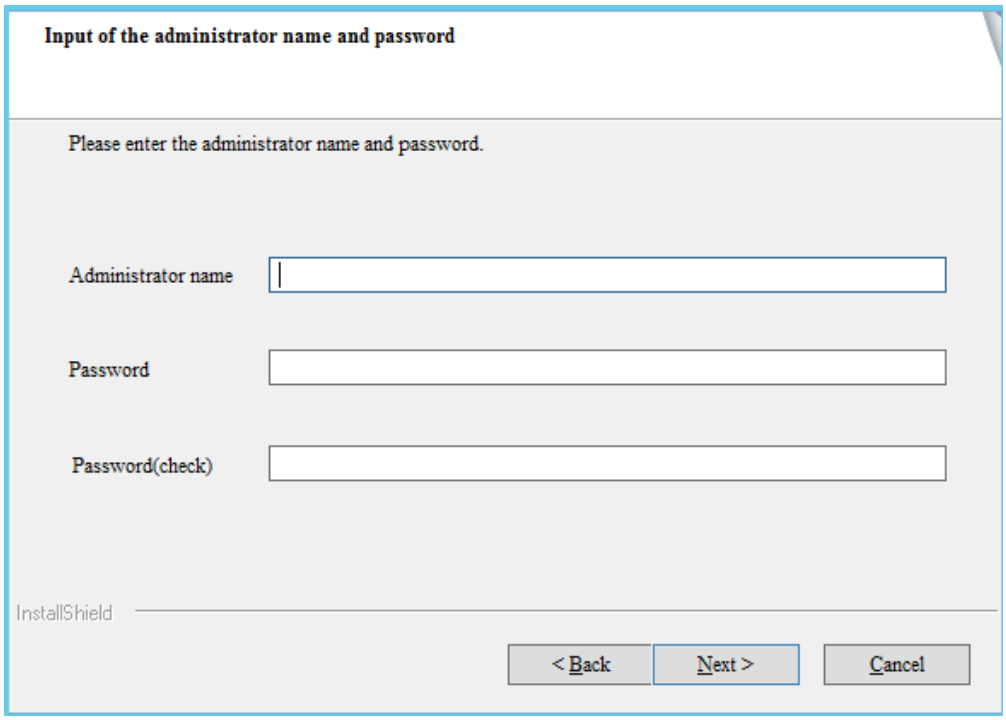
   Select the installation target folder, and then click [Next].



9. Enter the administrator name and the password.

(For update installation, this is not displayed.)

Create NEC ESMPRO Manager administrator. Specify the administrator name and password, and then click [Next].



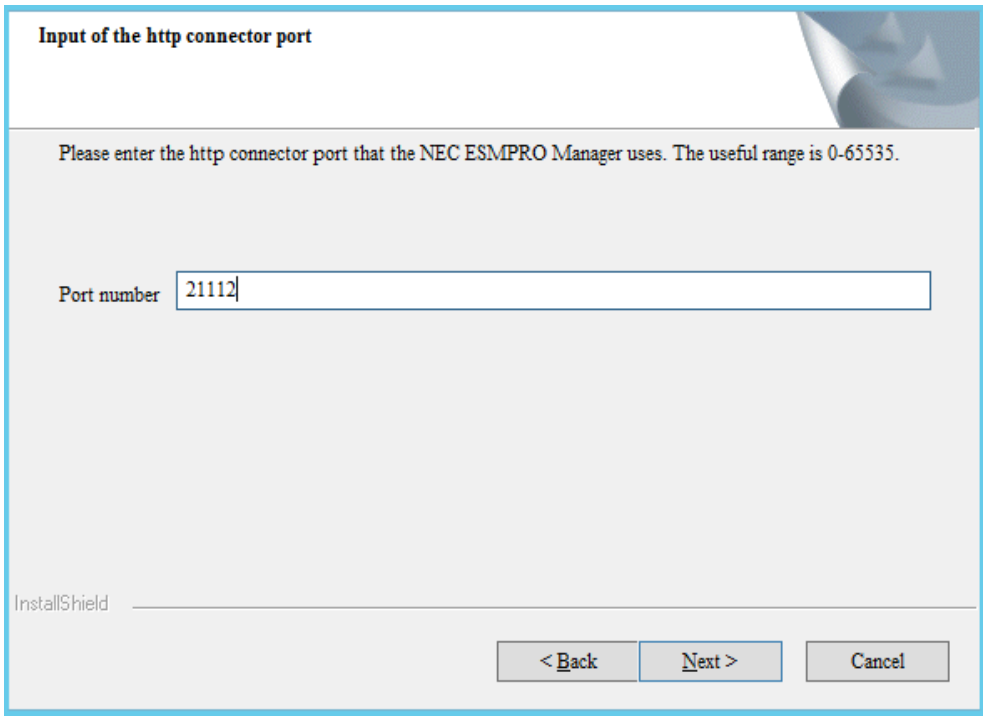
Note

- Specify the administrator name with 1 to 16 alphanumeric characters, and the password with 6 to 16 alphanumeric characters.
- Administrator name is the user name to operate NEC ESMPRO Manager with the administrator authority.

10. Input of the http connector port.

(For update installation, this is not displayed.)

Specify the http connector port that NEC ESMPRO Manager uses, and then click [Next].

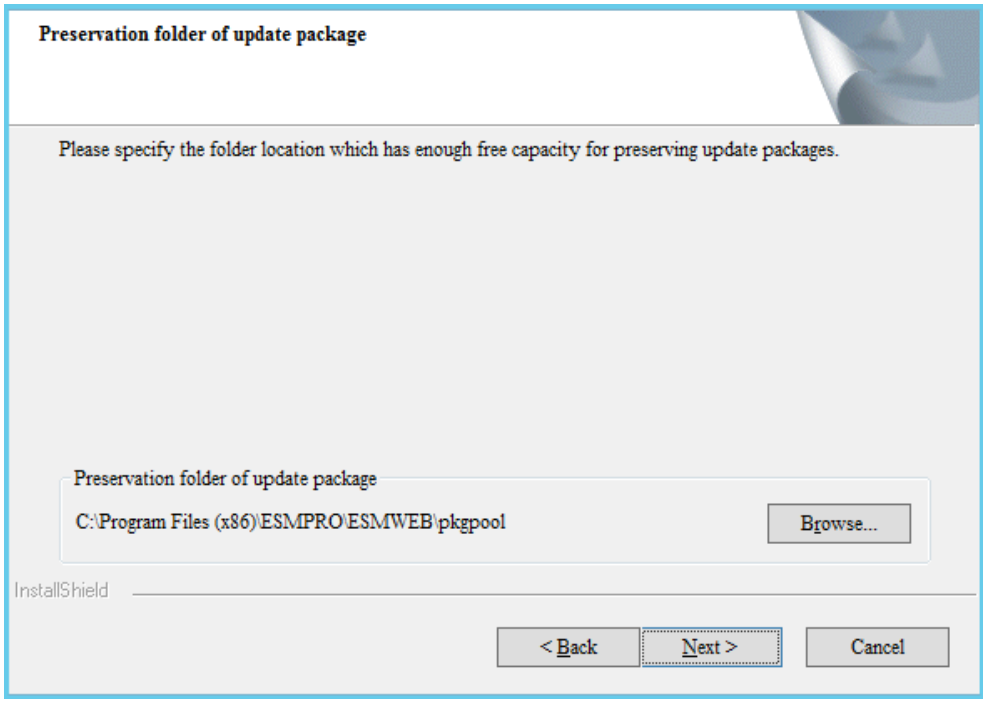


Note The useful range of the http connector port is 0-65535.

11. Enter preservation folder of update package.

(For update installation, this is not displayed in case that the folder has been specified.)

Specify the preservation folder of update package, and then click [Next].



Tips This folder will be used as a repository of update packages for NEC Express Update.

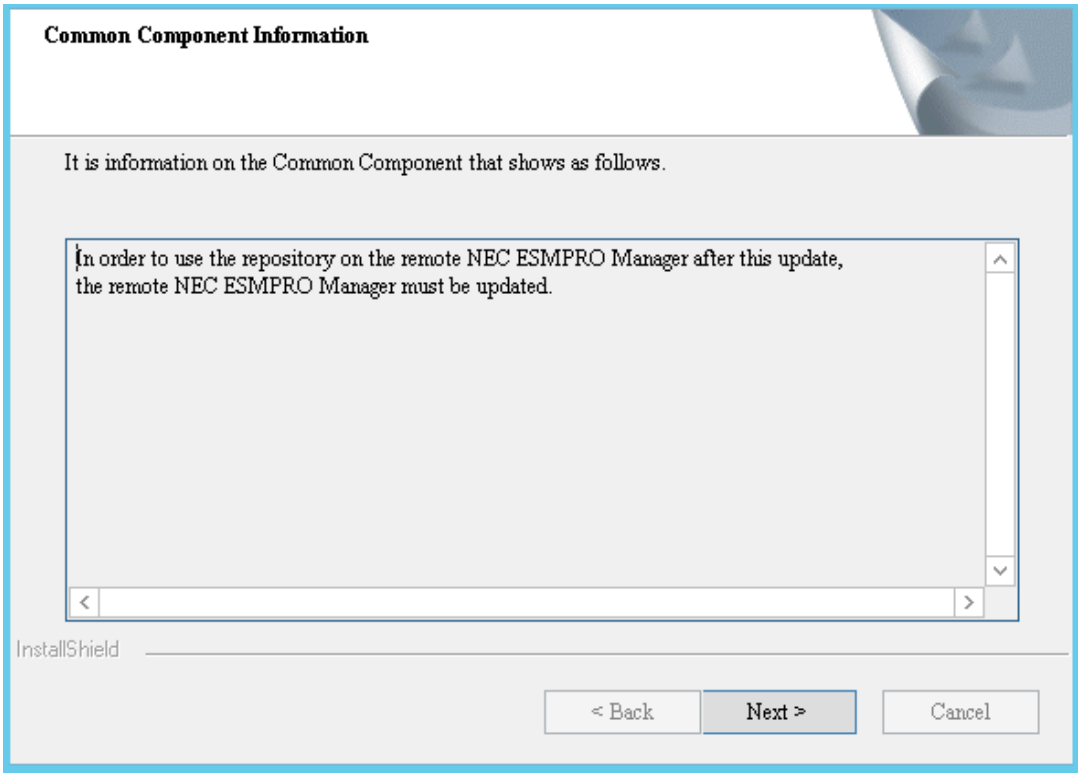
Note This folder is required plenty of space. The default preservation folder is "Installation target folder¥ESMWEB¥pkgpool".

Wait until the installation completes. Some installation windows are displayed during the installation. If you click [Cancel], the installation can be aborted but the installed files are not deleted.

12. Check the information on Common Component.

(This is displayed for update installation when you set the remote repository on Tools.)

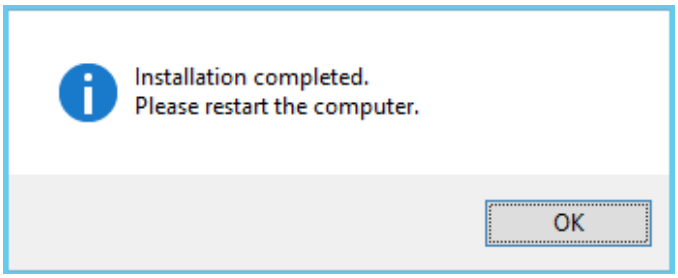
Check the information and click [Next].



13. The installation completes.

Click [OK] and then restart OS (the system will not automatically restart.).

* If this computer is intended to be used in EXPRESSCLUSTER system, you need to do some extra work before restarting the computer. Refer to EXPRESSCLUSTER document.



Note

- The displayed messages vary depending on the environment.
- If this computer is intended to be used in EXPRESSCLUSTER system, you need to do some extra work before restarting the computer. Refer to EXPRESSCLUSTER document.

2.2 Notes on installation

♦ Message on NEC ESMPRO Manager install

Depending on OS, installing NEC ESMPRO Manager the message that "Windows Explorer has stopped working" might be displayed. However, installation was normally completed. The system does not have the influence.

♦ Program Compatibility Assistant dialog box

A message "This program might not have installed correctly" may popup after installing NEC ESMPRO Manager complete. In such a case, you can safely click [This program installed correctly] or［Cancel] button to close the dialog because the installation is done successfully.

3. After Installation

♦ Login

When the installation of NEC ESMPRO Manager completes, check that you can login to it.

1.Access to the following address on a Web browser on the web client.

http://"the computer name installed NEC ESMPRO Manager":"HTTP connection port number"/esmpro/

This is an example of address to access with HTTP connection port "21112" from the web browser on PC for Management.

http://localhost:21112/esmpro/

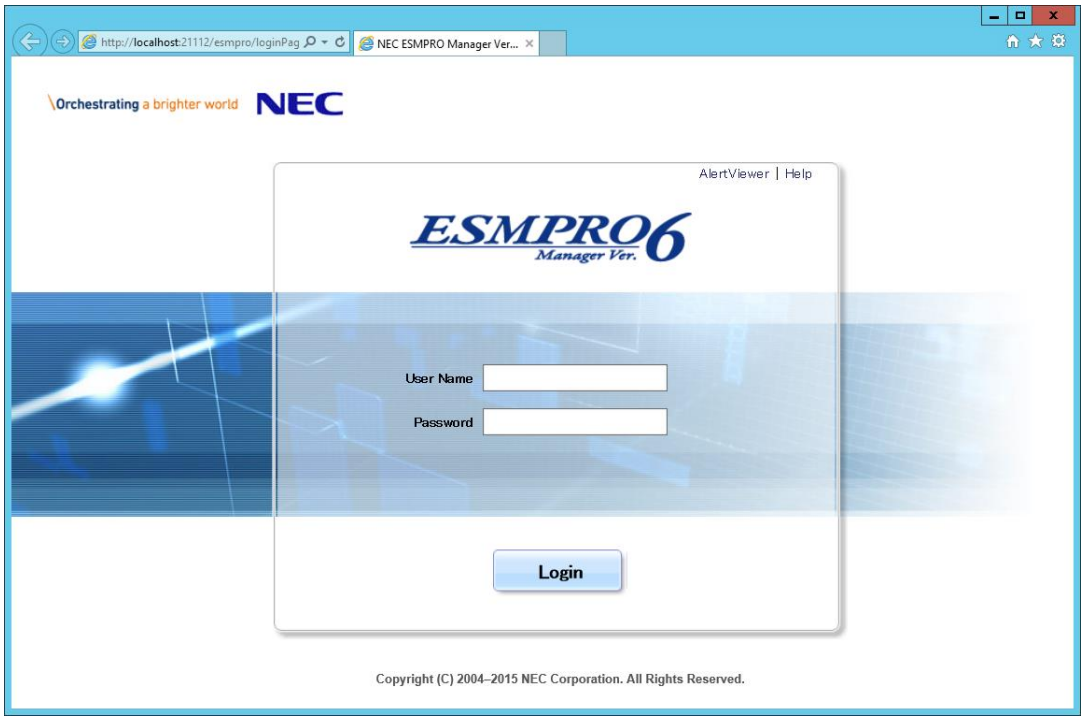
＊ If EXPRESSCLUSTER system is installed, access to the following address.
http://" Floating IP (FIP) or Virtual computer name":"HTTP connection port number"/esmpro/

Tips

- NEC ESMPRO Manager can be started up by clicking its icon created on the desktop after the installation.
- NEC ESMPRO Manager has the access control function.
  NEC ESMPRO Manager can be accessed only from the local Web browser with the default setting. Add the IP address to access ESMPRO Manager from remote Web browser.
  [Procedure]
  1. Click [Environment]-[Access Control].
  2. Click [Add Address].
  3. Add the IP address which you want to allow to access.

2.NEC ESMPRO Manager login window opens.

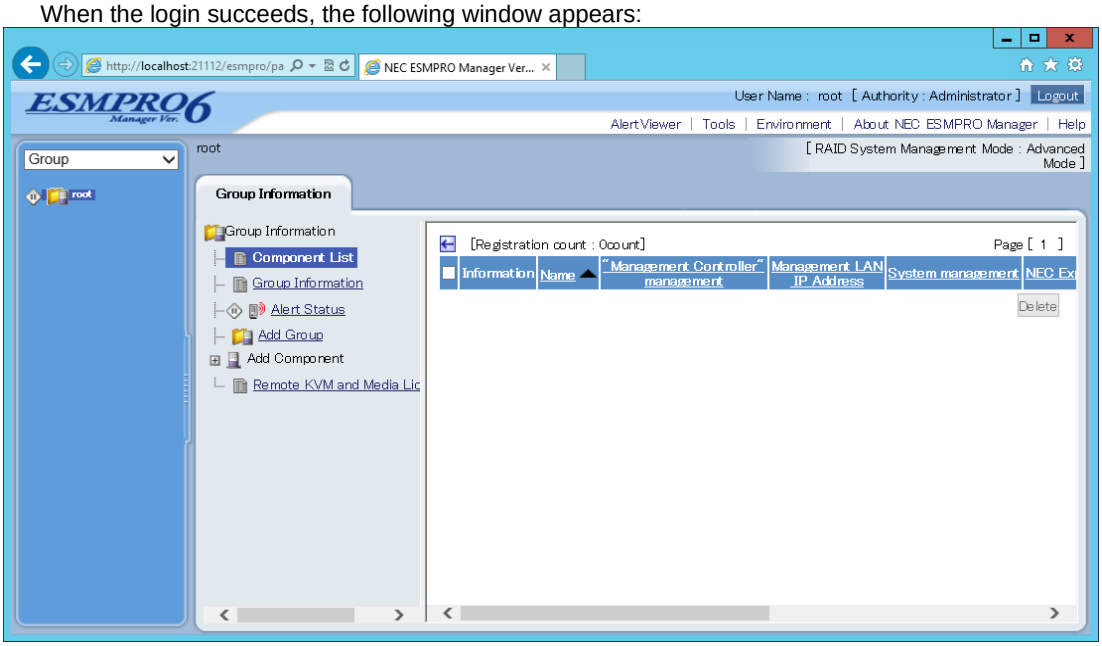
Enter the administrator name and the password that were registered at the installation, and click [Login] button.



Note

To protect your NEC ESMPRO Manager more securely, you should change the password regularly and use a strong password that is hard to guess.

When the login succeeds, the following window appears:



Note

The area on which commands, such as [AlertViewer], [Tools］are displayed is called [Header Menu]. Use these commands on [Header Menu] to operate NEC ESMPRO Manager.

♦ Setting environment

You can change the optional setting of NEC ESMPRO Manager.

Click [Environment] on [Header menu] to check the setting. For details, see the online help.

- **Set a modem**

  The modem that is used to connect with a managed server must be set on OS on PC for Management. If PC for Management has plural modem driver on Windows, input the modem name to use the connection in DianaScopeModemAgent.ini file under the sytem32 folder. The modem names are shown on device manager on Windows. The following is an example of DianaScopeModemAgent.ini file.

```
modem=Standard 56000 bps modem
```

♦ SSL

If you need to login to NEC ESMPRO Manager using SSL, you must change the setting of NEC ESMPRO Manager. Perform the procedure that is necessary in order to use SSL with NEC ESMPRO Manager as follows:

1.Create a key

The Key tool is needed for creating the key using with SSL. The Key tool is contained in JDK. Create the key as follows:

In the case of NEC ESMPRO Manager installed in "C:¥Program Files (x86)¥ESMPRO":

[Notes] The “-validity” option can set the validity period of the certificate. In the case of the following example, certificate will be valid for 5000 days.

```
"C:¥Program Files (x86)¥ESMPRO¥ESMWEB¥java¥r1¥bin¥keytool" -genkey -alias tomcat -keyalg RSA
–validity 5000
```

Some messages are displayed with dialog style. Input the information about the creator of the key.

You need to set the same password as the keystore password to the key password for <sdo>.

The following is shown an example.

```
Enter keystore password: ******
What is your first and last name?
      [Unknown]: Scott Oaks
What is the name of your organizational unit?
      [Unknown]: SMCC
What is the name of your organization?
      [Unknown]: Sun Microsystems
What is the name of your City or Locality?
      [Unknown]: New York
What is the name of your State or Province?
      [Unknown]: NY
What is the two-letter country code for this unit?
      [Unknown]: US
Is <CN=Scott Oaks, OU=SMCC, O=Sun Microsystems, L=New York, S=NY, C=US> correct?
    [no]: y
Enter key password for <sdo>
(RETURN if same as keystore password): ******
```

Confirm that the key was created.

```
%USERPROFILE%¥.keystore
```

Tips %USERPROFILE% means C:¥Document and Settings¥<logon user>

2.Change the setting of NEC ESMPRO Manager.

Edit the server.xml file to enable SLL. The server.xml is in the folder ESMWEB¥wbserver¥conf on NEC ESMPRO Manager installed folder. Open the server.xml file with an editor tool, search the description of <Connector> which is specified port number 8443, and delete the comment form "<!-" and "->". Modify the port number if you need.

Add the keystore file path and the password that is specified at the time creating the keystore, in the description of <Connector>.

If there is a description of <SSLHostConfig>~</SSLHostConfig>, please delete it.

```
<--Define a SSL HTTP/1.1 Connector on port 8443
        :
<!--NOTES: Delete these lines
<Connector port="8443"    NOTES: Change it if you need.
    protocol="org.apache.coyote.http11.Http11NioProtocol"
    maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
    clientAuth="false" sslProtocol="TLS"
    keystoreFile="<the directory that contains keystore>/.keystore"          NOTES: Add these lines.
    keystorePass="<the password>"
    useBodyEncodingForURI="true"
    sslEnabledProtocols="TLSv1,TLSv1.1,TLSv1.2"       NOTES: Set enabled protocols.
     />
-->    NOTES:Add these lines.
```

3.Reboot PC for Management.

Reboot the server installed NEC ESMPRO Manager.

4.Login.

Confirm to login to NEC ESMPRO Manager with "https:".

Make access to the following address using the web browser on the web client.

https://" the computer name installed NEC ESMPRO Manager":" port number that is specified in server.xml"/esmpro/

An example of address to access from the web browser on PC for Management is shown.

https://localhost:8443/esmpro/

♦ SSL Setup for LDAP/ActiveDirecroty

To use SSL connection between NEC ESMPRO Manager and the authentication server of LDAP/ActiveDirectory, please import certificate into a keystore of JRE which NEC ESMPRO Manager uses. The certificate can be imported by entering the following commands in a command prompt.

C:¥Program Files (x86)¥ESMPRO¥ESMWEB¥jre¥bin>keytool.exe -import -trustcacerts -alias ldapsrv -file C:¥ldap¥client.pem -keystore ..¥lib¥security¥cacerts

Note

- Administrator privileges may be required.
- Change "C:¥Pogram Files¥ESMPRO" according to the installed environment.
- Change "C:¥ldap¥client.pem" according to the location and the file name of the certificate.
- A default password of a keystore is "changeit".

Important

- Using a network controllable product with its default password may raise a serious risk as it may be hacked by some malicious third person.
  If a product is supplanted by a malware, it will face possibilities of not only information leakages, but also system damages obstructing its availability and/or integrity.
  Even if it does not cause damage to own system, the product may be used as a botnet to make a cyber-attack to some other systems.
  The default password on our product is provided only for the purpose of changing initial setting during its installation service. In first change of initial setting, please be sure to change the password.
  NEC Corporation shall not take any liability and responsibility for any damages arising from illegal access.
  If the new password is not strong (too short) or easily guessed, illegal access cannot be prevented. Please be sure to use a strong password.

  <<How to change your password of a keystore>>
  * In the case of NEC ESMPRO Manager installed in "C:¥Program Files (x86)¥ESMPRO".
  1. Open the following folder via a command prompt.
     C:¥Program Files (x86)¥ESMPRO¥ESMWEB¥jre¥bin
  2. The password of a keystore can be changed by entering the following commands in a command prompt.
     keytool.exe -storepasswd -keystore ..¥lib¥security¥cacerts
  3. Stop the following 6 services.
     * Stop procedures
       1. ESMPRO/SM Web Container
       2. ESMPRO/SM Event Manager
       3. ESMPRO/SM Base AlertListener
       4. ESMPRO/SM Common Component
       5. ESM32BridgeService for AlertListener
       6. ESM32BridgeService for NvAccessor
  4. Edit the following file.
     <Folder>
      C:¥Program Files (x86)¥ESMPRO¥ESMWEB¥wbserver¥webapps¥esmpro¥WEB-INF¥service
     <File>
      options.txt
     <Changes>
      Change the value "changeit" in the following line to the new password and save it.
       DS_CERT_PSWD=changeit
       (Example)
       DS_CERT_PSWD=newpassword
  5. Start the following 6 services.
     * Start procedures
       1. ESM32BridgeService for NvAccessor
       2. ESM32BridgeService for AlertListener
       3. ESMPRO/SM Common Component
       4. ESMPRO/SM Base AlertListener
       5. ESMPRO/SM Event Manager
       6. ESMPRO/SM Web Container

♦ Changing the port number (Start Port)

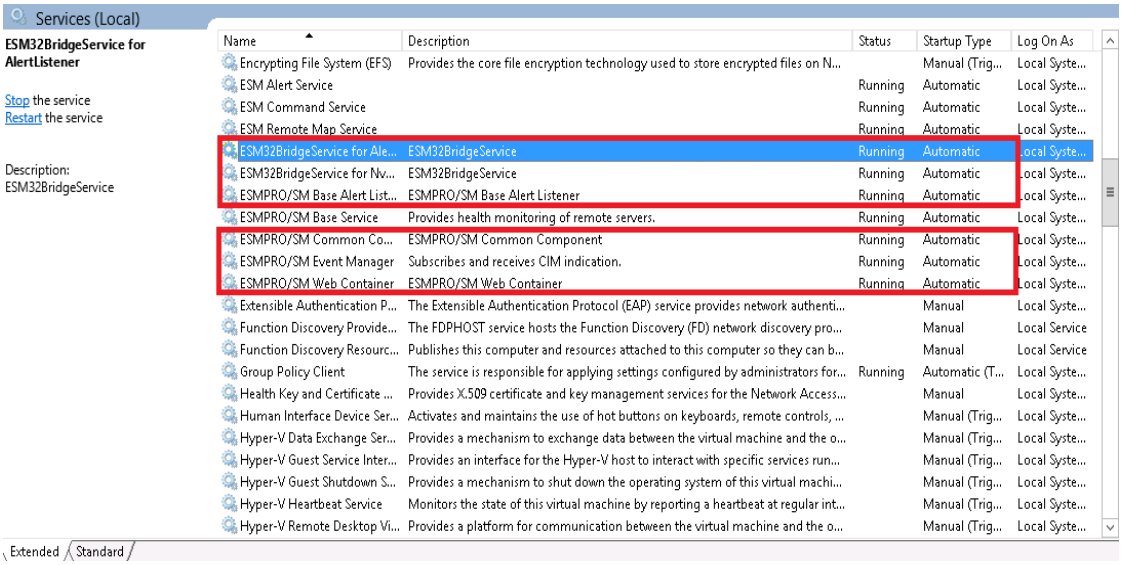
You can change the available port number after installation of NEC ESMPRO Manager.

An example of address to access in HTTP connection port "21112".

1. Stop the following 6 services.

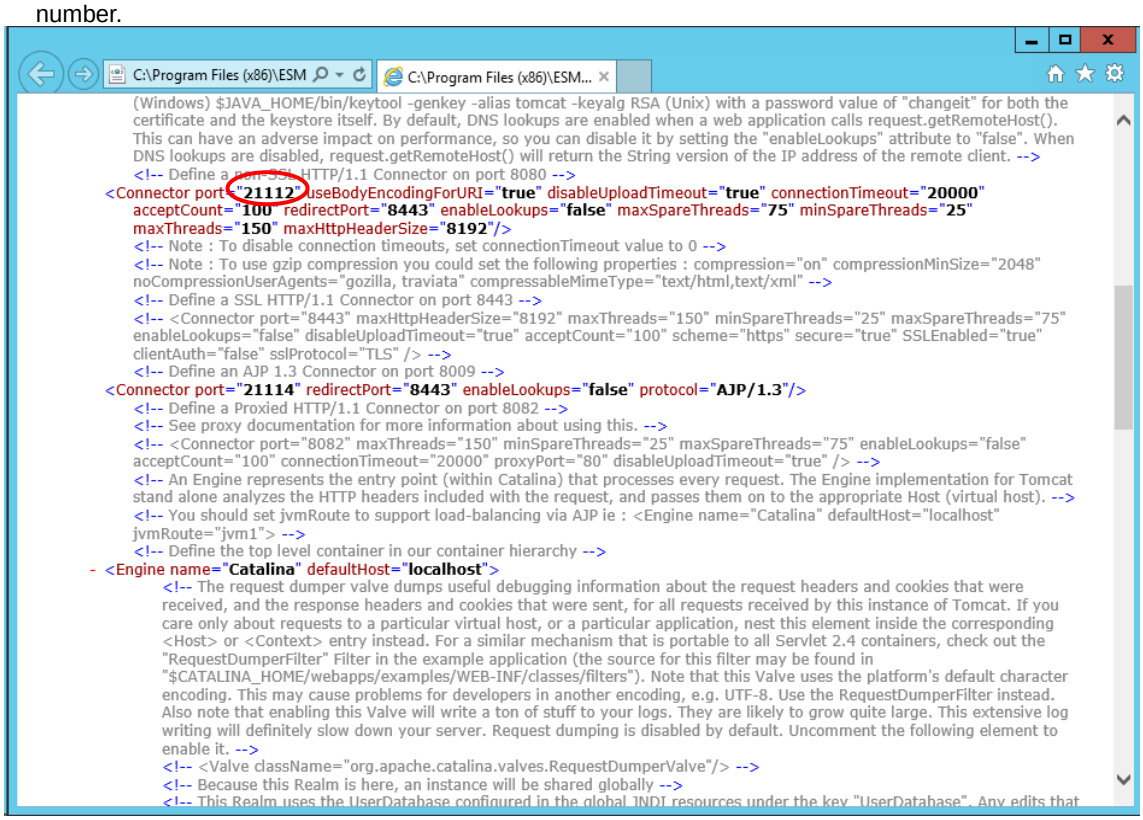
♦ Stop procedures

1. ESMPRO/SM Web Container
2. ESMPRO/SM Event Manager
3. ESMPRO/SM Base AlertListener
4. ESMPRO/SM Common Component
5. ESM32BridgeService for AlertListener
6. ESM32BridgeService for NvAccessor



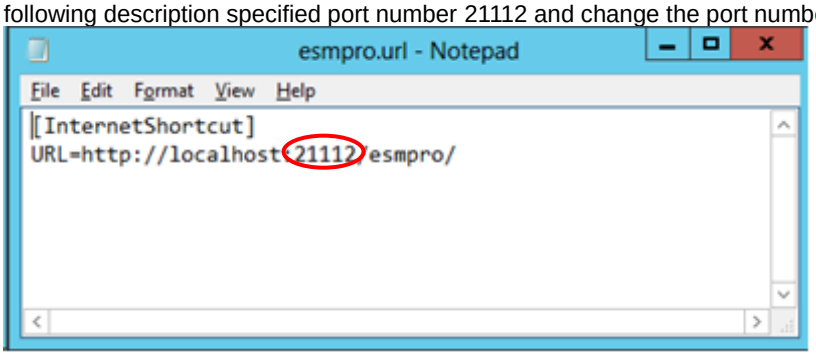
2. Edit the port number in the "server.xml" setting file of ESMPRO/SM Web Container service.

The "server.xml" file is on "NEC ESMPRO Manager installed folder"¥ESMWEB¥wbserver¥conf. In this file, you search the following <Connector> description specified port number 21112 and change the port number.



3. Edit shortcut file "esmpro".

The "esmpro" file is on "NEC ESMPRO Manager installed folder"¥ESMWEB. In this file, you search the following description specified port number 21112 and change the port number.



4. Start the following 6 services.

♦ **Start procedures**

1. ESM32BridgeService for NvAccessor
2. ESM32BridgeService for AlertListener
3. ESMPRO/SM Common Component
4. ESMPRO/SM Base AlertListener
5. ESMPRO/SM Event Manager
6. ESMPRO/SM Web Container

♦ Changing the port number (ESM32BridgeService)

You can change the available port number of ESM32BridgeService by following steps after installation of NEC ESMPRO Manager.

1. Stop the following 6 services.

♦ Stop procedures

1. ESMPRO/SM Web Container
2. ESMPRO/SM Event Manager
3. ESMPRO/SM Base AlertListener
4.ESMPRO/SM Common Component
5. ESM32BridgeService for AlertListener
6. ESM32BridgeService for NvAccessor

2. Edit the following file.

<Folder>

C:¥Program Files (x86)¥ESMPRO¥ESMWEB¥wbserver¥webapps¥esmpro¥WEB-INF¥service

(* This is defalt install destination.)

<File>

options.txt

<Chamges>

Change the port number of follow setting between 0 and 65535.

>> BRIDGE_NV_PORT=21117

>> BRIDGE_ALERT_PORT=21118

* BRIDGE_NV_PORT >> The port setting of ESM32BridgeService for NvAccessor
* BRIDGE_ALERT_PORT >> The port setting of ESM32BridgeService for AlertListener

3. Start the following 6 services

♦ Start procedures

1. ESM32BridgeService for NvAccessor
2. ESM32BridgeService for AlertListener
3. ESMPRO/SM Common Component
4. ESMPRO/SM Base AlertListener
5. ESMPRO/SM Event Manager
6. ESMPRO/SM Web Container

♦ Coexistence with Tomcat

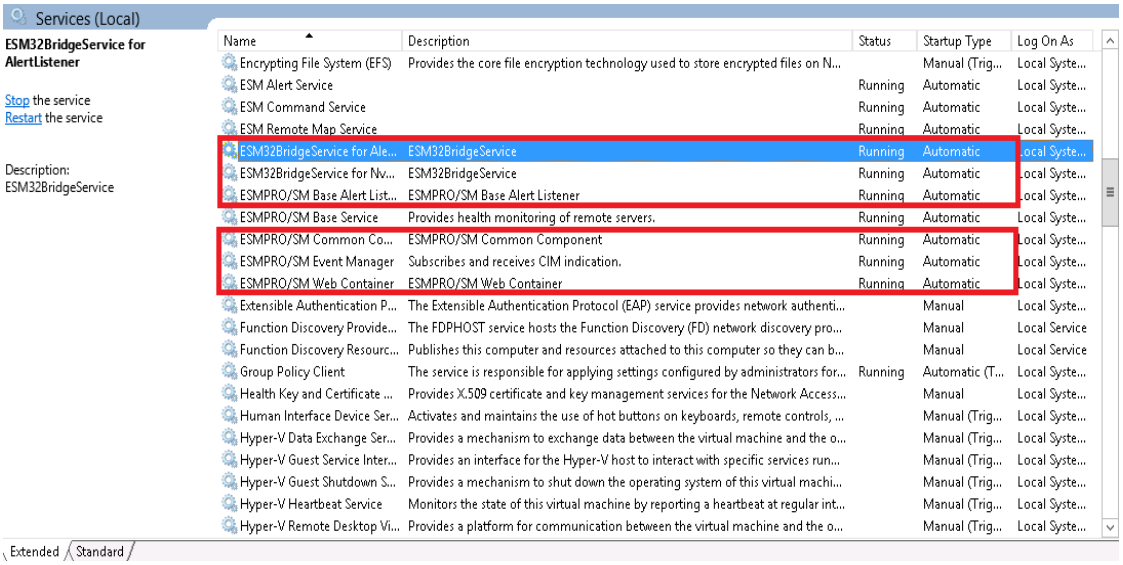
When NEC ESMPRO Manager and Tomcat are installed same computer, the application software installed later will not be running correctly.

In this case, you can avoid it by the following way.

1. If the following 6 services have started, stop the services.

♦ **Stop procedures**

1. ESMPRO/SM Web Container
2. ESMPRO/SM Event Manager
3. ESMPRO/SM Base AlertListener
4. ESMPRO/SM Common Component
5. ESM32BridgeService for AlertListener
6. ESM32BridgeService for NvAccessor



2. If Tomcat service has started, stop the service.

3. Edit the server port number and connector port number in the "server.xml" setting file of ESMPRO/SM Web Container service.

The "server.xml" file is on the <The folder in which this product is installed>¥ESMWEB¥wbserver¥conf. In this file, you search the following description specified <Server port="21113" …> <Connector port = "21114" …> and change the port number to unused number.

- **server port number**

- **connector port number**

4. Start the following 6 services.

♦ **Start procedures**

1. ESM32BridgeService for NvAccessor
2. ESM32BridgeService for AlertListener
3. ESMPRO/SM Common Component
2. ESMPRO/SM Base AlertListener
3. ESMPRO/SM Event Manager
4. ESMPRO/SM Web Container

5. Start Tomcat service.

Note

- Specify the port numbers of NEC ESMPRO Manager and Tomcat not to overlap.
  If you change the port number of NEC ESMPRO Manager, see the preceding clause "Change the Port Number".
- When you use SSL communication on Tomcat or connect Tomcat with Apache, you may need to change another port number. See Tomcat is Document for detail.

♦ Receiving SNMP Trap from iStorage T series

NEC ESMPRO Manager has a built-in support for SNMP trap from iStorage T series.

If you preconfigured NEC ESMPRO Manager to receive trap from iStorage T series using alert definition file, remove such customizations and reboot the computer so that the built-in support is enabled.The trap enterprise of iStorage T series is shown below.

Also note that If you use WebSAM AlertManager, you may have to reconfigure the report setting since alert type for iStorage T series is now “Tape Library”.

[Location of the alert definition file]

%ESMWORK%¥public¥trap

%ESMWORK% is written in the following registry;

Key ：HKEY_LOCAL_MACHINE¥SOFTWARE¥Wow6432Node¥NEC¥NVBASE

Name：WorkDir

[Enterprise for iStorage T series]

Managed Server	Enterprise
T30A	1.3.6.1.4.1.119.1.83.1.31
T60A	1.3.6.1.4.1.119.1.83.1.41
T100A	1.3.6.1.4.1.211.4.1.1.126.3.5
T700A	1.3.6.1.4.1.211.4.1.1.126.3.2

NEC ESMPRO Manager Ver. 6

3 Uninstallation

This chapter explains uninstallation of NEC ESMPRO Manager.

1. Uninstallation

Describes about uninstallation procedure of NEC ESMPRO Manager.

I. Uninstallation

This page describes how to uninstall NEC ESMPRO Manager.

I.I Uninstallation procedure

Important

- Uninstallation performed immediately after the system restarts may fail. If an error message appears, try again after waiting for a while.
- If this computer is intended to be used in EXPRESSCLUSTER system, you need to do some extra work before restarting the computer. Refer to EXPRESSCLUSTER document.

1. Sign-in (Log on) to the system with the built-in Administrator (or an account having administrative privilege).

2. Exit all running applications.

3. Perform uninstallation.

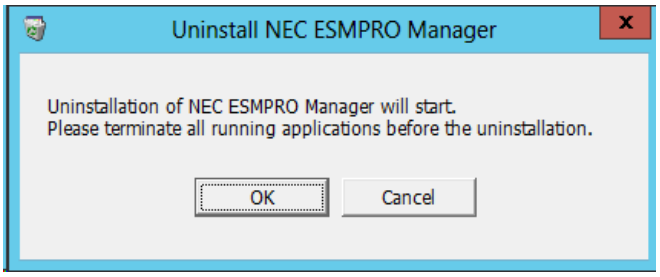
Startup [Programs and Features] (or [Add or Remove Programs]) from [Control Panel].

Select NEC ESMPRO Manager from the list of the installed programs to remove it.

4. Confirmation for uninstallation.

Confirm that any applications related to NEC ESMPRO are not running, and click [OK].

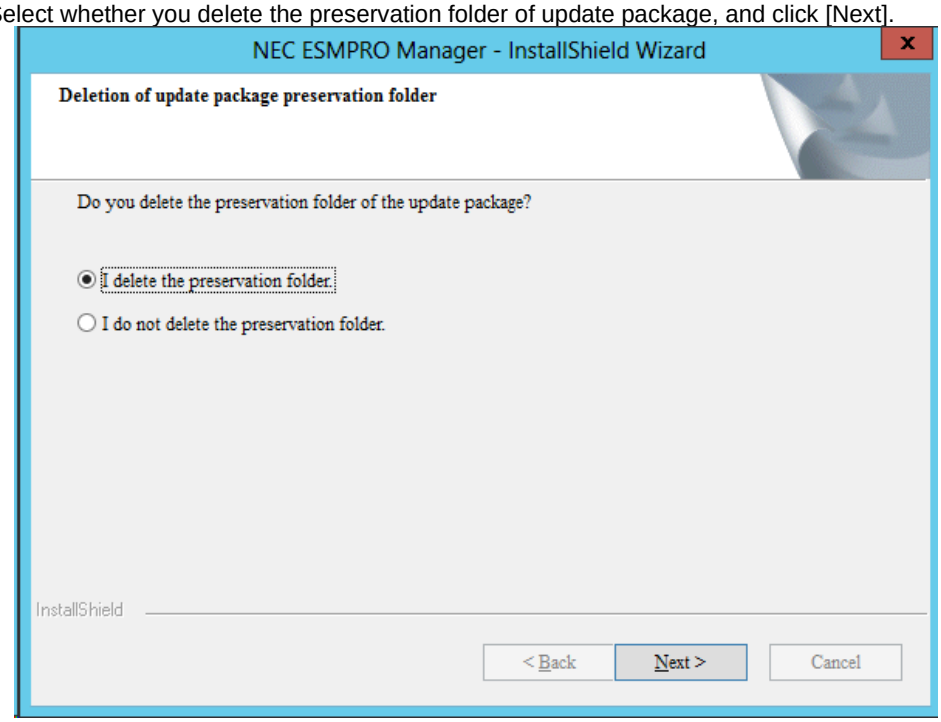
The selected features will be uninstalled.



5. Confirmation for deletion of the folder.

(If there is no folder of update package, this dialog box is not displayed.)

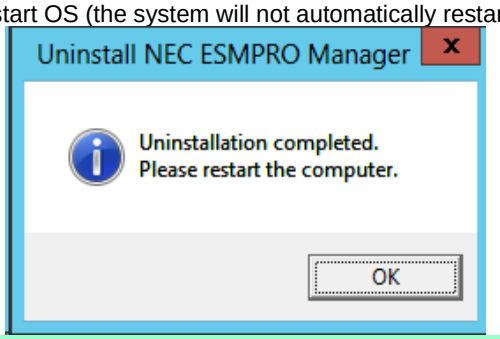
Select whether you delete the preservation folder of update package, and click [Next].



Wait for a while until the uninstallation completes. During the uninstallation, some uninstallation windows will appear.

6. The uninstallation completes.

Click [OK] and then restart OS (the system will not automatically restart.).



Note The displayed messages vary depending on the environment.

1.2 Notes on Uninstallation

♦ Message after NEC ESMPRO Manager Uninstall

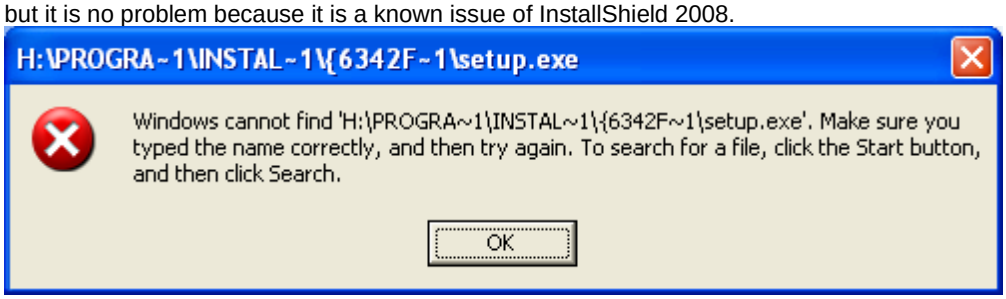
Depending on OS, uninstalling NEC ESMPRO Manager the message that "Windows Explorer has stopped working" might be displayed. However, uninstallation was normally completed. The system does not have the influence.

♦ Program Compatibility Assistant dialog box

A message "This program might not have uninstalled correctly" may popup after uninstalling NEC ESMPRO Manager complete. In such a case, you can safely click［This program uninstalled correctly] or [Cancel] button to close the dialog because the uninstallation is done successfully.

♦ Message at reactivation

The following message might be displayed at the time of the first system reboot after ESMPRO uninstall, but it is no problem because it is a known issue of InstallShield 2008.



♦ File after uninstallation

After uninstalling, the following file is sometimes left in "C:¥Windows¥SysWOW64¥wbem". When you access to WMI information using a tool like wbemtest.exe, classes and name space still exist. However, there are no problems to using a system.

♦ amwmiprv_v4.0.30319.mof

♦ WebSAM AlertManager is installed

If WebSAM AlertManager is installed on the device where NEC ESMPRO Manager is installed, uninstall WebSAM AlertManager before uninstalling NEC ESMPRO Manager.

However, if you have NEC ESMPRO ServerAgentService or NEC ESMPRO Agent installed, you do not need to uninstall WebSAM AlertManager.

NEC ESMPRO Manager Ver. 6

4 Appendix

1. Notes

Describes about notes.

2. Port numbers / Protocols

Describes about the port numbers and port Protocols.

3. Services

Describes about the service list.

4. Procedure to disable the Windows application setting

Describes about the procedure to disable the Windows application setting.

I. Notes

Check the following points after installing NEC ESMPRO Manager:

I.1 NEC ESMPRO Manager

♦ Installation

- If you install NEC ESMPRO Manager do not delete user account "Administrators" from "Impersonate a client after authentication" of "Local Security Policy".
- NEC ESMPRO Manager cannot be downgraded to the older version. If you want to use the older version, uninstall the current version and then install new version.

  Note: All the registered information will be deleted as the result of the uninstalling.
- If installer displays either of the following message, execute the installation again.

  "It failed in the writing in a necessary file of Common Component."

  "Close of necessary file for Common Component failed."
- You must logout from the web browser that is login to NEC ESMPRO Manager before NEC ESMPRO Manager is updated. After NEC ESMPRO is updated during login, some error may be displayed on any web browser. When the error is displayed, you must close web browser that is login to NEC ESMPRO Manager and restart the following services.

  ♦ Stop procedures

  1. ESMPRO/SM Web Container
  2. ESMPRO/SM Event Manager
  3. ESMPRO/SM Base AlertListener
  4. ESMPRO/SM Common Component
  5. ESM32BridgeService for AlertListener
  6. ESM32BridgeService for NvAccessor

  ♦ Start procedures

  1. ESM32BridgeService for NvAccessor
  2. ESM32BridgeService for AlertListener
  3. ESMPRO/SM Common Component
  4.. ESMPRO/SM Base AlertListener
  5.. ESMPRO/SM Event Manager
  6. ESMPRO/SM Web Container

- After NEC ESMPRO Manager is updated, NEC ESMPRO Manager on the web browser may display incorrectly. Take the following steps to avoid it.

  [Internet Explorer 11]

  1. Click [Tools].
  2. Select [Delete Browsing History].
  3. Select the checkbox for [Temporary Internet Files].
  4. Click [Delete] button.

  [Firefox]

  1. Click [Tools].
  2. Click [Options] menu.
  3. Select [Advanced].
  4. Select [Network].
  5. Click [Clear Now] in [Cached Web Content] section.
  6. Click [Clear Now] in [Offline Web Content and User Data] section.
  7. Click [OK].

♦ Setting a Windows Firewall

If the Windows Firewall is enabled, communication of NEC ESMPRO Manager with a web client and a managed server will be interrupted and the system will not work correctly.
To use NEC ESMPRO Manager with Windows Firewall enabled, open the required ports.

Note For ports used by NEC ESMPRO Manager, see "Chapter4 2 Appendix Port numbers / Protocols".

♦ Use of two or more NEC ESMPRO Manager

A single managed component can be controlled remotely by up to three NEC ESMPRO Manager. Follow these notes on the remote control:

- Use only one NEC ESMPRO Manager for "management controller" management of the managed component.
- Use only one NEC ESMPRO Manager for RAID system management and NEC ExpressUpdate of the managed component. If you register the managed component on two or more NEC ESMPRO Manager, you must set "unregistration" for RAID system management and NEC ExpressUpdate of the managed component.
- Use one NEC ESMPRO Manager for all EM cards and CPU blades on one blade enclosure.
- Use only one NEC ESMPRO Manager for “WS-Man” management of the managed component.

♦ Power OFF, Power Cycle, Reset, and Dump

Since power control is provided by hardware regardless of the state of the managed server is OS, the system may be damaged. Be careful of operation under power control.

♦ Power OFF, Power Cycle, Reset with BIOS Setup Utility active

If you use the managed server integrated BMC, do not execute Power Off, Power Cycle or Reset while BIOS Setup Utility is active on the managed server. Otherwise, the alert setting of BMC configuration will be disabled.

♦ Shutdown OS

NEC ESMPRO Manager commands one of the agent modules on the managed component to shutdown OS. The order of priority for the shutdown function is NEC ESMPRO Agent Extension, NEC ESMPRO Agent and NEC ExpressUpdate Agent.

NEC ESMPRO Agent Extension or NEC ExpressUpdate Agent shutdowns OS regardless the setting "Permit Remote Shutdown / Reboot" on NEC ESMPRO Agent.

♦ IPMI information collection

While a managed server is tuned OFF, some records of management controller information and FRU (Field Replaceable Unit) information cannot be read in.

The current status of some sensors cannot be read in either while the managed server is turned OFF.

♦ Restriction on concurrent connection to Remote Console

When a single NEC ESMPRO Manager is operating the remote console of a managed server, another Manager cannot execute the remote console function for the managed server. A managed server can transmit redirection data to only a single NEC ESMPRO Manager.

♦ Remote console before OS boot or during DOS program running

If a graphic screen is displayed on a managed server, data cannot be displayed correctly on CUI (Character User Interface) remote console. CUI remote console screen is displayed only when the managed server displays a text screen.

♦ In case of interruption to Remote Console

After BMC on a managed server establishes communication via WAN/Direct connection, communication with DianaScope Agent or NEC ESMPRO Agent Extension may ends up with a timeout or the remote console may not be updated any more. This is because priority is given to communication with BMC.

To restart the remote console, use [Restart Redirection] button on NEC ESMPRO Manager.

♦ Display of a special character

CUI remote console screen is not displayed correctly in the following cases:

- **Special character**

  Ruled lines, arrows correctly and en-size left arrows cannot be displayed.

- **User definition font**

  User definition font cannot be displayed.

♦ In case of display of illegally keyed data on the remote console

If you use the managed server integrated BMC, unintentionally keyed data may appear on a managed server in the following conditions when NEC ESMPRO Manager issues a command to BMC:

- WAN/Direct connection.
- Special Administration Console (SAC) screen at Windows boot or CUI remote console under Linux is accessed.

♦ In case of key-in failure on the remote console

- During DOS boot or access to the removable media immediately after the managed server is power switch is turned ON, data cannot be keyed in from the remote console or the keyed data display may be delayed.
- Remote Console is realized by using SOL function of IPMI conformity and the Serial Redirection function of BIOS.

  Data cannot be keyed in from the remote console when the firmware (BIOS and so on) or the software requires the key code that VT100 terminal emulator (the hyper-terminal and so on) cannot control.

  Refer to the document of each firmware or software for the details.

♦ RAID EzAssist Configuration Utility

To operate RAID EzAssist for a SOL-incompatible managed server from CUI remote console via LAN, set the item "Console Redirection" to "Disable" on BIOS Setup Utility screen, reboot the system, and then boot RAID EzAssist Configuration Utility.

♦ Power management

- If you set the value on the managed server which does not support power management, you cannot put back the value to "unsetting". Set "zero" to each value, it is accepted as "unsetting".
- The electric power value might not necessarily reach even the value of Power Cap value.

  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.

Note

For more detail about Power Monitoring and Power Control Function, reference the following site.
http://www.58support.nec.co.jp/global/download/index.html
[Others] – [Technology paper]

♦ CPU blade auto registration

When "Check Connection" of "CPU blade auto registration" was failed. You can execute "Check Connection" on "Server Properties" - "Connection Setting".

If a specified IP address is set from a CPU blade to another CPU blade during "CPU blade auto registration" process (ex. when you replace CPU blade and execute "CPU blade auto registration"), NEC ESMPRO Manager may not be able to connect CPU blade because old information remains in ARP table on PC for Management. Wait for a few minutes and try "Check Connection".

♦ Coexistence of NEC ESMPRO Manager with DianaScope Agent or NEC ESMPRO Agent Extension on the same server

If the managed server is installed Advanced Remote Management Card or EXPRESSSCOPE Engine series (BMC uses exclusive LAN port (management LAN port)), NEC ESMPRO Manager can manage the server itself installed. If the managed server is installed BMC that uses the standard LAN port, NEC ESMPRO Manager on the managed server cannot manage itself.

You can install NEC ESMPRO Manager and NEC ESMPRO Agent Extension (formerly DianaScope Agent) on the same server, but the communication with BMC on the server is prevented by local loopback function of OS and BMC cannot receive any packets from NEC ESMPRO Manager.

♦ EM Card registration

- When you resister EM Card, you need to set valid on SNMP management and "Management Controller" management each other.
- If the connection is failed at "Auto Registration" or "Check Connection", it is not recognized as EM Card because both management is invalid. In this case, set correct connection setting and execute "Check Connection" again.

♦ Remote Control

When all the following conditions are satisfied, remote control cannot be executed from NEC ESMPRO Manager.

- The managed server has either following BMC.
  - BMC uses standard LAN port
  - Advanced Remote Management Card or equivalent BMC
- The managed server has been power off.

♦ Display of the monitoring window

If you exit and restart the monitoring window of NEC ESMPRO Manager with AlertViewer started, the displayed AlertViewer window is rewritten and the window may not be properly displayed.

In such a case, exit the monitoring window and AlertViewer once, and then restart them.

♦ Coexistence of NEC ESMPRO Manager with other vendor's SNMP management application

When another vendor's SNMP management application which receives SNMP trap is used along with NEC ESMPRO Manager, one of them can fail to receive SNMP trap due to a conflict between the two applications. Through the following procedures, the situation can be avoided.

[Work Around]

If the other vendor's SNMP management application supports the trap reception function of standard SNMP Trap Service, you can change the setting of NEC ESMPRO Manager according to the instruction below.

Select [Options] - [Customize] - [My Manager] on Operation Window, and change the method of receiving SNMP Trap to [Use SNMP Trap Service].

♦ Usage of DHCP

NEC ESMPRO Manager and managed servers communicate by the IP address.

Therefore, if you use DHCP on NEC ESMPRO Manager's OS and managed server's, please configure the DHCP server so that the IP address is assigned by fixing.

♦ Setting SNMP trap destination

When you install NEC ESMPRO Manager and NEC ESMPRO Agent on the same computer, specify IP address assigned to the network card or the host name as SNMP trap destination for the computer, instead of the loop back address 127.0.0.1. If you specify 127.0.0.1, "unknown server" may be displayed on AlertViewer.

On the other hand, you may need to specify 127.0.0.1 for a computer not connected to the network. For more information, see "Settings on Standalone Environments Without Network Connections" below.

If the following is displayed on AlertViewer even when you have specified as above,

Component : {unknown server}

Address : 127.0.0.1

change IP address to 127.0.0.1 on the properties of the server by selecting [Connection Setting] from [Server setting].

♦ Settings on standalone environments without network connections

When you install NEC ESMPRO Manager and NEC ESMPRO Agent on a machine together, if the machine is not connected to the network, take the following steps to monitor the machine itself.

- Specify 127.0.0.1 for Start Address and End Address as a range for Auto Registration.
- Specify 127.0.0.1 for SNMP trap destination.

If you have already registered server, execute Auto Registration after deleting it.

♦ To upgrade your OS

Otherwise uninstall NEC ESMPRO Manager first and upgrade OS. To upgrade OS to other than the following OS, uninstall NEC ESMPRO Manager first and upgrade OS.

- Windows 10
- Windows 11

♦ Display of the Information of server state/constitution

In case that NEC ESMPRO Manager has been updated from Ver. 5.23 and below, the display of the selected item on [Information of server state/constitution] may take long time with the hardware constitution of the managed server.

Perform the followings in this case:

- Change the "Update Interval" value of "Automatically update display" setting from 5 seconds (default value) to 60 seconds.

  The changing of the automatic update interval by JavaScript will reduce the load of NEC ESMPRO Agent on the managed server, and so allows NEC ESMPRO Manager to display DataViewer quickly.

  <settings>

  [Environment] – [Option] – [Automatically update display] – [Update Interval]

♦ Display of the network speed

- When you monitor Linux servers, Speed will not be displayed on the network general view of [Information of server state]. In such a case, check it on the monitored server.
- When you monitor Windows servers which have network interfaces of which speeds are 10Gbps or over, Speed may not be displayed correctly on the network general view of [Information of server state]. In such a case, check it on the monitored servers.
- When you monitor servers which have network interfaces with which a cable is not connected, an incorrect value (4,294 Mbps) may be displayed for the Speed on the network general view of [Information of server state].

♦ Display of the teamed network interfaces

Depending on OS, if network interfaces are teamed, the network information may not be properly displayed on [Information of server state]. Check it on the monitored server

♦ Power saving mode of OS

- When a computer on which NEC ESMPRO Manager is installed goes into a power saving mode, all features of NEC ESMPRO Manager (such as alert reception, server status monitoring and automatic statistical data collection) stop. Disabling the power saving mode is recommended.
- When a monitored server with the Wake On Directed Packet option enabled for the network adapter setting goes into the power saving mode, the server is powered on immediately by the server status monitoring feature of NEC ESMPRO Manager which regularly sends packets to the server. In such a case, disable Wake On Directed Packet option.

♦ Application event log when installing NEC ESMPRO Manager

- When installing NEC ESMPRO Manager, the following event will be reported on Application event log. This does not cause a problem with security, so you do not need to do anything for it.

  Source : WinMgmt
  Event ID : 5603
  Type : Wrning
  Description : A provider, ServerManager WMI Support eXtension, has been registered in the WMI namespace, Root¥NEC¥ESMPRO¥SM¥WSX, but did not specify the HostingModel property. This provider will be run using the LocalSystem account. This account is privileged and the provider may cause a security violation if it does not correctly impersonate user requests. Ensure that provider has been reviewed for security behavior and update the HostingModel property of the provider registration to an account with the least privileges possible for the required functionality.

  In addition to the above, there is ESMPROProvider as a provider name.
  Source and Description might somewhat vary depending on OS.

- When update installing from NEC ESMPRO Manager Ver. 5, the following event may be reported on Application event log. This does not cause a problem with installation, so you do not need to do anything for it.

  Source : EsmTrapRedirection
  Event ID : 108
  Type : Information
  Description : The description for Event ID 108 from source EsmTrapRedirection cannot be found. Either the component that raises this event is not installed on your local computer or the installation is corrupted. You can install or repair the component on the local computer.

♦ Event log which is registered during the hang-up of Alert Manager WMI Service service Start failure of ESMCommonService (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 mach ine.

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

You do not have any problem if it shift to a start state (running), but, ESMCommonService of NEC ESMPRO ServerAgentService may not start properly then. It is set to solve the phenomenon. Setting method is described below.

1. Double-click [Services] at [Administrative Tools] in [Control Panel].
2. Click [ESMCommonService] from the service list and then [Properties] in [Action] menu.
3. Set "Automatic (Delayed Start)" to Startup type of [General] property sheet.
4. Set "Restart the Service" to [First failure] and [Second failure] of [Recovery] property sheet.
5. Click [OK].

By the setting mentioned above, NEC ESMPRO ServerAgentService starts after system operation after progress for 2 minutes.

♦ Replacing a managed server

After replacing monitored server, even if the server name and IP address remains the same, delete the corresponding server icon and execute AutoRegistration.
Otherwise, the replaced server is not recognized and the server status and the configuration information is not correctly displayed.

♦ Auto Registration

- After you register a CPU blade managed via only SNMP to create the chassis information, to register another CPU blade on the same chassis with the management controller enabled, delete the previously registered CPU blade managed via SNMP and register it again.
- If a server for which Check Connection is not performed is included in the search range for Auto Registration, be sure to execute Check Connection for it before Auto Registration.

♦ Recovery from system error

If a system error occurs, follow the instruction displayed on the window.
If no instruction is displayed, restart the browser.

♦ If communication with a monitored server becomes disabled

If communication with a monitored server becomes disabled due to server down or network problem during display of the status of the server, the server icon of the group or chassis shows unknown status. In this case, the status color of the configuration information tree item may not indicate the latest status. Click the server icon from the group or chassis to display the latest information.

♦ Changing the configuration of the servers

If you change the configuration of the servers (such as attaching or removing HDDs) with [Information of server state/constitution] tree displayed, the changes will not be reflected to [Information of server state/constitution] tree. After changing the configuration, click the target server icon displayed in [Group] or [Chassis] tree to update [Information of server state/constitution] tree.

♦ **Display** of the Information of EM Card state/constitution

To update the monitoring display in case of EM Card configuration such as removing/mounting CPU blade, switching power redundancy mode, reselect EM card icon from Group/Chassis tree.

♦ If the page cannot be displayed on web browser

When you start NEC ESMPRO Manager or application that is installed after NEC ESMPRO Manager installation, the web browser may displays "The page cannot be displayed." or "The server cannot be found." and the page cannot be displayed. In this case, the port number of NEC ESMPRO Manager and other application may be overlapped. See the procedure on "Coexistence with Tomcat" in "Chapter 2 3.After Installation".

♦ RAID operation

See User's Guide of Universal RAID Utility (after Ver.4.0) or NEC ESMPRO Manager RAID System Management Guide for VMware ESXi 5 or later installed on the managed server for notes about the operation of RAID system with [Information of server state] navigation tree.

♦ Receive alerts for S2D Disk Failures

If the NEC ESMPRO ServerAgentService S2D disk monitoring function is enabled on a server monitored by NEC ESMPRO Manager, you will receive an "S2D Disk Failure" alert.

The "S2D Disk Failure" alert also occurs if the "Usage" of the S2D disk is set to "Retired" when the disk is replaced during hardware maintenance of the monitored server.

In order to halt alerts relating to the maintenance of S2D disk "Usage" operations,temporarily stop the NEC ESMPRO ServerAgentService monitoring service (ESMS2DMonitor).

For details, see "NEC ESMPRO ServerAgentService Ver.2.2 Installation Guide (Windows)".

(Chapter 2 Installation - 3. After Finishing Installation - 3.6 Monitoring S2D Disk)

♦ Suspend Periods Setting

When you set a suspend period schedule for a group, NEC ESMPRO Manager deletes the same schedule which has already been set for the managed component.

Please be careful that the group schedule is deleted from the managed component if you move the managed component from the group to another group.

♦ The default setting of EXPRESSSCOPE Engine 3

You can change BMC Configuration Information from [BMC Setting] of NEC ESMPRO Manager.

For details of [BMC Setting], see the online help of NEC ESMPRO Manager.

Refer to EXPRESSSCOPE Engine 3 User's Guide about difference between NEC ESMPRO Manager's default value and a value which 'Configuration Initialization' function will set.

♦ Standby BMC Configuration Setting

It may take a few minutes to set the Standby BMC Configuration.

If the setting is failed, please set it again after waiting for a few minutes.

♦ DHCP setting for Advanced Remote Management Card

If you change DHCP setting to [Enable] on [BMC setting] of NEC ESMPRO Manager, Advanced Remote Management Card may not be able to send the alert to the destinations.

The reason is that MAC address for the destination becomes unsuitable in the case that enabling DHCP changes the address range.

Set DHCP setting for Advanced Remote Management Card using BMC configuration tools on the managed server.

♦ Fail registration by WS-Man with NEC ESMPRO Manager Ver. 6.00 or later

If registration by WS-Man of NEC ESMPRO Manager Ver. 6.00 or later is fail, see “Chapter4 (1.7 Others)” in “NEC ESMPRO ServerAgentService Installation Guide (Windows)” and confirm Windows remote management (WinRM) settings.

♦ About Login to EXPRESSSCOPE Engine series

"Login to EXPRESSSCOPE Engine series" may fail very rarely after network setting to the BMC or shortly after the BMC reset.

In this case, please try to login again.

♦ Server Monitoring (Ping)

When the management component is equipment with vPro and the IP address for vPro is identical with the IP address for OS, the server monitoring status will be "UNKNOWN" only in case that neither vPro or OS cannot be access via network.

Set the IP address for vPro to the value which is different from the IP address for OS if you want to acquire server monitoring status for vPro and OS, respectively.

♦ Setup steps of Alert Manager

When NEC ESMPRO Manager Ver.6.00 or later is installed on the machine which installed WebSAM AlertManager, NEC ESMPRO Agent, or NEC ESMPRO ServerAgentService, go through the following steps to start Alert Manager, and set manually report settings of these products.

1. Sign-in (Log on) with the built-in administrator account.
2. Click [Report Settings] in start menu or Apps of Start.

♦ Virtual machines (Guest OS)

Virtual machines (Guest OS) which are managed by NEC ESMPRO Manager must have unique UUIDs.

If you move or copy a virtual machine, you should generate a new unique UUID.

♦ Management of ExpEther

NEC ESMPRO Manager uses the host information set on the ExpEther board to link the ExpEther board to the server that mounts it. You need to set the serial number of the server to the ExpEther board (40G) mounted on the server by using the ExpEtherConfig tool to manage the ExpEther board by NEC ESMPRO Manager.

♦ About deletion of the ExpEther board and the ExpEther I/O expansion unit

When the ExpEther board or the ExpEther I/O expansion unit has been removed by the user's operation from an ExpEther manager, NEC ESMPRO Manager keeps the registry information, but sets the status of ExpEther and ExpEther Manager to “warning”.

If you want to remove the ExpEther board or ExpEther I/O expansion unit that was removed from ExpEther Manager, you should remove the ExpEther Manager from NEC ESMPRO Manager and re-register it.

♦ 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.

♦ If the alerts is registered with the alert definition files already

NEC ESMPRO Manager Ver.6.20 or later registers SNMP traps of the following enterprise at AlertViewer. If you set the alert definition files of the following enterprise to NEC ESMPRO Manager of less than Ver.6.20, the alerts defined in NEC ESMPRO Manager is registered at AlertViewer by updating Ver.6.20 or later.

* The enterprise of SNMP traps is "1.3.6.1.4.1.232.9.4.11" or "1.3.6.1.4.1.232".

♦ About alert registration of the generic trap

NEC ESMPRO Manager Ver.6.00 or later does not support registration of the generic-trap defined rfc-1215.

♦ Use of FireFox ESR

FireFox ESR does not allow autoenrollment, manual registration, replacement, and update in the ExpEther panel.

If you want to do this, use the supported Internet Explorer.

♦ Statistics data collection

After implementing statistical data collection, set unregistered ⇒ registrated as the management state, then OS restart or NEC ESMPRO Manager service restart, you may see information about the old statistics data collection.

You collect statistics data again, there are no old statistics, and new statistics are collected.

♦ Regarding the function using Java Applet

If Java is not installed or Java not supporting Java Applet, such as Java JRE 11 is only installed on machine where you access NEC ESMPRO Manager via browser, the following function does not run on your browser.

- [Remote Control] – [Remote Console]
- Searching ExpressUpdate Agent Package in NEC EXPRESSBUILDER medium on “ExpressUpdate Agent Install”

  When you install ExpressUpdate Agent remotely and you select “EXPRESSBUILDER” in Package selection, file upload function does not run on your browser.

To enable these functions, you should install Java 8 on machine where you access NEC ESMPRO Manager via browser and add a site to the Exception Site List. For more detail, refer to “Adding a site to the Exception Site List” on the following site.

https://blogs.oracle.com/java-platform-group/upcoming-exception-site-list-in-7u51

♦ Notes for NEC ESMPRO Manager Ver.6.40 or later

When NEC ESMPRO Manager Ver.6.40 or later is installed on Pre-Windows10 (or Pre-WindowServer2016), “ESMPRO/SM Common Component” service and “ESMPRO/SM Web Container” service as the part of NEC ESMPRO Manager services may not be started and the status of service may be remaining “Starting”.

In this case, please implement the solution shown below.

[Cause]

“api-ms-win-crt-runtime-l1-1-0.dll” has not been installed on the NEC ESMPRO Manager installed computer.

[How to Fix]

Take the following action, and check if it can be improved.

1. Install All Windows Updates.

“api-ms-win-crt-runtime-l1-1-0.dll” will be installed by Windows Update. After install all pending Windows update, check the status of NEC ESMPRO Manager Service.

2. Download and install “Visual C++ Redistributable for Visual Studio 2015”

When NEC ESMPRO Manager service is not working after Windows Update, install “Visual C++ Redistributable for Visual Studio 2015”.

If “Visual C++ Redistributable for Visual Studio 2015” has been installed, please re-install it.

[Download method]

1. Visit the following Microsoft Download Center page
   https://www.microsoft.com/en-in/download/details.aspx?id=48145
2. Click the “download” button. And check the box on “vc_redist.x64.exe”.

♦ About NAT environmental support in NEC ESMPRO Manager

WS-Man management functions (management using NEC ESMPRO ServerAgentService) and management controller management functions (management using iLO and BMC) are not supported and are not managed under NAT environments.

SNMP management functions (managed using NEC ESMPRO Agent) are supported in NAT environments where global and local addresses are statically one-to-one.

♦ Precautions when registering components

Do not register the same device as two components in Management Controller Management and System Management.

If you have registered as two components, delete one of the components and register both administrations as one component in "Edit" in the "Connection Settings" of the other component.

♦ About component names at the time of automatic registration

If you perform automatic system administration registration for a component that has already been created in Management Controller Management, the system sets the component name to the host name.

1.2 NEC ExpressUpdate

♦ Installation of NEC ExpressUpdate Agent

To use the function of "Installing NEC ExpressUpdate Agent", following configurations are necessary.

*1 Change following configurations with the user belongs to Administrators group.

*2 See"Chapter4 2 Appendix Port numbers / Protocols" for network ports and protocols which this function uses.

- **Windows OS**

  "NEC ExpressUpdate Agent" cannot be installed on OS remotely.

- **Linux OS**

  *1 See document of the distribution for configuration.

  1) Configure Firewall.
     - Enable remote SSH login.
  2) Configure SSH.
     - Enable root login with SSH.

       Typically, open the sshd configuration file [/etc/sshd/sshd_config] and set "PermitRootLogin" option to "yes".

1.3 Managed Servers

♦ Setting Windows Firewall

If Windows Firewall is enabled, communication with the management machine will be interrupted and the system will not work correctly. To use NEC ESMPRO Manager Windows Firewall enabled, open the required ports.

Note For ports used by NEC ESMPRO Manager, see "Chapter4 2 Appendix Port numbers / Protocols"

♦ Support for SOL

The SOL system implements CUI remote console via LAN by the following method: BMC or vPro gets redirection data that has been output to the serial port 2 by System BIOS or console–less OS and transmits the data via the LAN. If the remote console has been set in BMC configuration information, the serial port 2 (COM2) cannot be used for connecting another device such as UPS because BMC occupies the serial port 2.

See "Appendix D Managed Components Summary" in "NEC ESMPRO Manager Ver.6 Setup Guide" to confirm the managed server supports SOL.

The remote console of Linux or SAC of Windows can be used when the managed server support SOL. However, there are the following notes:

- Use of serial port 2 is restricted. See "Notes on Managed Servers and Network Devices".
- In case of the managed server based on vPro, NEC ESMPRO Manager does not support the remote console of SAC of Windows.

There are the following notes in the managed server which does not support SOL:

- Do not attempt to boot Windows or Linux on the managed server when you use Remote Control function with utility boot mode via LAN connection. Booting of Windows or Linux may result in a failure.
- To operate RAID EzAssist for a SOL–incompatible managed server from CUI remote console via LAN, set the item［Console Redirection] to [Disable］on BIOS Setup Utility screen, reboot the system, and then boot RAID EzAssist Configuration Utility.

♦ Power control with BIOS Setup Utility Active

If you use the managed server integrated BMC, do not control the power supply while BIOS Setup Utility is active on the managed server. Otherwise, the alert setting of BMC configuration will be disabled.

♦ CUI Remote Console of DOS

To execute CUI remote console function of DOS screen, select [Server]-[Console Redirection]and change［ACPI Redirection］to［Disable］on BIOS Setup Utility screen of the managed server if［ACPI Redirection] exists on［Console Redirection］.

♦ CUI Remote Console after Windows boot

- If the managed server does not support SOL, Remote Console of SAC of Windows cannot be executed via LAN.
- To execute CUI remote console function of SAC screen after Windows boot, select［Server］-［Console Redirection] and change [ACPI Redirection］to [Enable］on BIOS Setup Utility screen of the managed server. When [ACPI Redirection］is set to [Enable] on BIOS Setup Utility screen, CUI remote console function cannot be executed after POST.
  If［ACPI Redirection] does not exist on [Console Redirection］menu, confirm that [Console Redirection after POST］is enabled.

♦ Shutdown OS

During the following OS shutdown operation, the cancel dialog box may not be displayed.

- OS shutdown by NEC ESMPRO Manager.
- OS shutdown by scheduled running function.

♦ Shutdown OS during DC-OFF state by scheduled running

When［Agent Setting］- [Shut down OS after DC-ON during Scheduled Running Halt］on NEC ESMPRO Manager is enabled, DianaScope Agent or NEC ESMPRO Agent Extension shutdowns OS if the managed server is powered up during the down period (DC OFF state time by scheduled running).
Only if the managed server is powered up from NEC ESMPRO Manager, DianaScope Agent or NEC ESMPRO Agent Extension does not shutdown OS. However, in case that any error is occurred during booting, DianaScope Agent or NEC ESMPRO Agent Extension may shutdown OS even though power up by NEC ESMPRO Manager.

♦ FT server VMware model for virtual machine BIOS information

NEC ESMPRO Agent does not manage virtual machine BIOS information in the ft server VMware model. For this reason, the BIOS version displayed in the server state is "Unable to communicate with the Agent or not installed." will be displayed.

♦ CPU information may not be displayed correctly

If you enable WS-Man management in NEC ESMPRO Manager and more than 64 logical processors are enabled in Windows Server 2016/2019, the following CPU information will not be displayed correctly in NEC ESMPRO Manager because OS limitations do not return the correct information:

- Constitution information - Hardware - Equipment information - CPU
- Constitution information - Hardware - CPU - CPU socket
- Constitution information - System - CPU - Total CPU - Total information

Check the iLO WEB interface to check the CPU information.Note that this limitation has been fixed in KB4598296 for Windows Server 2019.

♦ Multiple controller information is displayed on the storage controller of "Constitution information"

When a device equipped with a RAID controller is registered as a managed server of NEC ESMPRO Manager, the following events may occur.

- If you enable both iLO management and WS-Man management
  - When the OS is running, multiple "general information", "physical drive", and "logical drive" under the controller of "Constitution information" are displayed.
  - When the OS is not running, multiple controllers are displayed in the "Constitution Information" tree.
- If you enable iLO management only
  - Multiple controllers are displayed in the "Constitution Information" tree.

There is no problem with the display information.

♦ Multiple information on the Express5800/R110k-1 controller is displayed.

If you register Express5800/R110k-1 as a managed server in NEC ESMPRO Manager and display the storage of configuration information, multiple controllers may be displayed.

In addition, multiple controllers may be displayed on the system health screen of NEC ESMPRO Extension for Windows Admin Center.

There is no problem with the display information.

♦ Logical drive information is not displayed.

When a server configured for RAID with Intel VROC (Virtual RAID on CPU) is registered as a managed server in NEC ESMPRO Manager, logical drive information is not displayed in the configuration information storage.

♦ Precautions when uninstalling the WEM provider on an ESXi server

Uninstalling the WVM provider on an ESXi server does not work with the RAID system management features of NEC ESMPRO Manager.

If you want to register an ESXi server with WBEM provider uninstalled with NEC ESMPRO Manager, Set raid system management functions to Disabled.

♦ Notes when WS-Man management is set up and windows managed servers are registered

If windows OS audit policy is enabled,

When WS-Man accesses managed servers from NEC ESMPRO Manager,

WinRM service logon to manage server security logs

The log is output. Accessed at the default 10-minute interval, the security log

It may increase by about 24MB/day.

If you want to reduce the amount of security logs output,

On the management server where NEC ESMPRO Manager is installed, make the following configuration changes.

However, logging can only be reduced if NEC ESMPRO Manager is logged out.

So be sure to use NEC ESMPRO Manager when not using NEC ESMPRO Manager.

Please log out.

Ver.6.53 later

<Initialization>

For Ver.6.53, launch a command prompt after restarting the OS during installation and run the following command.

dscli setOption MONITORING_WSMAN_CHECK true

dscli setOption MONITORING_INTERVAL 600

<Steps to set access or not>

Launch the command prompt and run the following command.

If you want to stop monitoring:

dscli setOption MONITORING_WSMAN_CHECK false

If you want to start monitoring (default value)

dscli setOption MONITORING_WSMAN_CHECK true

[Steps to check access or not]

dscli getOption MONITORING_WSMAN_CHECK

However, if false, the monitoring of the management server is stopped, so immediately after logging in, the server.The status display may be different from the latest state.

<Steps to change the access interval>

Launch the command prompt and run the following command.

The default value is 600 (10 minutes). The configurable range is from 60 to 86400.

dscli setOption MONITORING_INTERVAL [Arbitrary set time (seconds)]

[Steps to check access intervals]

Launch the command prompt and run the following command.

dscli getOption MONITORING_INTERVAL

Ver.6.48 - Ver.6.52

[Steps to change the access interval]

Launch the command prompt and run the following command.

The default value is 600 (10 minutes). The configurable range is from 1 to 3600.

dscli setOption MONITORING_INTERVAL [Arbitrary set time (seconds)]

[Steps to check access intervals]

Launch the command prompt and run the following command.

dscli getOption MONITORING_INTERVAL

In addition, if you have an HTTP connection to the managed NEC ESMPRO ServerAgentService,

A large number of event IDs 10120 may be output in the system log.

A similar procedure can reduce logging.

Or, changing to an HTTPS connection prevents event output.

This phenomenon occurs only in environments where NEC ESMPRO Manager is Ver.6.48 or later and monitored by NEC ESMPRO ServerAgentService (WS-Man Management).

♦ What to do if you want to de-monitor the network board

If you want to de-monitor the network board, make the following settings.

1. Log in to NEC ESMPRO Manager.
2. Write down the physical address of the network where you want to hide the component name and status (want to be unmonitored).
   - Component name: Component name → server settings→ connection settings → Settings tab
   - Physical address:
     For WS-Man + iLO management
     Configuration tab → Configuration Information → Network → Network Name → General Information → Physical Addresses
     For iLO management
     Configuration tab → Configuration Information → Network → Network Name → Port Name → Physical Address
3. Log off NEC ESMPRO Manager.
4. Open the NICStatusNotShow .txt in the following folder with a text editor:
   <NEC ESMPRO Manager Install Folder>ESMWEB¥wbserver¥webapps¥esmpro¥WEB-INF¥service
5. Set the component name and physical address written down in step 2 to the NICStatusNotShow .txt with the following contents and save the file.
   (Component name) = (physical address), (physical address),...
   Example: Component Name: ServerA, Physical Address: 11:22:33:44:55:66
   ServerA=11:22:33:44:55:66
6. Log in to NEC ESMPRO Manager.
7. Check "Configuration Information" → "Network" for the component name you set. Display the icon for the network name of the physical address set in NICStatusNotShow.txt with "..."

Notes

1. If you want to set multiple physical addresses for the NICStatusNotShow .txt, separate them with ",(comma)".
   Example: ServerA=11:22:33:44:55:66,11:22:33:44:55:77
2. If you want to set multiple component names in the NICStatusNotShow .txt, set them in rows.
   Example: ServerA=11:22:33:44:55:66
   ServerB=11:22:33:44:55:77
3. Even if "Alias" of the component's display name is set to "Enabled", set "Component Name" to NICStatusNotShow.txt.
4. If the same component name is listed in multiple lines, only the setting in the last line will be valid.
5. If you set it by the wrong method, the setting will be invalid.
6. This setting cannot be performed for networks where the MAC address is not displayed in NEC ESMPRO Manager.

♦ Display network name

Depending on the LAN board installed, the [Server Status/Configuration Information] of the managed server The network name may differ from the information displayed in the iLO web interface. In that case, check the network name in the iLO web interface.

♦ Monitoring of non-SCSI/IDE devices

Storage monitoring does not monitor non-SCSI/IDE storage devices such as USB.

Please note that storage monitoring is disabled for iLO-compatible models, so this precaution does not apply.

1.4 BMC Configuration

♦ In case of exchange of PC for Management

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

♦ Function "Obtain an IP Address automatically (DHCP)"

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

1. Following version of NEC ESMPRO Manager modules supports the setting of the function.

Managed server	DianaScope
The managed server that integrates EXPRESSSCOPE Engine series. DianaScope Manager Ver.1.07.01 or later	DianaScope Manager Ver.1.07.01 or later
	DianaScope Agent Ver.2.03.05 or later
	DianaScope Configuration Ver.1.02 or later
The managed server installed Advanced Remote Management Card.	DianaScope Manager Ver.1.11.00 or later
	DianaScope Agent Ver.2.06.00 or later
	DianaScope Configuration Ver.1.02 or later

When you use the module that does not support the setting of the function "Obtain an IP Address automatically (DHCP)" for the managed server that supports the function, note followings :

- If DianaScope Agent does not support the setting of the function, DianaScope Agent always set [disable] for the function when it registers BMC configuration. DianaScope Agent also set [disable] when it writes BMC configuration information file.
- If DianaScope Configuration does not support the setting of the function, DianaScope Configuration always set [disable] for the function when it writes BMC configuration information file.
- If [System Management] tool on EXPRESSBUILDER does not support the setting of the function, the tool always set [disable] for the function when it registers BMC configuration. The tool also set [disable] when it writes BMC configuration information file.
- If remote console feature of EXPRESSBUILDER does not support the setting of the function, the tool always set "disable" for the function when it registers BMC configuration.
- If NEC ESMPRO Manager does not support the setting of the function, NEC ESMPRO Manager cannot set disable for the function nor change IP address when DianaScope Agent support the setting of the function and the function has been set enable.

2. Advanced Remote Management Card

If the managed server has been installed Advanced Remote Management Card, BMC may not immediately obtain IP address after BMC is set to obtain IP address by DHCP.

Please turn the managed server AC-OFF and then AC-ON because BMC try to obtain IP address whenever the managed server is turned AC-ON.

♦ Port that BMC uses

In case that Linux on the managed server uses port 623, NEC ESMPRO Manager cannot communicate with BMC that uses standard LAN port.

Perform following settings:

1. Add the following entries in services files (/etc/services) to reserve port 623.
   ```
   asf-rmcp 623/tcp ASF Remote Management and Control Protocol
   asf-rmcp 623/udp ASF Remote Management and Control Protocol
   ```
2. Reboot OS.

♦ Initialization of BMC Configuration Information setting

When you set［Default value］on BMC Configuration Information with DianaScope Agent or NEC ESMPRO Agent Extension, or create New Configuration with [System Management Tool] started from EXPRESSBUILDER, each items of BMC Configuration Information are initialized.

If the managed server integrates EXPRESSSCOPE Engine series, Advanced Remote Management Card, following items for BMC Web server are also initialized because they are shared with BMC Configuration Information:

DHCP Configuration

IP Address

Subnet Mask

Default Gateway

How to set the Web server is following:

- Select［System Management Tool] on［Tool]. Started from EXPRESSBUILDER DVD-ROM, and then select［Web server of BMC].
- Login to Web server of BMC, and then select［Configuration］-［Network］.

1.5 Web client

♦ Language setting on Web browser

NEC ESMPRO Manager and Web client needs to be the same OS language.

Do not change your browser language setting.

♦ Operation from two or more browsers

NEC ESMPRO Manager cannot be operated using two or more browser windows by one Web client. When you use the browser which has tabbed browsing, NEC ESMPRO Manager cannot be operated using two or more tab.

♦ Downloading Configuration Information File

When you try to download the file from［Configuration Information File］of [Linkage Service］on NEC ESMPRO Manager, Internet Explorer may block the download. Internet Explorer will also display the message on the information bar.

In this case, you can download the file with following settings:

1. Click information bar on Internet Explorer.
2. Click［Download File].
3. Read the confirmation message carefully, and select [Save].

♦ Java Plug-in version

To login to EXPRESSSCOPE Engine series through NEC ESMPRO Manager, Java plug-in of the web browser must be version 7.0 or later.

♦ Internet Explorer

- The "login to EXPRESSSCOPE Engine series" screen might not be displayed on Internet Explorer.

  In this case, add URL of EXPRESSSCOPE Engine series to "Add this Web site to the zone".

  1. Select［Internet Options］on [Tools］menu of Internet Explorer.
  2. Click [Security] tab.
  3. Click [Local Internet］zone, and then click [Sites] button.
  4. Enter URL of EXPRESSSCOPE Engine series on [add this Web site to the zone］.

     For example: If EXPRESSSCOPE Engine series has IP address 192.168.0.100, URL is "http://192.168.0.100".
  5. Click [Add] button, and then click [OK]

- The screen including Java Applet might not be displayed on Internet Explorer.

  Through the following procedure, the situation can be avoided.

  - Disable the check box.

    [Java control panel] - [Advanced] tab [Enable the next-generation Java Plug-in].

♦ Note on using Internet Explorer

If you login to NEC ESMPRO Manager from Web client using Internet Explorer for a long time, according to Internet Explorer restriction (for detail, see Microsoft Knowledge Base 830555), memory usage of Internet Explorer on Web client will increase. (About 10MB a day at maximum.)

So, do following processes if you use it for a long time after login from Web client.

- Logout Web client regularly. The increased memory by Internet Explorer restriction will be released by logout.

♦ Using Firefox

The screen including Java Applet might not be displayed on Firefox. Through the following procedure, the situation can be avoided.

- Modify the version of Java Plug-in of web browser.
- Use Internet Explorer.
- Disable the check box.
  [Java control panel] - [Advanced] tab [Enable the next-generation Java Plug-in].

♦ Using AlertViewer

In some environments, a pop-up window must be allowed on a browser to use AlertViewer.

If the pop-up window is not allowed, AlertViewer may not work properly.

♦ [Back] button of the browser

NEC ESMPRO Manager cannot be operated using browser functions like [Back] button. The screen contents cannot be displayed correctly on browsers.

Choose a necessary link or a button again in that case.

♦ Automatic logout

NEC ESMPRO Manager logs out automatically when you do not operate a screen for more than 30 minutes.

When you continue the operation, login to NEC ESMPRO Manager again.

2. Port numbers / Protocols

NEC ESMPRO Manager uses the following port numbers and protocols.

In case of two-way protocol, upper arrow shows that connection starts, and lower arrow shows that connection turns.

In case of port No. unknown, unused port is used to start connection.

[Web Client <->PC for Management]

Function	Web Client		Protocol /Direction	PC for Management	
	Component	Port No.		Port No.	Component
Management/ monitoring	web browser	Unknown	TCP -> <-	21112 (*1)	NEC ESMPRO Manager

*1 You can change the port number at the installation or see [Changing the port number].

[PC for Management <->Managed Server]

Function	PC for Management		Protocol /Direction	Managed Server	
	Component	Port No.		Port No.	Component
SNMP report to Manager	NEC ESMPRO Manager	162	UDP <-	Unknown	NEC ESMPRO Agent NEC ESMPRO ServerAgent Service
TCP/IP report to Manager (TCP/IP in Band)	NEC ESMPRO Manager	31134 (*1)	TCP <- ->	Unknown	NEC ESMPRO Agent NEC ESMPRO ServerAgent Service
Auto Registration Server Monitoring (SNMP)	NEC ESMPRO Manager	Unknown	UDP -> <-	161	NEC ESMPRO Agent
Server Monitoring (Ping)	NEC ESMPRO Manager	--	ICMP -> <-	--	OS BMC iLO vPro
BMC Setting NEC ExpressUpdate	NEC ESMPRO Manager	Unknown	TCP -> <-	443(*2)	BMC
Alert from BMC	NEC ESMPRO Manager	162	UDP <-	Unknown	BMC
Alert Trap from iLO	NEC ESMPRO Manager	162	UDP <-	Unknown	iLO
Acknowledge of Alert from BMC (When Alert Acknowledge is Enable)	NEC ESMPRO Manager	47116	UDP ->	623	BMC
Server Monitoring	NEC ESMPRO Manager	47117 (*3)	UDP -> <-	623	BMC
Information Collection (through BMC)	NEC ESMPRO Manager	47117 (*3)	UDP -> <-	623	BMC
Remote Batch	NEC ESMPRO Manager	47117 (*3)	UDP -> <-	623	BMC
Operation with Command Line I/F	NEC ESMPRO Manager	47117 (*3)	UDP -> <-	623	BMC

Power Control	NEC ESMPRO Manager	47117 (*3)	UDP -> <-	623	BMC
Remote Console (CUI, SOL)	NEC ESMPRO Manager	47117 (*3)	UDP -> <-	623	BMC
Remote Console (CUI, non-SOL)	NEC ESMPRO Manager	47115	UDP -> <-	2069	System BIOS
Remote Wake Up	NEC ESMPRO Manager	Unknown	UDP ->	10101	LAN Board
Information Collection (through NEC ESMPRO Agent Extension)	NEC ESMPRO Manager	Unknown	TCP -> <-	47120-47129 (*4)	DianaScope Agent NEC ESMPRO Agent Extension
Scheduled Running	NEC ESMPRO Manager	Unknown	TCP -> <-	47120-47129 (*4)	DianaScope Agent NEC ESMPRO Agent Extension
Search of NEC ExpressUpdate Agent, Universal RAID Utility	NEC ESMPRO Manager	Unknown	TCP -> <-	7	OS
Search of NEC ExpressUpdate Agent, Universal RAID Utility ESXi server	NEC ESMPRO Manager	Unknown	UDP -> <-	427	NEC ExpressUpdate Agent Universal RAID Utility ESXi
NEC ExpressUpdate Agent, Universal RAID Utility	NEC ESMPRO Manager	Unknown	TCP -> <-	Unknown	NEC ExpressUpdate Agent Universal RAID Utility
NEC ExpressUpdate Agent, Universal RAID Utility event monitoring	NEC ESMPRO Manager	21112	TCP <- ->	Unknown	NEC ExpressUpdate Agent Universal RAID Utility
Remote installation of NEC ExpressUpdate Agent (When managed server's OS is Windows type)	NEC ESMPRO Manager	Unknown	UDP -> <-	137	OS
		Unknown	TCP -> <-	445	OS
Remote installation of NEC ExpressUpdate Agent (When managed server's OS is Linux type)	NEC ESMPRO Manager	Unknown	TCP -> <-	22	OS
Communication with the iLO	NEC ESMPRO Manager	Unknown	TCP -> <-	443 80 (*7)	iLO
Communication with the vPro	NEC ESMPRO Manager	Unknown	TCP -> <-	16992	vPro
Remote Console	NEC ESMPRO Manager	Unknown	TCP -> <-	16994	vPro
Server Monitoring (WS-Man / ESXi)	NEC ESMPRO Manager	Unknown	TCP -> <-	443	ESXi
CIM Indication Subscription	NEC ESMPRO Manager	Unknown	TCP -> <-	5989	ESXi
CIM Indication Receiving events	NEC ESMPRO Manager	6736 (*5)	TCP <- ->	Unknown	ESXi NEC ESMPRO ServerAgent Service

Server Monitoring (WS-Man)(HTTP) CIM Indication Subscription(HTTP) (When managed server's OS is Windows type)	NEC ESMPRO Manager	Unknown	TCP -> <-	5985 80(*6)	NEC ESMPRO ServerAgent Service
Server Monitoring (WS-Man)(HTTPS) CIM Indication Subscription(HTTPS) (When managed server's OS is Windows type)	NEC ESMPRO Manager	Unknown	TCP -> <-	5986 443(*6)	NEC ESMPRO ServerAgent Service
Server Monitoring (WS-Man)(HTTPS) (When managed server's OS is Linux type)	NEC ESMPRO Manager	Unknown	TCP -> <-	5986	NEC ESMPRO ServerAgent Service
CIM Indication Subscription(HTTPS) (When managed server's OS is Linux type)	NEC ESMPRO Manager	Unknown	TCP -> <-	5989	NEC ESMPRO ServerAgent Service
CIM Indication Subscription (Ping)	NEC ESMPRO Manager	--	ICMP -> <-	--	OS

*1 The port number used by TCP/IP report to Manager can be changed in "TCP/IP Report Setting" screen of AlertViewer.

*2 BMC's port number can be changed on [BMC Setting] - [Network] - [Service].

*3 NEC ESMPRO Manager's port number used for communication with BMC can be changed on the "Environment" screen.

*4 The module uses the lowest unused port of the range.

*5 The port number can be changed on [Alert Receive Setting] - [CIM-Indication Setting] - [Port Number] of AlertViewer.

*6 The used default port number depends on Windows Remote Management(WinRM) on the managed server. For detailed information, see " Appendix C Port number for WS-Man communication" in "NEC ESMPRO Manager Ver.6 Setup Guide".

*7 The module uses the port number of iLO Web Server. The port number can be changed. For detailed information, see "iLO5 user’s guide".

[PC for Management -> EM Card]

Function	PC for Management		Protocol /Direction	EM Card	
	Component	Port No.		Port No.	Component
Information Collection	NEC ESMPRO Manager	47117(*1)	UDP -> <-	623	EM Card
	NEC ESMPRO Manager	47170-47179(*2)	TCP/IP <-	623	EM Card
	NEC ESMPRO Manager	47180-47189(*2)	UDP -> <-	623	EM Card
Auto Registration EM Card Monitoring (SNMP)	NEC ESMPRO Manager	Unknown	UDP -> <-	161	EM Card
EM Card Monitoring	NEC ESMPRO Manager	47117(*1)	UDP -> <-	623	EM Card
BMC configuration of CPU blade	NEC ESMPRO Manager	47117(*1)	UDP -> <-	623	EM Card
Operation with Command Line I/F	NEC ESMPRO Manager	47117(*1)	UDP -> <-	623	EM Card
SNMP Trap	NEC ESMPRO Manager	162	UDP <-	Unknown	EM Card
Ack sending for SNMP trap	NEC ESMPRO Manager	Unknown	UDP ->	5002	EM Card

*1 NEC ESMPRO Manager uses a same port number for communication with BMC and EM card. The port number can be changed on the [Environment Setting] screen.
*2 The module uses the lowest unused port of the range.

[PC for Management <-> Other Vendor's Management Console]

Function	PC for Management		Protocol /Direction	Other Vendor's Management Console	
	Component	Port No.		Port No.	Component
SNMP Trap Redirection	NEC ESMPRO Manager	Unknown	UDP ->	162	Other Vendor's Management Console

[Inside of PC for Management]

Function	Component	Port No.	Protocol /Direction	Port No.	Component
NEC ESMPRO Manager	NEC ESMPRO Manager	21115	TCP -> <	21115	NEC ESMPRO Manager
NEC ESMPRO Manager	NEC ESMPRO Manager	51099-51107 (*1)	UDP -> <-	51099-51107 (*1)	NEC ESMPRO Manager
NEC ESMPRO Manager	NEC ESMPRO Manager	21113 21114	TCP -> <-	21113 21114	NEC ESMPRO Manager
NEC ESMPRO Manager	NEC ESMPRO Manager	Unknown	TCP -> <-	8807 (*2)	ESM Alert Service
NEC ESMPRO Manager Direct connection / Modem connection	NEC ESMPRO Manager	Unknown	TCP -> <-	47140-47149 (*1)	NEC ESMPRO Manager (DianaScope Modem Agent)
Server Monitoring	NEC ESMPRO Manager	Unknown	TCP -> <-	Unknown	NEC ESMPRO Manager
NEC ESMPRO Manager	NEC ESMPRO Manager	21117(*2)	HTTP -> <-	21117 (*2,*3)	ESM32BridgeService for NvAccessor
NEC ESMPRO Manager	NEC ESMPRO Manager	21118(*2)	HTTP -> <-	21118 (*2,*3)	ESM32BridgeService for AlertListener

*1 The module uses the lowest unused port of the range.

*2 No firewall configuration is needed as it is used for inter-process communication on the local computer.

*3 The port number of ESM32BridgeService can be changed. Please check here.

3. Services

NEC ESMPRO Manager registers the following services.

Service Name	Process Name	Function
Alert Manager Main Service	AMVMain.exe	Various processing about reports.
Alert Manager WMI Service	AMwmiprv.exe	Setting of report function
Alert Manager HTTPS Service	AMMHTTP.exe	Forward Express Report (HTTPS) (*2)(*3)
Alert Manager ALIVE(S) Service	AMVALVS.exe	ExpressReportService reports.
Alert Manager Socket(R) Service	amvsckr.exe	Receiving TCP/IP In-bound report. (*1)
Dmi Event Watcher	dmieventwatcher.exe	Receiving DMI events.
ESM Alert Service	esmasvnt.exe	Receiving traps (alerts).
NVBASE System Service	nvbase.exe	Communication base for NEC ESMPRO Manager.
ESM Command Service	nvcmd.exe	Periodical command execution.
ESM Remote Map Service	nvrmapd.exe	Synchronizing Remote Map status color.
ESMPRO/SM Base Service	esmdsvnt.exe(*4) esmdsvap.exe	Server status watching.
ESMPRO/SM Event Manager	jsl.exe	CIM indication Subscription / Receiving events
ESMPRO/SM Common Component	jsl.exe	Main service
ESMPRO/SM Base AlertListener	jsl.exe	Function listening to reports receiving alerts from NVBASE System Service.
ESMPRO/SM Web Container	jsl.exe	Web application server
ESM32BridgeService for NvAccessor	jsl.exe	Connection function for Main service and Communication base for NEC ESMPRO Manager.
ESM32BridgeService for AlertListener	jsl.exe	
DianaScope ModemAgent	DianaScopeModemAgent.exe	For modem/direct connection

*1 This service has stopped when "Receive from Agent (TCP/IP)" of the TCP/IP Report Setting is disabled.

*2 The startup is set as "Manual" by default.

*3 "Alert Manager HTTPS Service" is started and the startup is set as "Automatic" when "Express Report (HTTPS) from Manager" of Report Setting is enabled.

"Alert Manager HTTPS Service" is stopped and the startup is set as "Manual" when "Express Report (HTTPS) from Manager" of Report Setting is disabled.

*4 For ESMPRO/SM Base Service, esmdsvnt.exe is registered as a service process, and esmdsvap.exe is started and stopped on starting and stopping the service.

- **Dependencies of the services**

The dependencies of the services are the followings:

Alert Manager ALIVE(S) Service
Alert Manager WMI Service
Alert Manager HTTPS Service
Alert Manager Main Service
NVBASE System Service
    ESM Alert Service
        Alert Manager Socket(R) Service
        Dmi Event Watcher
    ESM Command Service
    ESM Remote Map Service
    ESMPRO/SM Base Service
        ESM32BridgeService for NvAccessor
            ESM32BridgeService for AlertListener
                ESMPRO/SM Common Component
                    ESMPRO/SM Base AlertListener
                        ESMPRO/SM Event Manager
                            ESMPRO/SM Web Container
DianaScope ModemAgent

- **Order of starting or stopping services**

To start or stop services, perform the following procedures.

♦ Starting services

1. Alert Manager ALIVE(S) Service (*)
2. Alert Manager WMI Service
3. Alert Manager HTTPS Service (*)
4. Alert Manager Main Service
5. NVBASE System Service
6. ESM Remote Map Service
7. ESM Command Service
8. ESM Alert Service
9. Dmi Event Watcher (*)
10. ESMPRO/SM Base Service
11. Alert Manager Socket(R) Service (*)
12. ESM32BridgeService for NvAccessor
13. ESM32BridgeService for AlertListener
14. ESMPRO/SM Common Component
15. ESMPRO/SM Base AlertListener
16. ESMPRO/SM Event Manager
17. ESMPRO/SM Web Container
18. DianaScope ModemAgent

♦ Stopping services

1. DianaScope ModemAgent
2. ESMPRO/SM Web Container
3. ESMPRO/SM Event Manager
4. ESMPRO/SM Base AlertListener
5. ESMPRO/SM Common Component
6. ESM32BridgeService for AlertListener
7. ESM32BridgeService for NvAccessor
8. Alert Manager Socket(R) Service (*)
9. ESMPRO/SM Base Service
10. Dmi Event Watcher (*)
11. ESM Alert Service
12. ESM Command Service
13. ESM Remote Map Service
14. NVBASE System Service
15. Alert Manager Main Service
16. Alert Manager HTTPS Service (*)
17. Alert Manager WMI Service
18. Alert Manager ALIVE(S) Service (*)

* May be stopped depending on the settings. In such a case, there is no need to start or stop the service.

4. Procedure to disable the Windows application setting

This section provides the procedure to disable the Windows application setting.

♦ Automatic Data Collection

To disable the Automatic Data Collection setting, perform the following procedures.

1. Select a server icon on Operation Window and select [Automatic Data Collection Setting] with right mouse button to display [Automatic Data Collection Setting] Dialog Box.
2. Delete all items in Collecting Servers list.
3. Click [OK].

♦ Remote Manager

To disable the Remote Manager setting, perform the following procedures. (Recommends performing the same procedure to the another Manager .)

Important In case that the Remote Manager setting is disabled, you cannot disable the Send Alert Filter setting. Disable the Send Alert Filter setting before disabling the Remote Manager setting.

1. Select [Customize]-[Remote Manager] from [Options] menu of Operation Window to display [Remote Manager] Dialog Box.
2. Select [Notification Event] tab and delete all items in the list.
3. Select [Access Permission] tab and delete all items in the list.
4. Select [Routing Manager] tab and delete all items in the list.
5. Select [Neighbor Manager] tab and delete all items in the list.
6. Click [OK].

♦ Alert driven status control

To disable the Alert driven status control setting, perform the following procedures.

1. Select [Options] from [Tools] menu of AlertViewer to display [Options] Dialog Box.
2. Select [General] tab and uncheck the checkbox of [Alert driven status control].
3. Click [OK].

♦ Receive Alert Filter

To disable the Receive Alert Filter setting, perform the following procedures.

1. Select [Alert Filter]-[Receive Alert Filter] from [Tools] menu of Operation Window to display [Receive Alert Filter Settings] Dialog Box.
2. Uncheck the checkbox of [Enable Alert Filtering].
3. Click [OK].

♦ Send Alert Filter

To disable the Send Alert Filter setting, perform the following procedures.

1. Select [Alert Filter]-[Send Alert Filter] from [Tools] menu of Operation Window to display [Send Alert Filter Settings] Dialog Box.
2. Uncheck the checkbox of [Enable Alert Filtering].
3. Click [OK].

♦ Same Alert Blocker

To disable the Same Alert Blocker setting, perform the following procedures.

1. Select [Alert Filter]-[Same Alert Blocker] from [Tools] menu of Operation Window to display [Same Alert Blocker] Dialog Box .
2. Uncheck the checkbox of [Block the same alerts].
3. Click [OK].

♦ AlertLogAutoSave

To disable the AlertLogAutoSave setting, perform the following procedures.

1. Select [AlertLogAutoSave Settings] from [Tools] menu of AlertViewer to display [AlertLogSave Settings] Dialog Box.
2. Uncheck the checkbox of [Enable AlertLogAutoSave].
3. Click [OK].

♦ Regular Autodiscovery

To disable the Regular Autodiscovery setting, perform the following procedures.

Since each map on Operation Window has configurations, you should perform the procedures to all maps.

1. Select the target map in the left pane (Tree View).
2. Select [Autodiscover] - [Baackgraound] from [Tools] menu of Operation Window to display [Background AutoDiscover] dialog Box.
3. Select [Disable AutoDiscovery].
4. Click [OK].