MasterScope SystemManager G 8.0 WebConsole Option

Installation Guide

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NEC Corporation
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Preface

Target readers and objective

This document is intended for system administrators who install MasterScope SystemManager G 8.0 WebConsole Option (hereinafter called WebConsole Option) and describes how to install WebConsole Option.

Overview of the document

This document describes the procedure for installing WebConsole Option.

To enable the use of WebConsole Option, first install the following functions.

- SystemManager G 8.0 Manager
- SystemManager G 8.0 Agent
- SystemManager G 8.0 View

For details about the installation, see the "MasterScope Media April 2018 Release Memo."

Notation rules of this document

In this document, important notes and related information are described as follows:

Note

Notes, warnings, and supplements on functions, operations, and settings are described.

Tip

Additional information and reference information are described.

Notation list

The following conventions apply to this document.

Notation	Meaning	Example
Square brackets	Placed before and after an item (such as a text box, check box, or tab) on the screen	Enter the machine name in the **Machine name** text box. **All** check box
" " Double quotation marks	Placed before and after a screen name (such as a dialog box or window), and a name of other manuals	"Setting" window "*Installation Guide*"
Square brackets [ ] in a command line	Indicates that the specification of the value in [ ] can be omitted.	add [/a] Gr1

Notation	Meaning	Example
Pipe | in a command line	Indicates that either of the elements delimited with the pipe will be selected. The element selection can be omitted when a pipe is used in square brackets. The element selection must be made when a pipe is used in braces.	delete [/a|/f] group add {--code=*codeword*|--file=*file-path*}
Braces { } in a command line	Are used together with a pipe, indicating that either of the elements delimited with the pipe must be selected.	add {--code=*codeword*|--file=*file-path*}
Monospace font (Courier New)	Output from the command line (such as a message or prompt)	Run the following command. `replace Gr1`
Italicized monospace font (Courier New)	Indicates the items to be replaced with a valid value and input by users. If the value contains any spaces, surround it with " " (double quotation marks).	add *GroupName* `InstallPath="Install Path"`
Gray-scale background	Shows a concrete example of a command to run, a return value(s), and the like.	`msc_license_cmd.exe --register="C:\tmp\codeword.txt" --force`

JSON example	To improve readability, line breaks and indentation are added to the displayed JSON examples.	`{`
		`  "ID": [`
		`  "45ed3512"`
		`  ],`
		`  "Manager": {`
		`  "ErrorMessage": "",`
		`  "Name": "localhost",`
		`  "Status": 200,`
		`  "StatusCode": 200`
		`  }`
		`}`

Definitions

Definition	Description
<WebConsole-install-path>	Installation directory of SystemManager G WebConsole Option. The default installation directory varies depending on the environment as follows: In the Windows environment, the default installation directory is "C:\Program Files\NEC\pf\opm\manager". In the Linux environment, the default installation directory is "/opt/nec/pf/opm/manager".
<manager-install-path>	Installation directory of SystemManager G Manager. The default installation directory varies depending on the environment as follows: In the Windows environment, the default installation directory is "C:\Program Files (x86)\NEC\UMF\Operations". In the Linux environment, the default installation directory is "/opt/UMF/Operations".

Definition	Description
<Tomcat-install-path>	Installation directory of Application Server. The default installation directory varies depending on the environment as follows: In the Windows environment, the default installation directory is "C:\Program Files (x86)\NEC\UMF\Operations\Tomcat". In the Linux environment, the default installation directory is "/opt/NEC/UMF/Operations/Tomcat".
<WebSAM Root>	Mounting directory of MasterScope media. The default installation directory varies depending on the environment.

Contents

Chapter 1. WebConsole Option Overview

This chapter describes the operating environment of WebConsole Option and cautions for its installation.

Contents

1.1 Operating environment

For details about the WebConsole Option operating environment, see "Operating Environments" of "WebConsole Option Release Memo."

1.2 Software requirements

- The following software is necessary for the Windows version of WebConsole Option to run.

Category	Package
External software	- Microsoft Visual C++ 2017 Redistributable Package(x64) (*1)(*2) - Microsoft Visual C++ 2013 Redistributable Package(x64) (*1) - Microsoft Visual C++ 2013 Redistributable Package(x86) (*1) - psqlodbc_x64 - PostgreSQL 9.6 - OpenSSL 1.0.2n
SystemManager G Component	- SystemManager G 8.0 Manager - SystemManager G 8.0 Agent - SystemManager G 8.0 View - Application Server 8.5.24 (*3) - Service Governor 3.26.0 (*3)

*1 Referring to this document, install it before installing WebConsole Option.

*2 For Windows Server 2008 (x64), 2008 R2, 2012, and 2012 R2, KB2999226 must be applied.

*3 Referring to this document, install it at the same time as WebConsole Option.

- The following software is necessary for the Linux version of WebConsole Option to run.

Category	Package
External software (*1)	- unzip - unixODBC - unixODBC-devel - postgresql-odbc - postgresql (9.6) - postgresql-server (9.6) - postgresql-libs (9.6) - openssl
SystemManager G Component	- SystemManager G 8.0 Manager - SystemManager G 8.0 Agent - SystemManager G 8.0 View - Application Server 8.5.24 (*2) - Service Governor 3.26.0

*1 They must be installed before the installation of WebConsole Option.

*2 Referring to this document, install it at the same time as WebConsole Option.

1.3 Component configuration

This section describes the component configuration of SystemManager G and WebConsole Option.

1.3.1 Components of SystemManager G

The following provides an overview of the SystemManager G components required to use WebConsole Option.

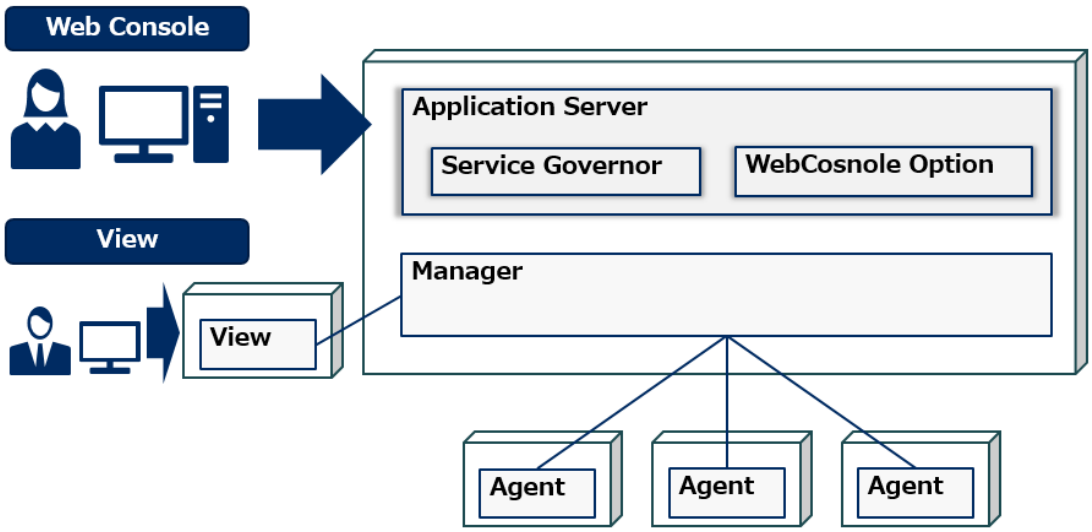


Figure 1-1 Configuration of SystemManager G

Table 1-1 SystemManager G component list

Component name (function name in the installer)	Role
Manager	This component provides a function that integrates and manages the information collected by agents.
Agent	This component provides a function that reports server monitoring information to the manager. This component is to be installed on the monitored server.
View	This component provides a console function that displays the information collected into the manager in a view and issues commands to the server.
Application Server	This is an application server (Tomcat) on which WebConsole Option and Service Governor run.
Service Governor	This component communicates with the manager, collects performance and other information from the manager, and sends it to WebConsole Option.
WebConsole Option	This component provides WebGUI for users.

This document describes the procedures for installing the application server, Service Governor, and WebConsole Option.

For an explanation of the procedures for installing the manager, agent, and view, see the "MasterScope Media Release Memo."

The manager and WebConsole Option can be installed on the same server or on different servers.

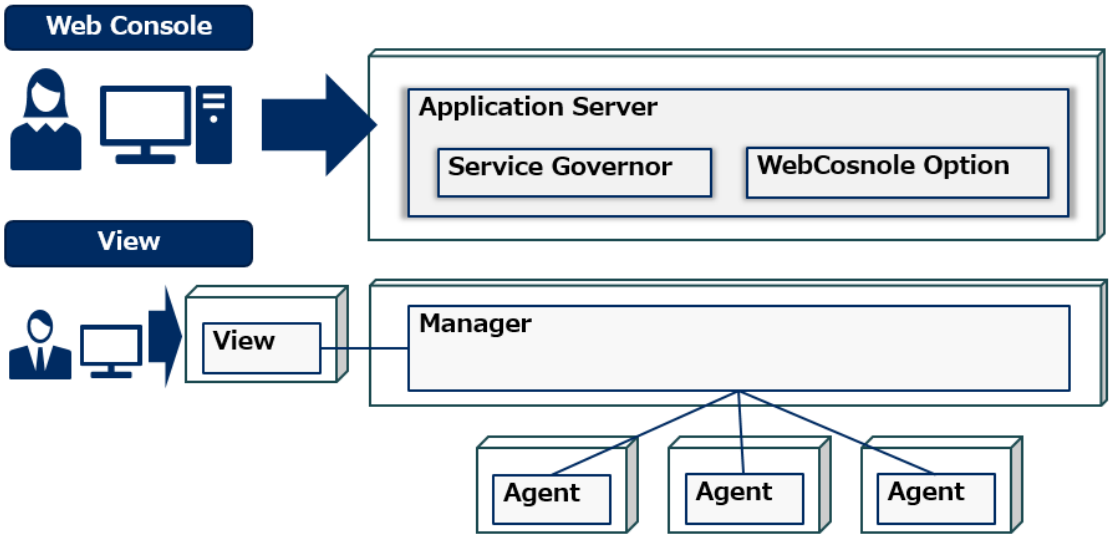


Figure 1-2 Configuration in which the manager and WebConsole Option are installed on different servers

1.3.2 Components of WebConsole Option

The following provides an overview of the components of WebConsole Option.

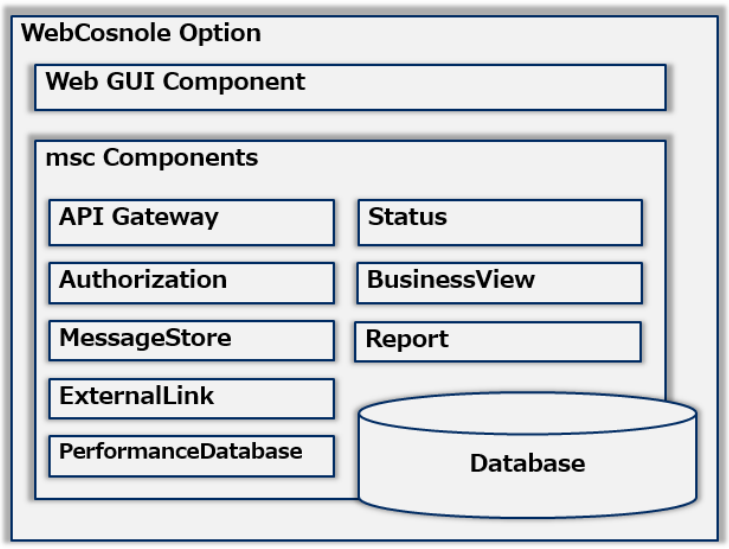


Figure 1-3 Configuration of WebConsole Option

Table 1-2 WebConsole Option component list

Component name (function name in the installer)	Role
Common Library Component	This is a common library used with WebConsole Option, providing WebGUI for end users. This component performs user authentication.
API Gateway Component	This component provides the gateway function for the RESTful API. This component also manages the license of this product and manages address information between components.
Authorization Component	This component manages the authority information assigned to users.

Component name (function name in the installer)	Role
MessageStore Component	This component accumulates and manages collected messages.
Status Component	This component manages the status of the monitoring target displayed with WebConsole Option.
ExternalLink Component	This is a component for connecting an external interface to SystemManager G Manager.
BusinessView Component	This component provides functions for classifying the events reported from monitoring targets from the viewpoint of customer business and monitoring them.
PerformanceDataStore Component	This component accumulates and manages collected performance data. This component also generates statistical data from performance data and manages it.
Report Component	This component provides functions to monitor messages and report them.
Web GUI Component	This component provides Web GUI for users. This component performs user management, authentication, and authorization.
Database	This component accumulates and manages monitoring definitions and monitoring results.

Tip

The API gateway, authority management, message store, monitoring status management, external interface linkage function, business view, performance data store, and report are collectively referred to as msc components.

Chapter 2. Installation

This chapter describes how to install and set up SystemManager G.

Contents

2.1 Notes on installation

Notes on installation are given below. Check them carefully prior to installation.

1. Do not perform modify/repair installation. Prior to installation, back up the `<WebConsole-install-path>\conf` directory and recover it once installation is complete.
2. The IPv6 network environment is not supported.
3. The path to specify when installing the software and the components to install with WebConsole Option cannot contain multi-byte characters.
4. Before installing WebConsole Option, set the language and the time zone of the OS according to the environment.
5. If the directories used by WebConsole Option and the required packages (SystemManager G Manager, Application Server, Service Governor, and PostgreSQL) are subject to a scan by Windows Defender or a virus scan (including on-access scan), normal operation may not be possible. For this reason, exclude the directories used (installation directory and data area directory) from the scan.

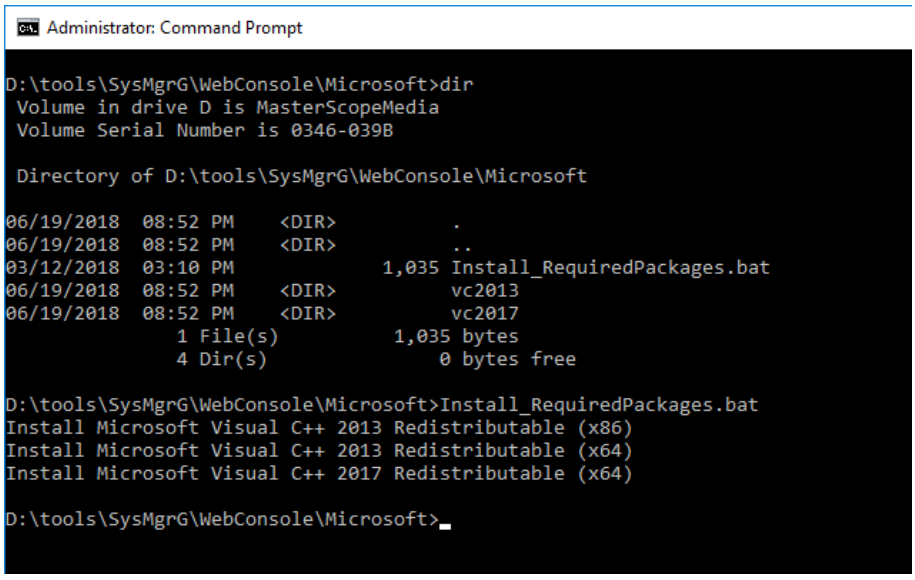
2.2 InstaInstallation in a Windows environment

This section describes how to install WebConsole Option in a Windows environment.

2.2.1 Installing WebConsole Option

This section describes the procedure for installing all the components.

1. Log on to the machine on which to install the packages with the Administrator account.
2. Install Visual Studio VC++ Redistributable. Mount the MasterScope Media and execute `<Media Root>\tools\SysMgrG\WebConsole\Microsoft\Install_RequiredPackages.bat` from the command prompt.



If a dialog box prompting you to restart the Windows OS is displayed or if the following message is displayed at the command prompt, restart the OS.

```
reboot required.
```

Figure 2-1 Executing Install_RequiredPackages.bat

3. For the following operating systems, the Windows KB2999226 update program must have been applied.

   - Windows Server 2012 R2
   - Windows Server 2012
   - Windows Server 2008 R2
   - Windows Server 2008 (x64)

   If it has not been applied, perform a Windows Update or refer to the following information published by Microsoft to apply KB2999226.

   https://support.microsoft.com/en-us/help/2999226/

4. Execute `<Media Root>\Windows\Setup.exe`.

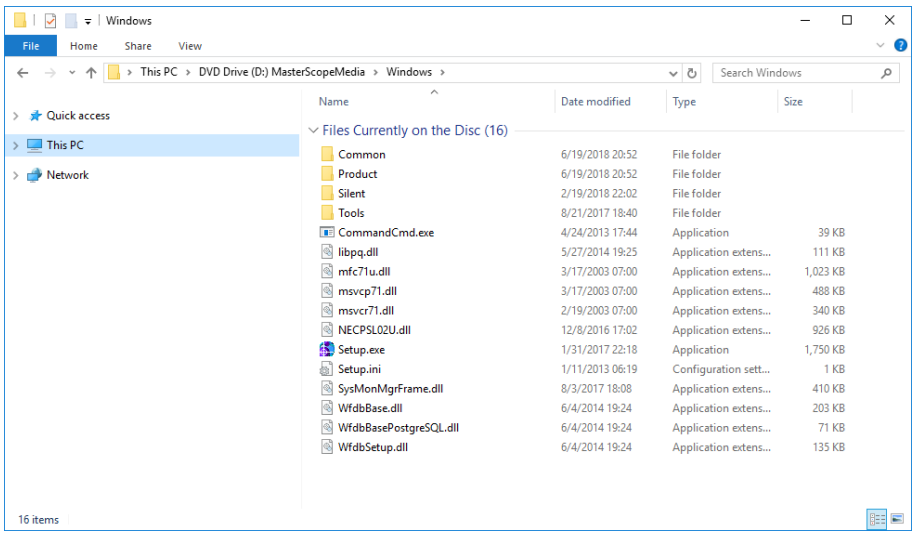


Figure 2-2 Executing Setup.exe

5. The[MasterScope Media Installer screen is displayed. Select [Install] and click [Next].

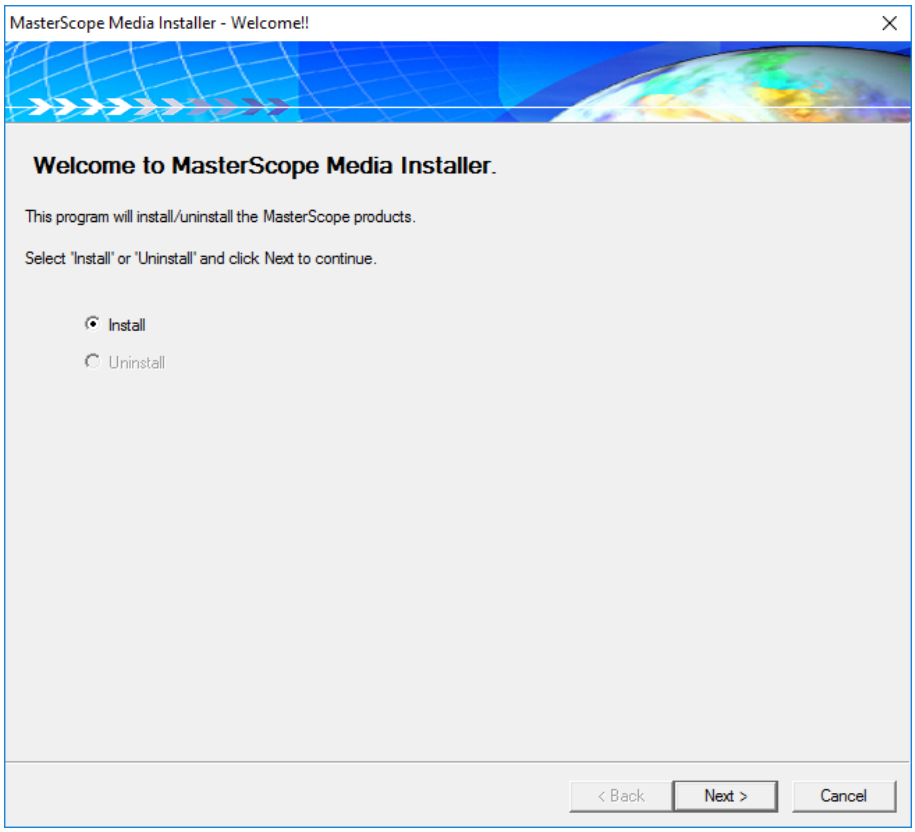


Figure 2-3 MasterScope Media Installer screen

6. A list of products that can be installed is displayed. Select the check boxes of the following products and click [Next].
   - Application Server
   - MasterScope Service Governor
   - SystemManager G WebConsole Option

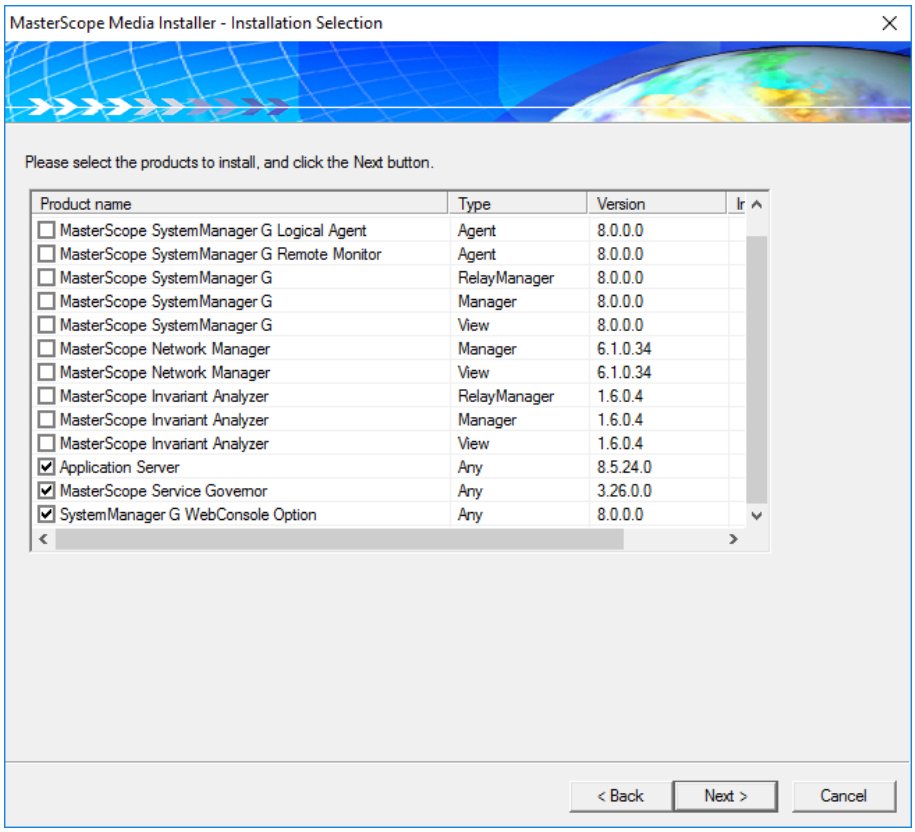


Figure 2-4 Screen for selecting the products to install

7. In the lower left [Configuration list] frame of the installation setting screen, a list of products to install is displayed.

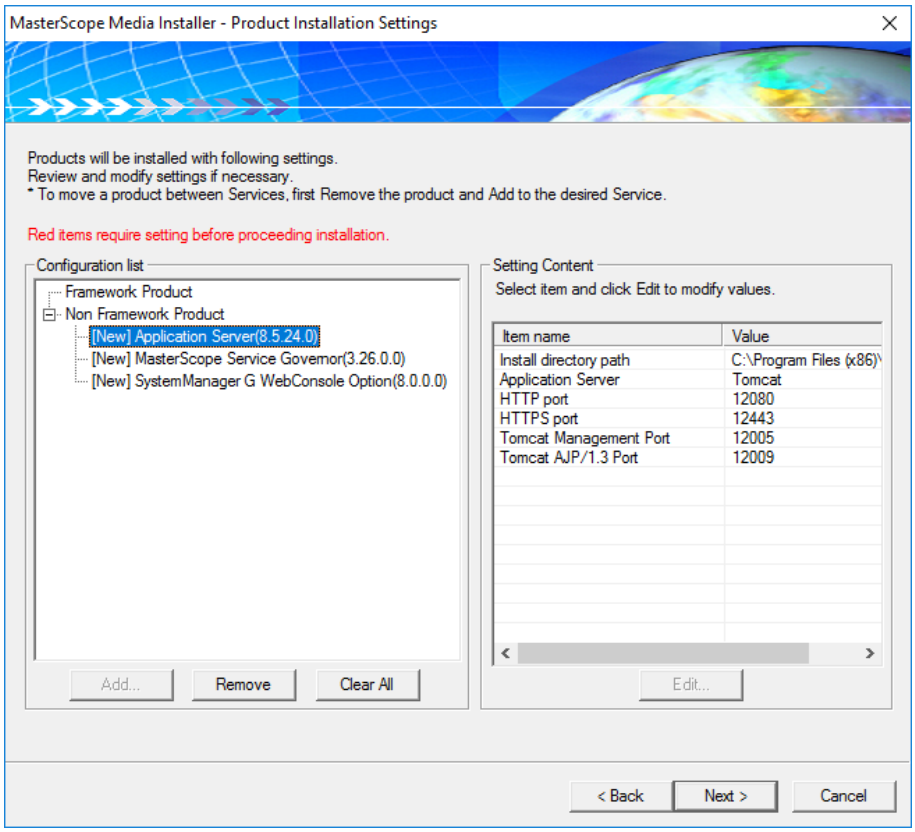


Figure 2-5 Installation setting screen (Application Server settings)

Select [Application Server] and set each setting item in [Setting Content].

Click the setting item and then click [Edit] or double-click the setting item, and make the necessary settings on the displayed setting screen.

For information about the setting items and their default values, see the following table.

This section describes each parameter in detail.

Setting item name	Setting value
Install directory path	Specify the installation destination folder. The default value is Windows : C:¥Program Files (x86)¥NEC¥UMF¥Operations¥Tomcat Linux: /opt/UMF/Operations/Tomcat Specify the installation folder within Windows : 55 characters. Linux : 128 characters.
	Specify 2. If you specify 2, Tomcat is installed.
	Specify the HTTP port number of Service Governor WebAPI Base Option. The default value is "12080".
	Specify the HTTPS port number of Service Governor WebAPI Base Option. The default value is "12443".
	Specify the Tomcat management port number. The default value is "12005".
	Specify the Tomcat AJP/1.3 port number. The default value is "12009".

Caution

```
Specify a port number that is not being used by another product.
Otherwise, installation will fail.
```

Caution

```
The following characters cannot be used to specify an installation folder.
¥ / : * ? " > < | ; ' &
```

Once the settings have been made, click [Next].

8. The Installation Confirmation screen is displayed. Confirm the contents and then click the [Start] button.

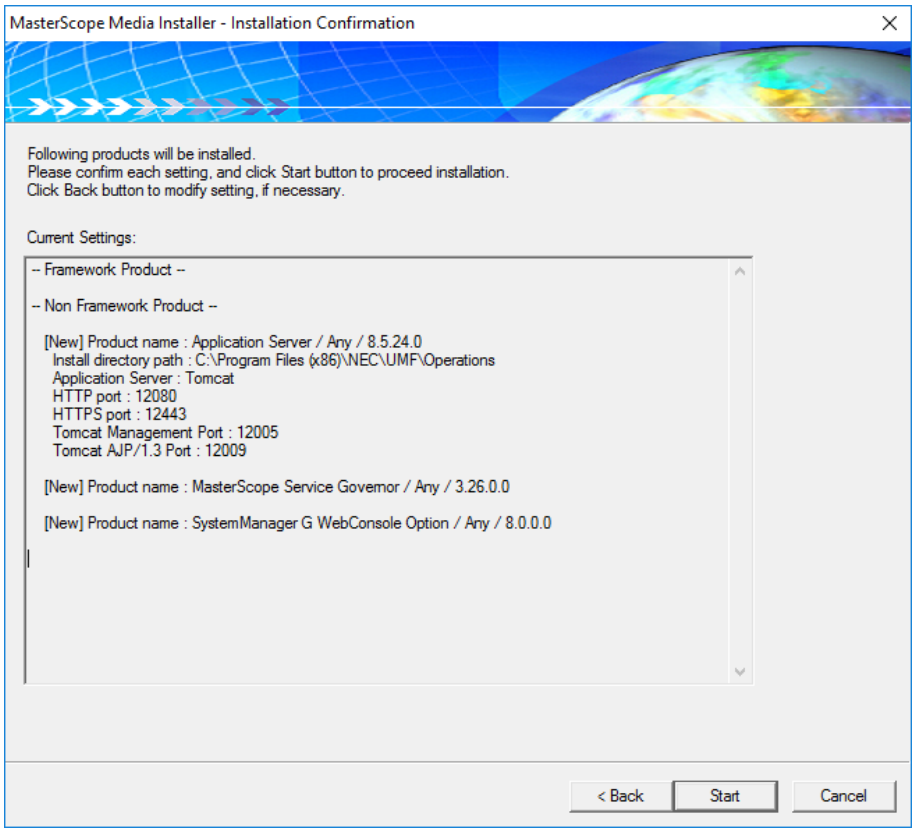


Figure 2-6 Screen for confirming the items to install

The installation execution screen is displayed, and the installation of the selected products is started.

9. Install the required WebConsole Option software.

   On the machine on which WebConsole Option is to be installed, a list of required packages that have not yet been installed is displayed. Check the contents and then click the [Install] button to start the installation.

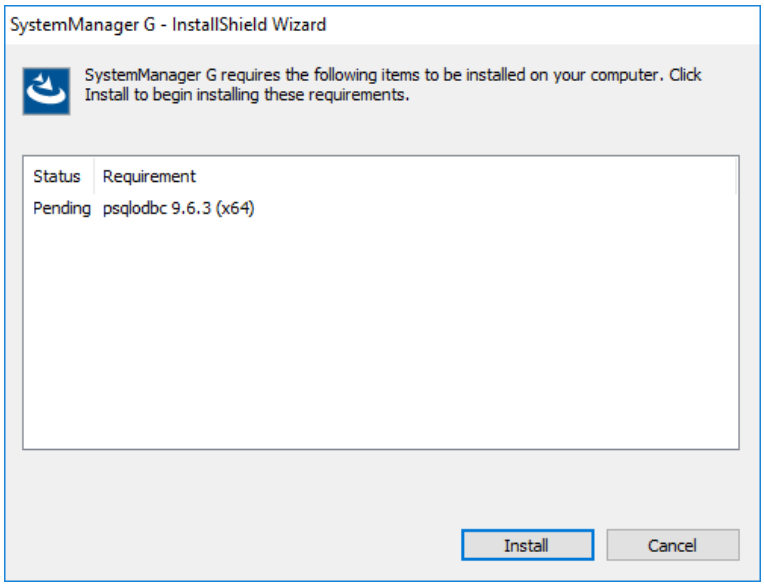


Figure 2-7 Screen displaying required software

If psqlodbc does not appear in the required software list, some of these steps will be unnecessary. See the following table.

Whether displayed or not	Description
psqlodbc is displayed.	After the [Install] button is clicked, a dialog box is displayed. Perform step "10. (page 13)" and subsequent steps.
psqlodbc is not displayed.	Perform step "15. (page 15)" and subsequent steps.

10. The psqlodbc installation start screen is displayed. Click [Next].

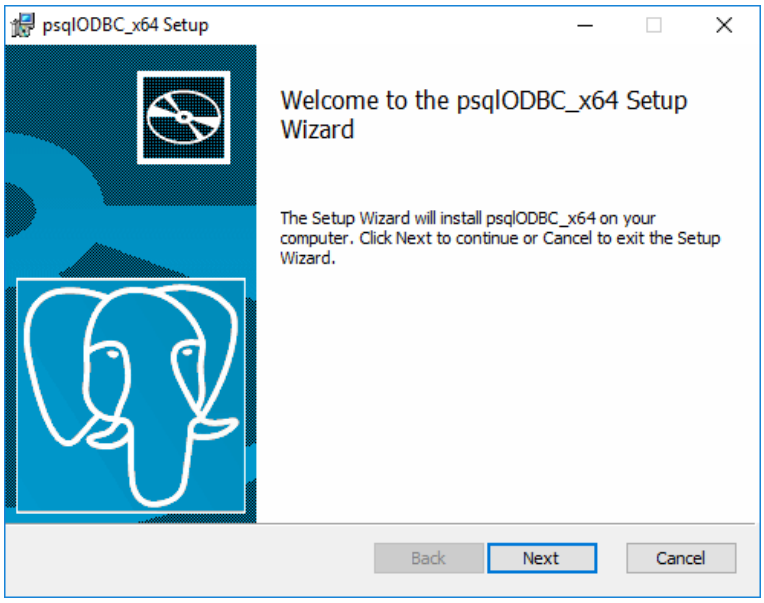


Figure 2-8 Installation start screen (psqlodbc installation)

11. The psqlodbc license screen is displayed.

    Confirm the End-User License Agreement first and then check [I accept the terms in the License Agreement]. Click the [Next] button.

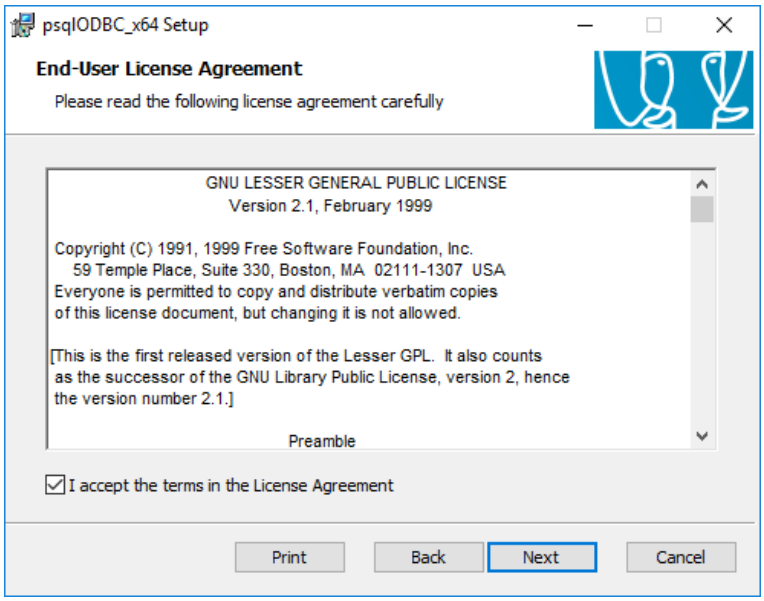


Figure 2-9 License screen (psqlodbc installation)

12. The psqlodbc installation setting screen is displayed.

    Leave the ODBC Driver setting unchanged from its default value [Will be installed on local hard drive]. Also, leave the Documentation setting unchanged from its default value [Entire feature Will be unavailable].

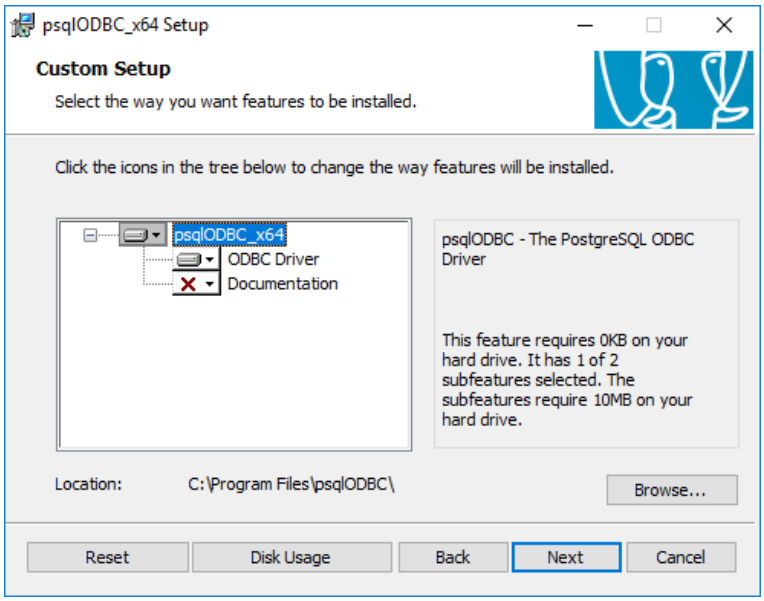


Figure 2-10 Installation setting screen (psqlodbc installation)

    The installation directory can be changed. To change the installation directory, click the [Browse...] button and then set the installation directory.

    Click the [Next] button.

13. The psqlodbc installation confirmation screen is displayed. Click the [Install] button.

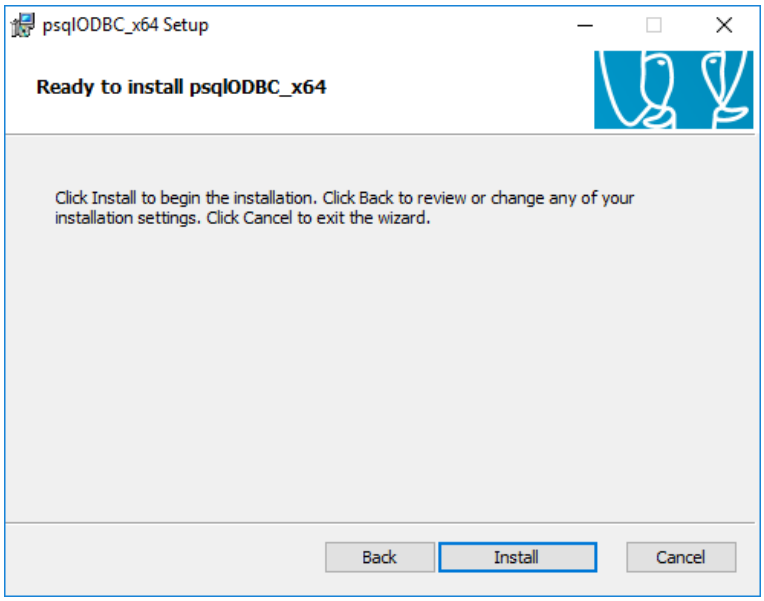


Figure 2-11 Installation confirmation screen (psqlodbc installation)

14. The dialog box indicating psqlodbc installation completion is displayed. Click the [Finish] button.

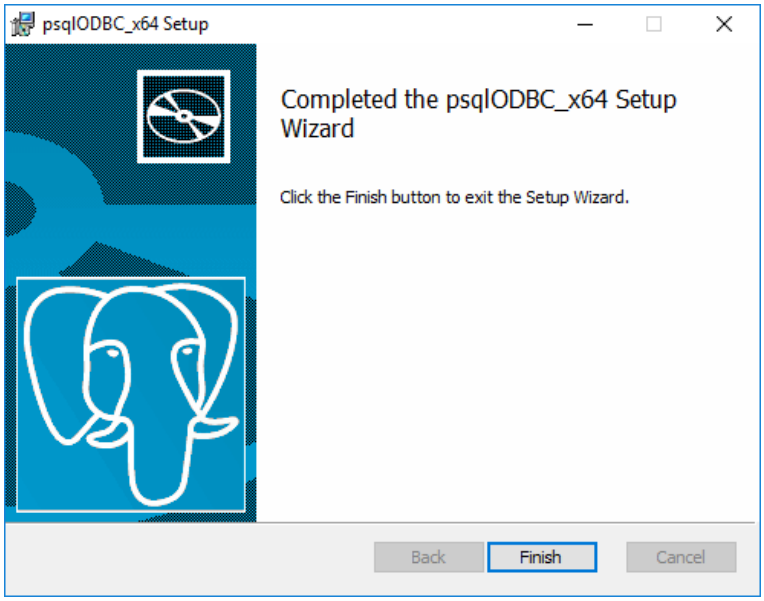


Figure 2-12 Installation completion screen (psqlodbc installation)

15. The WebConsole Option Install Wizard screen is displayed. Click the [Next] button.

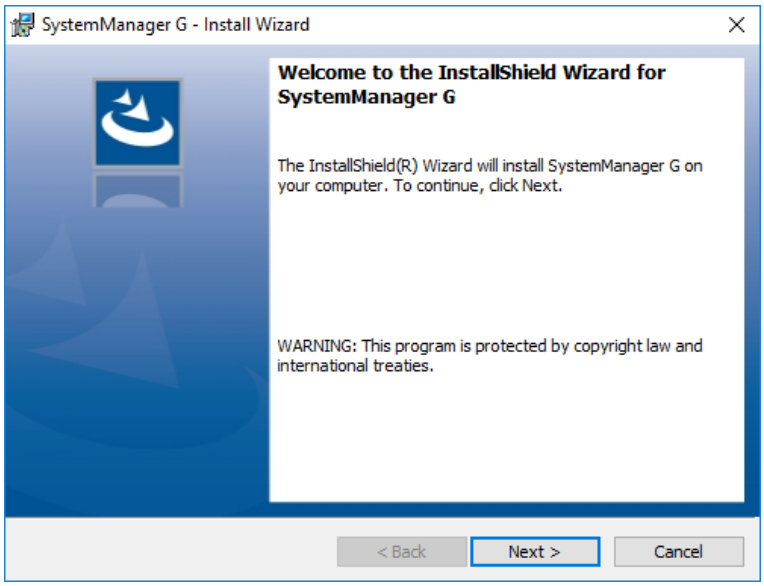


Figure 2-13 Installation start screen (WebConsole Option installation)

16. The Choose Install Location dialog box is displayed.

    To change the installation folder, click the [Change] button and specify the installation folder. Once the settings have been made, click the [Next] button.

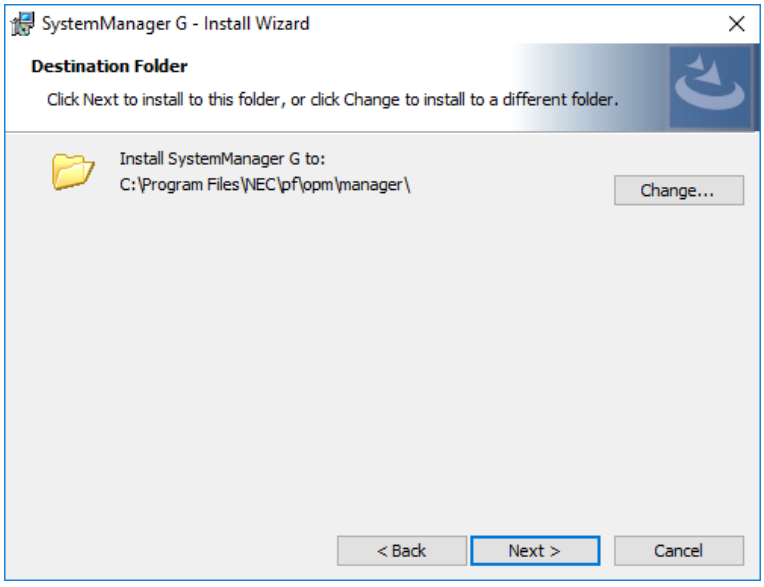


Figure 2-14 Installation destination setting screen (WebConsole Option installation)

Note

For an upgrade installation, the folder in which the previous version was installed is selected. For an upgrade installation, do not change the folder.

17. The setup type selection screen is displayed. Select [Complete] and click the [Next] button.

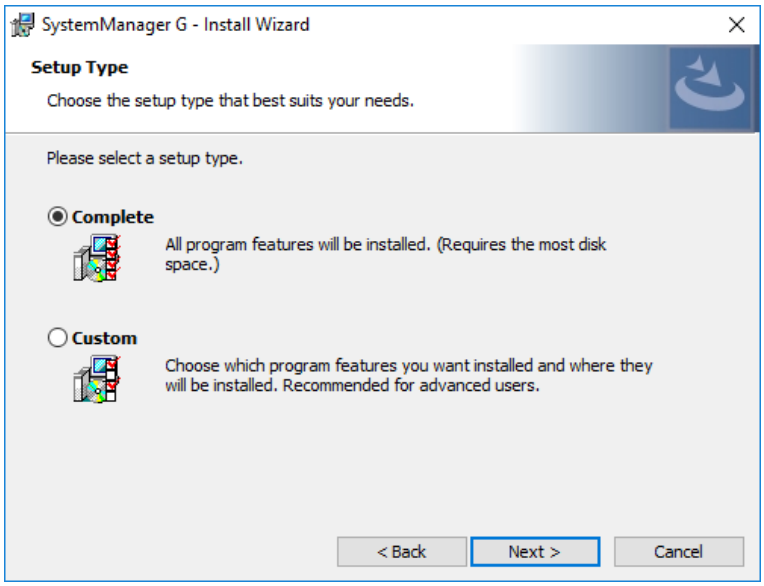


Figure 2-15 Setup type selection screen (WebConsole Option installation)

18. The msc component common setting screen is displayed.

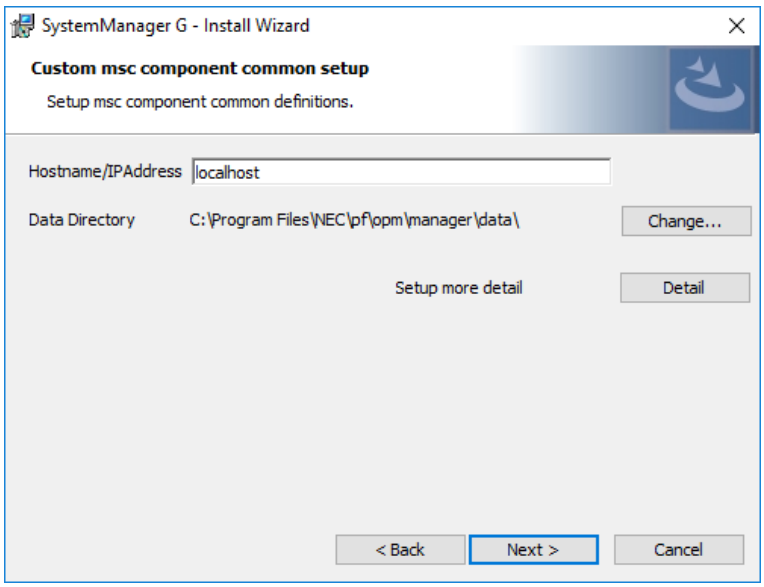


Figure 2-16 msc component common settings (WebConsole Option installation)

Confirm the description of each of the following items first and then specify each item.

Item	Description	Default value
Host name/IP address	Specify localhost. To install a cluster as well, specify localhost.	localhost
Data directory	Set the data directory. For a cluster, specify a shared disk path.	Automaticall y set from the installation directory.

When the [Detail] button is clicked, the dialog box for setting detailed items is displayed.

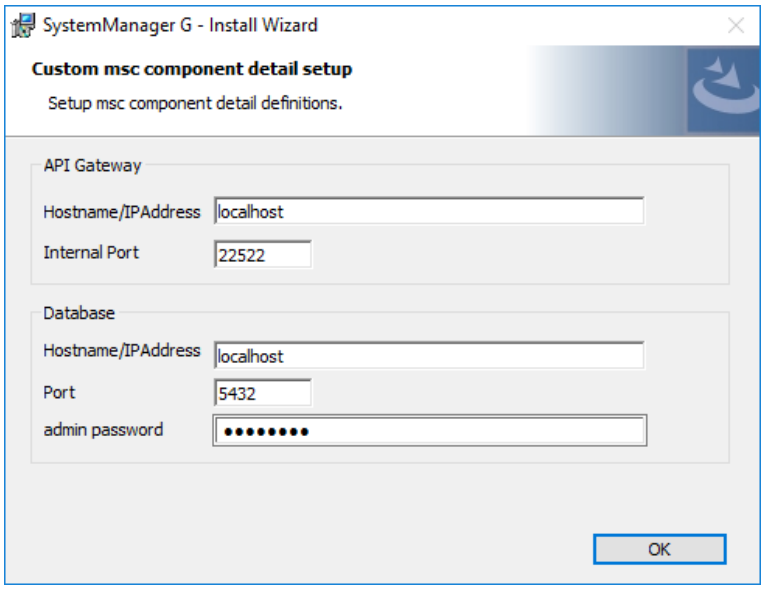


Figure 2-17 msc component detailed settings (WebConsole Option installation)

Item	Description	Default value
API Gateway		
Host name/IP address	Set the host name of the machine on which the API Gateway operates. For this item, set the same value as that of the host name of the msc component common settings.	localhost
Port number	Specify the port number of the API gateway.	22522
Database		
Host name/IP address	Specify the IP address of the PostgreSQL server or a host name that can be resolved. To set an item other than localhost, set access rights in the PostgreSQL configuration file pg_hba.conf.	localhost
Port number	Specify the port number of the PostgreSQL server.	5432
Administrator password	Specify the password of the PostgreSQL server administrator (postgres user). The available characters are alphanumeric characters, as well as ! #&()*,-./<=>?@[]_|}~.	postgres

When the [OK] button is clicked, the [msc component common setup] dialog box is redisplayed.

After confirming the settings, click the [Next] button.

19. The installation confirmation screen is displayed. Click the [Install] button.

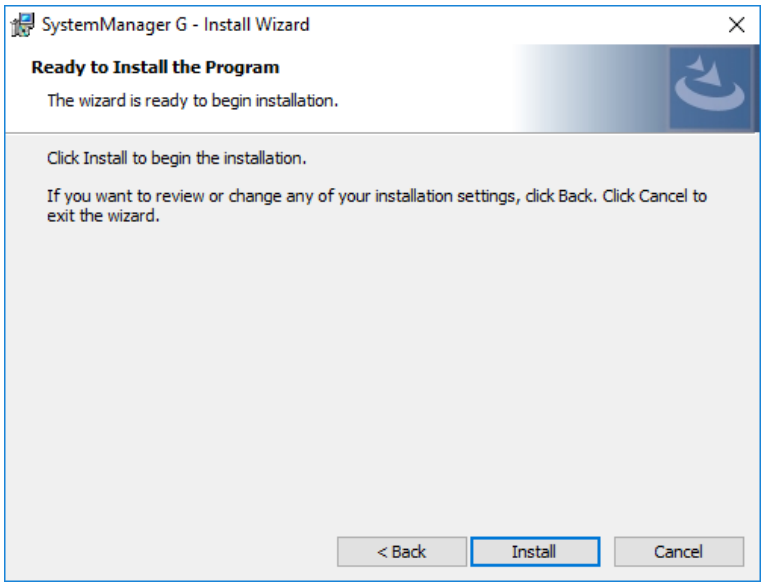


Figure 2-18 Installation confirmation screen (WebConsole Option installation)

In the installation of WebConsole Option, if PostgreSQL 9.6 has not been installed in the installation environment, the installation of PostgreSQL is automatically started.

Whether PostgreSQL 9.6 exists	Description
PostgreSQL 9.6 is already installed in the installation environment.	Perform step "28. (page 23)" and subsequent steps.
PostgreSQL is not installed.	After the [Install] button is clicked, a dialog box is displayed. Perform step "20. (page 19)" and subsequent steps.

20. The PostgreSQL installation start screen is displayed. Click the [Next] button.

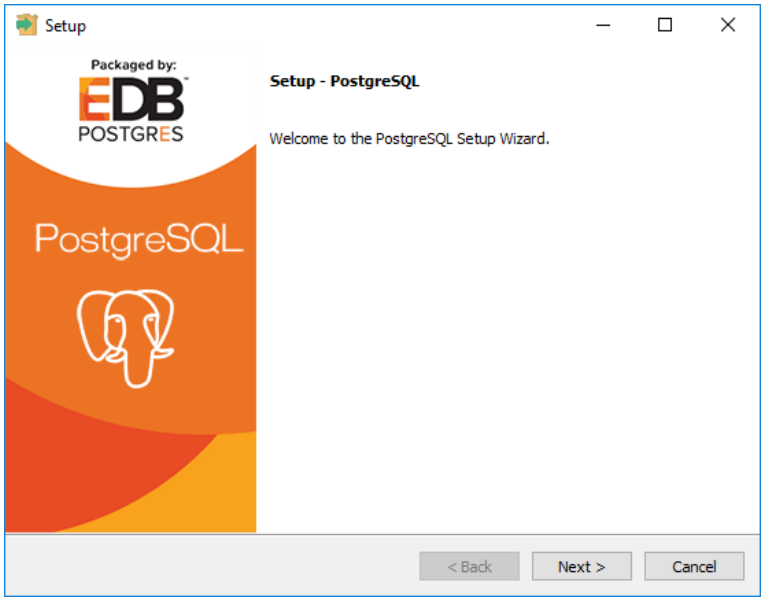


Figure 2-19 Installation start screen (PostgreSQL installation)

21. The PostgreSQL installation directory setting screen is displayed. Set any directory first and then click the [Next] button.

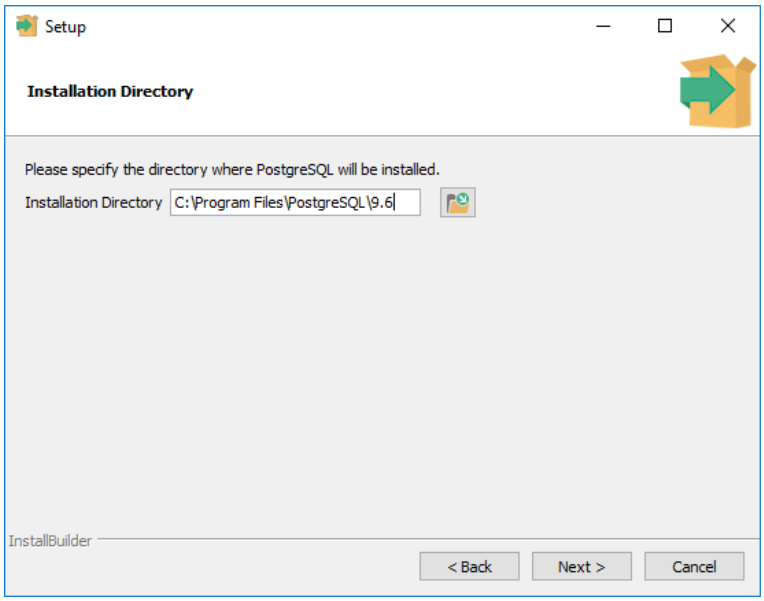


Figure 2-20 Installation directory setting screen (PostgreSQL installation)

22. The PostgreSQL data directory setting screen is displayed. Set any directory first and then click the [Next] button.

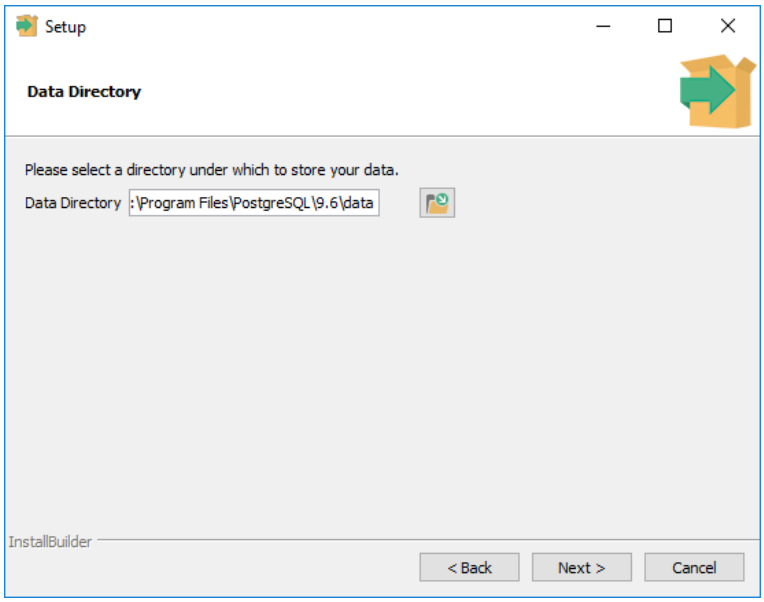


Figure 2-21 Data directory setting screen (PostgreSQL installation)

To enable use in the HA environment, set the path to the shared disk for the data directory.

Note

If the specified data directory already exists because, for example, PostgreSQL was previously installed, a dialog box is displayed to confirm whether to use the settings with this installation.

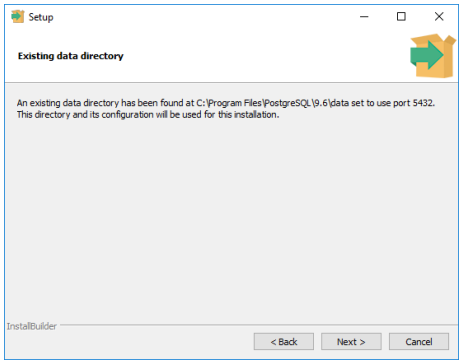


Figure 2-22 Existing data directory confirmation screen (PostgreSQL installation)

Provided there are no problems, click the [Next] button. If the above dialog box is displayed, perform step "26. (page 22)" and subsequent steps.

23. The postgres user password setting screen is displayed.

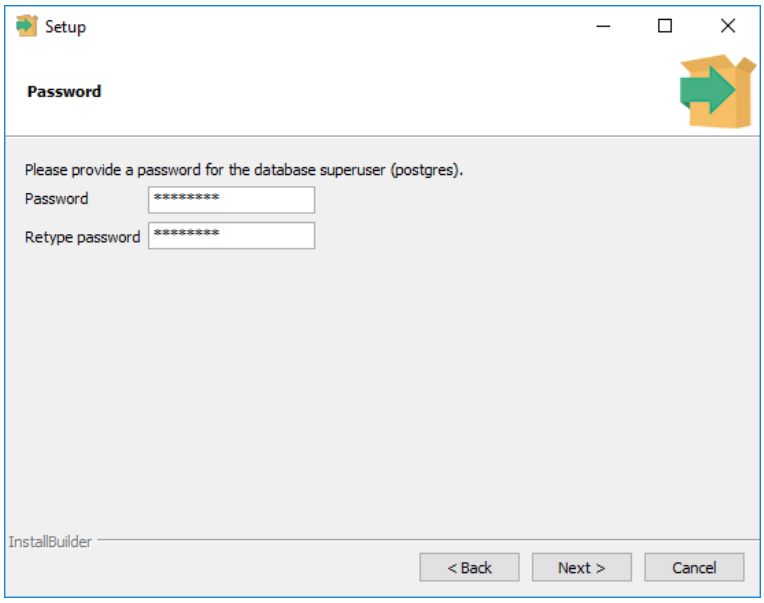


Figure 2-23 Postgres user password setting screen (PostgreSQL installation)

By default, the postgres user password that is set with the detailed setting in step "18. (page 17)" is set. Leave it as is and click the [Next] button.

24. The screen for setting the PostgreSQL port number is displayed.

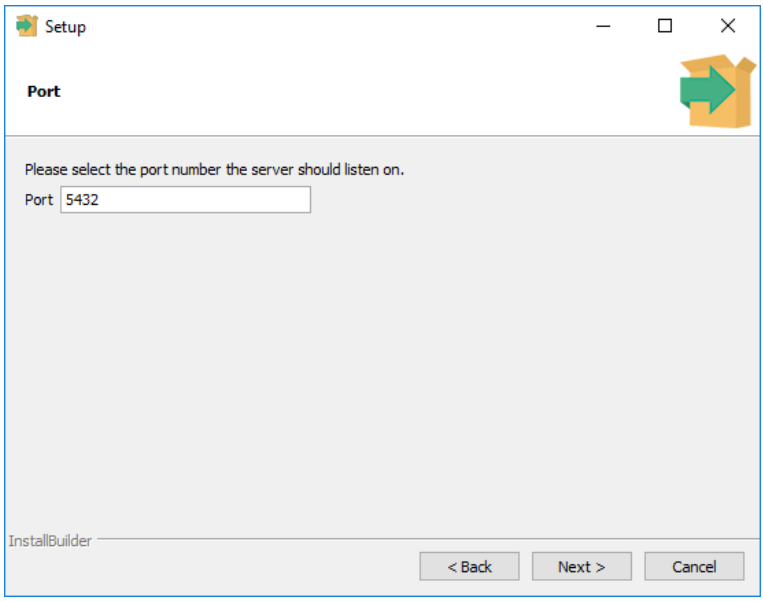


Figure 2-24 Port number setting screen (PostgreSQL installation)

By default, the PostgreSQL server port number that is set with the detailed setting in step "18. (page 17)" is set. Leave it as is and click the [Next] button.

25. The PostgreSQL locale selection screen is displayed.

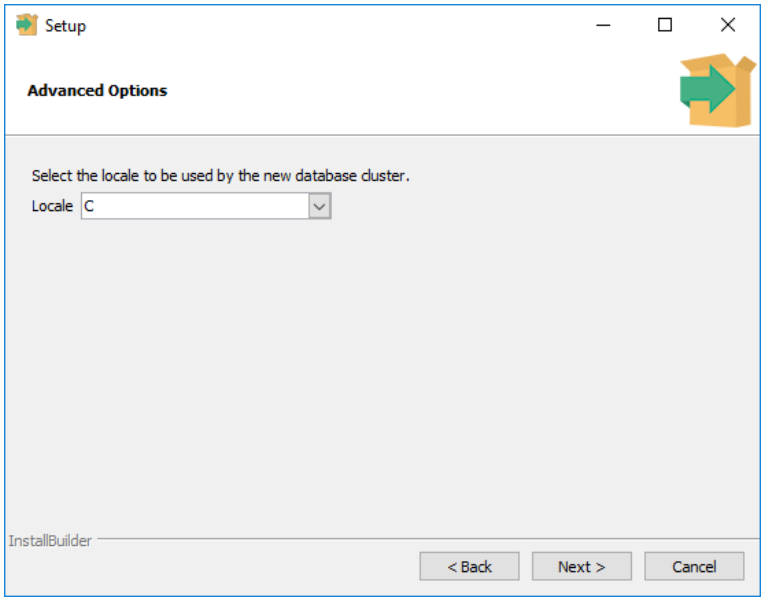


Figure 2-25 Locale selection screen (PostgreSQL installation)

Select [C] and click the [Next] button.

26. The PostgreSQL installation confirmation screen is displayed. Click the [Next] button to start the installation of PostgreSQL.

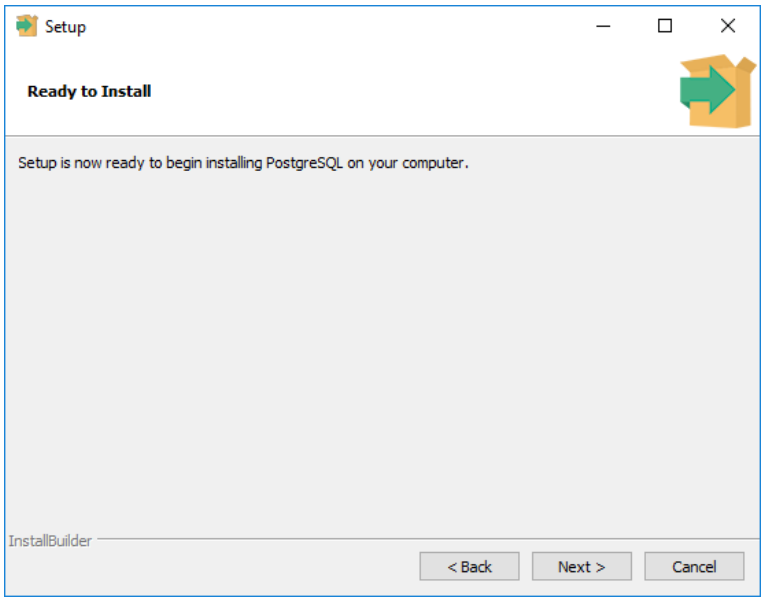


Figure 2-26 Installation confirmation screen (PostgreSQL installation)

27. The PostgreSQL installation completion screen is displayed. Click the [Finish] button.

    The tool for adding WebConsole Option is not necessary. Clear the check box on this screen.

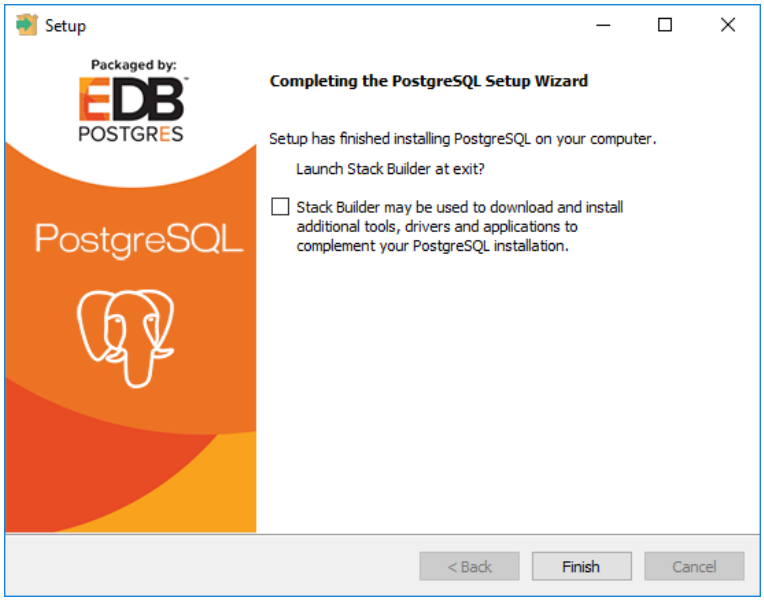


Figure 2-27 Installation completion screen (PostgreSQL installation)

28. The installation of WebConsole Option is resumed and the progress screen is displayed. Wait for completion.

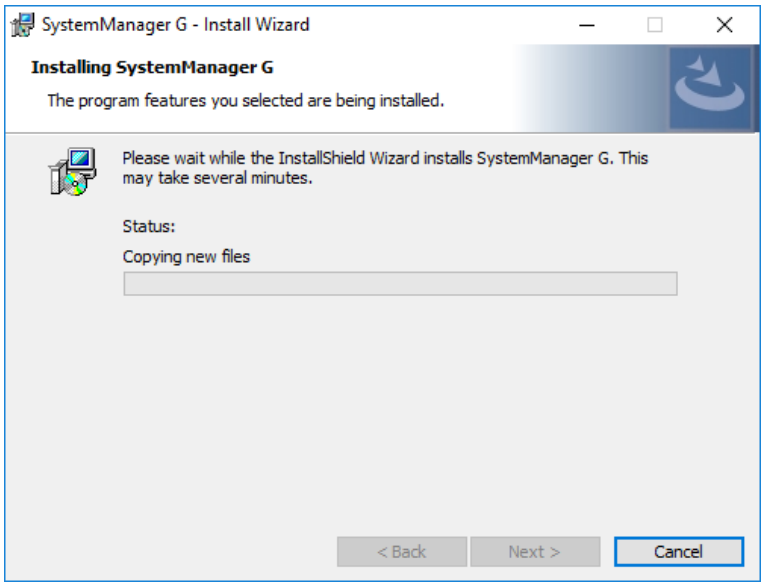


Figure 2-28 Installation progress screen (WebConsole Option installation)

Note

Installation takes time. Before completion, several command prompts are displayed as shown below. Do not close them.

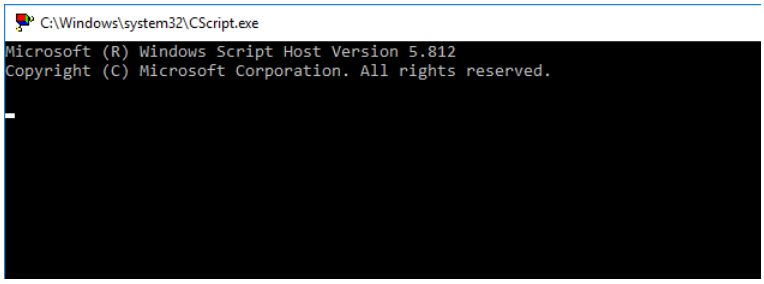


Figure 2-29 Command prompt example displayed during installation (WebConsole Option installation)

29. Once the installation of WebConsole Option is complete, the MasterScope Media installer is redisplayed and the total installation completion screen is displayed.

    Click the [Finish] button.

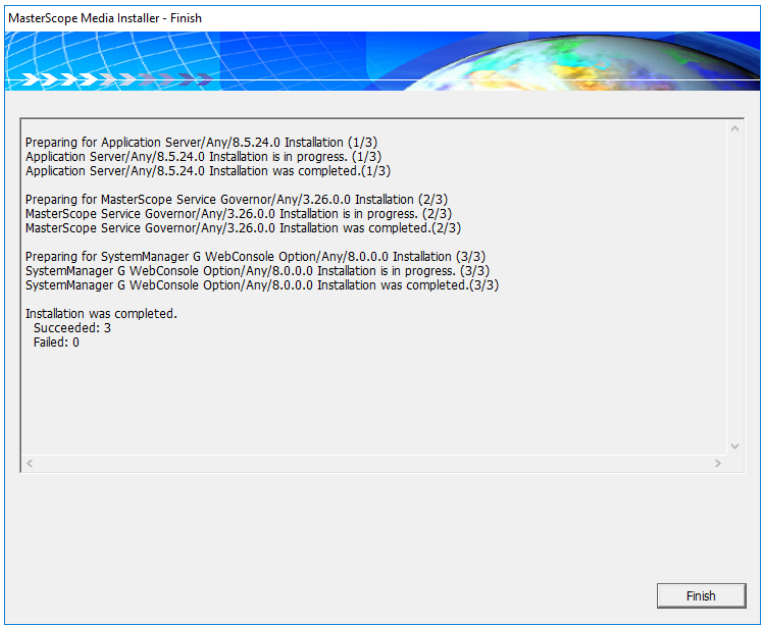


Figure 2-30 Installation completion screen

30. After installation, set dependencies for the application server and PostgreSQL.

Note

This work is required after the completion of installation.

From the service list, open the properties of the PostgreSQL service "postgresql-x64-9.6".

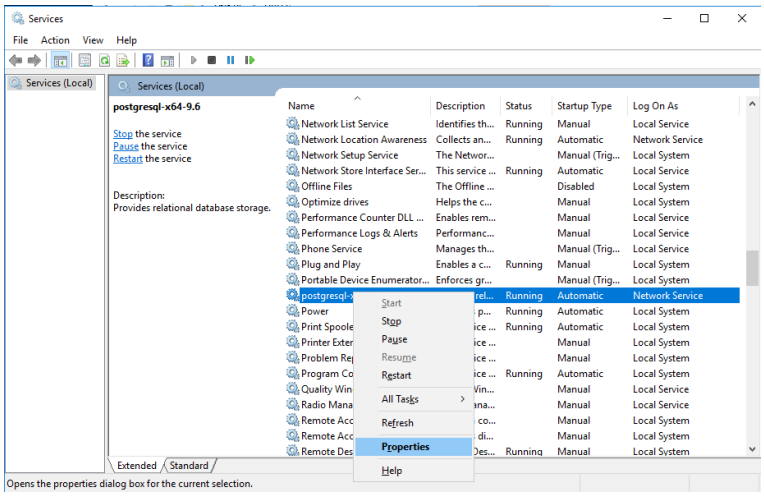


Figure 2-31 Windows service list

31. The PostgreSQL service property screen is displayed. Confirm the service name. The default is postgresql-x64-9.6.

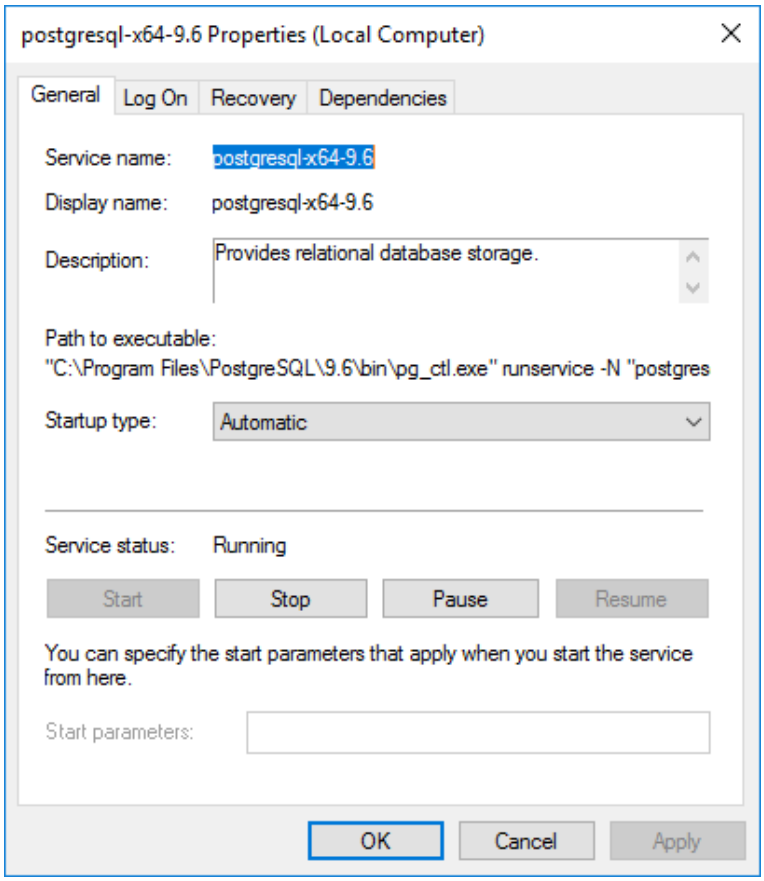


Figure 2-32 PostgreSQL property screen

32. To set service dependencies, open the registry editor.

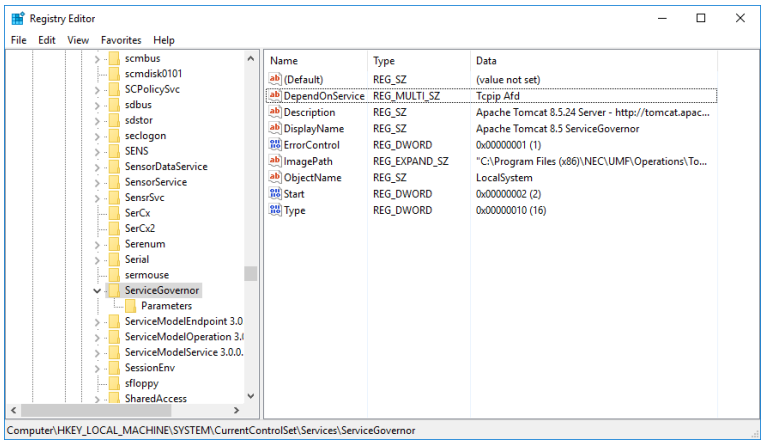


Figure 2-33 Registry editor

Select the DependOnService parameter of `<computer-name>\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Service Governor`

33. For [Value Data], add the PostgreSQL service name, and then click [OK].

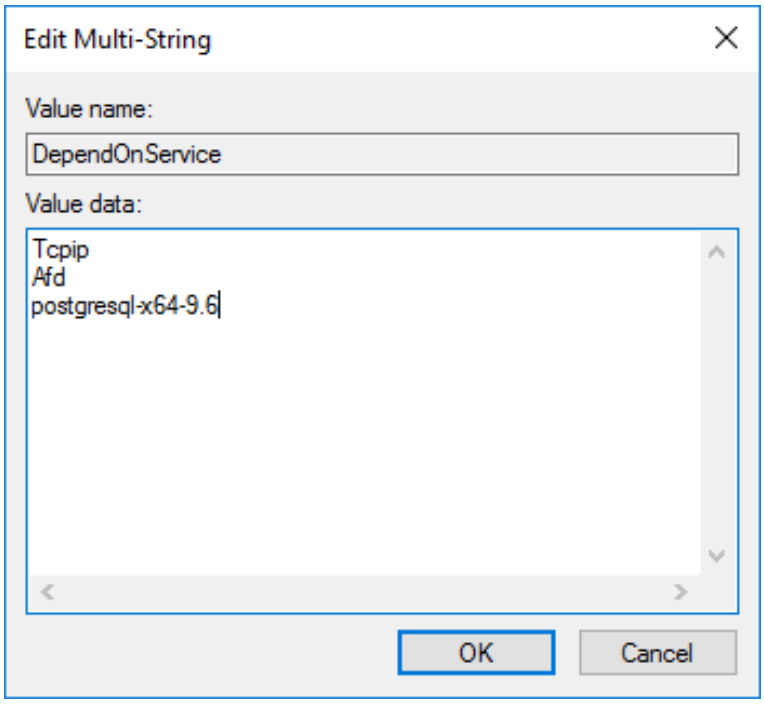


Figure 2-34 Parameter editing screen

Note

If a warning such as the following is displayed, click [OK].

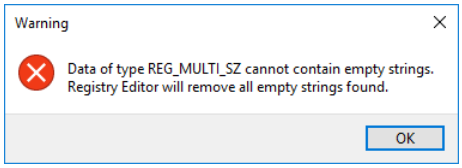


Figure 2-35 Warning message that may be displayed during parameter editing

34. Confirm that "postgresql-x64-9.6" has been added to DependOnService data, and close the registry editor.

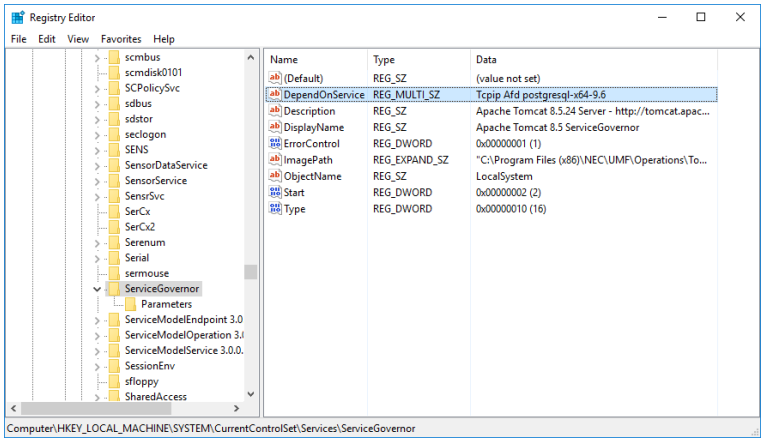


Figure 2-36 Registry editor (after the setting of dependencies)

35. To start WebConsole Option, perform either of the following.
    - Restart the machine to which WebConsole Option was installed.

- To start it manually, first start all the Windows services listed in "Appendix A. How to Start and Stop the Product (page 70)".

2.2.2 Performing confirmation after installation

Check whether the installation of WebConsole Option has been completed normally.

1. Check that all the Windows services listed in "Appendix A. How to Start and Stop the Product (page 70)"have been registered.

2.3 Installation in a Linux environment

This section describes how to install WebConsole Option in a Linux environment.

2.3.1 Installing the database

This section describes how to install and set up the database.

2.3.1.1 Installing PostgreSQL

1. Mount the MasterScope Media and confirm that the following four files are in the <Media Root>/Linux/tools/SysMgrG/WebConsole/postgresql/rhel7 directory.

Note

Note that files to be installed varies depending on the Linux OS version. Replace the files appropriately in the description.

```
# mkdir /mnt/cdrom
# mount /dev/cdrom /mnt/cdrom
# cd /mnt/cdrom/tools/SysMgrG/WebConsole/postgresql/rhel7
# ls
postgresql96-9.6.8-1PGDG.rhel7.x86_64.rpm
postgresql96-libs-9.6.8-1PGDG.rhel7.x86_64.rpm
postgresql96-odbc-10.01.0000-1PGDG.rhel7.x86_64.rpm
postgresql96-server-9.6.8-1PGDG.rhel7.x86_64.rpm
```

2. Install the rpm files in the following order.

Note

If the files are installed in a different order from the following, installation may fail due to the dependency among them.

```
# rpm -ivh postgresql96-libs-9.6.8-1PGDG.rhel7.x86_64.rpm
# rpm -ivh postgresql96-9.6.8-1PGDG.rhel7.x86_64.rpm
# rpm -ivh postgresql96-server-9.6.8-1PGDG.rhel7.x86_64.rpm
# rpm -ivh postgresql96-odbc-10.01.0000-1PGDG.rhel7.x86_64.rpm
```

2.3.1.2 Setting up PostgreSQL

1. Initialize PostgreSQL.

```
# su - postgres
$ /usr/pgsql-9.6/bin/initdb
$ exit
```

2. Start up PostgreSQL.

```
# systemctl start postgresql-9.6
```

3. Set the administrator user (postgres) password.

```
# /usr/pgsql-9.6/bin/psql -U postgres
psql (9.6.8)
Show Help by using the help command.

postgres=# ALTER ROLE postgres PASSWORD '********';
ALTER ROLE
postgres-# \q
```

Specify ******** with the administrator user (postgres) password.

4. Create a database for the portal/user management platform.

```
# /usr/pgsql-9.6/bin/psql -U postgres
psql (9.6.8)
Show Help by using the help command.

postgres=# create user msc_portal with createdb password 'msc_portal';
postgres=# create database msc_portal with owner=msc_portal
 template=template0 encoding='UTF8' lc_collate='C' lc_ctype='C';
postgres=# \q
```

Note

In the above example, it is seemed that a line break is inserted in the create database command. This depends on the display width.

5. Edit the /var/lib/pgsql/9.6/data/pg_hba.conf file.

```
<<Omitted>>

# "local" is for Unix domain socket connections only
local   all   all   md5                     ← Enter "md5" at the end.
# IPv4 local connections:
host   all   all 127.0.0.1/32   md5         ← Enter "md5" at the end.
# IPv6 local connections:
host   all   all   ::1/128   md5            ← Enter "md5" at the end.

<<Omitted>>
```

For a configuration in which the database is installed on a different machine, add the following so as to permit remote connection.

```
host all all 192.168.100.0/24 md5
```

Note

Fill the field of 192.168.100.0/24 with a value that indicates the address for connecting to the database in the actual environment.

6. Restart PostgreSQL.

```
# systemctl restart postgresql-9.6
```

7. Enable the automatic startup of PostgreSQL.

```
# systemctl enable postgresql-9.6
```

2.3.2 Installing WebConsole Option

This section describes how to install WebConsole Option in a Linux environment.

1. Install unixODBC on the target machine of installation of msc components.

```
# yum install unixODBC unixODBC-devel
```

2. Mount the MasterScope Media.

```
# mkdir /mnt/cdrom
# mount /dev/cdrom /mnt/cdrom
```

3. Install the postgresql96-odbc package in the mounted MasterScope Media.

Note

Note that files to be installed varies depending on the Linux OS version. Replace the files appropriately in the description.

```
# cd /mnt/cdrom/tools/SysMgrG/WebConsole/postgresql/rhel7
# rpm -ivh postgresql96-odbc-10.01.0000-1PGDG.rhel7.x86_64.rpm
```

4. Edit the /etc/odbcinst.ini file.
Change the paths of the Driver64 and Setup64 parameters of the [PostgreSQL] section.

```
[PostgreSQL]
Description = ODBC for PostgreSQL
Driver    = /usr/lib/psqlodbcw.so
Setup   = /usr/lib/libodbcpsqlS.so
Driver64  = /usr/pgsql-9.6/lib/psqlodbcw.so     ← Change the path.
Setup64   = /usr/pgsql-9.6/lib/libodbcpsqlS.so  ← Change the path.
FileUsage = 1
```

Add the following description to the /etc/odbcinst.ini file.

```
[PostgreSQL Unicode]
Description = PostgreSQL ODBC driver (Unicode version)
Driver64 = /usr/pgsql-9.6/lib/psqlodbcw.so
MaxLongVarcharSize = 65536
```

5. Execute <Media Root>/Linux/Setup stored in the mounted MasterScope Media.

```
# cd /mnt/cdrom/Linux
# ./Setup
```

6. The MasterScope Media Installer screen is displayed. Enter "1".

```
   ************************************
       Welcome to MasterScope Media !!
   ************************************

   This program will install/uninstall products.
```

```
   1. Install


   Please select the operation.
   (1:install q:quit program): 1
```

7. A list of products that can be installed is displayed. Select [Application Server], [MasterScope Service Governor], and [SystemManager G WebConsole Option]. In the following example, "13,14,15" are entered. All software names may not be displayed depending on the height of the screen. In that case, scroll the list by using the cursor keys [↑↓].

```
   --------
   Products
   --------

  ┌──────────────────────────────────────┐
  | 1 [ ] MasterScope SystemManager G Agent 8.0.0.0                    |
  | 2 [ ] MasterScope SystemManager G Logical Agent Agent 8.0.0.0      |
  | 3 [ ] MasterScope SystemManager G OracleEM Linker Agent 8.0.0.0    |
  | 4 [ ] MasterScope SystemManager G RelayManager 8.0.0.0             |
  | 5 [ ] MasterScope SystemManager G Manager 8.0.0.0                  |
(Omitted)
  |13 [ ] Application Server Any 8.0.41.0                              |
  |14 [ ] MasterScope Service Governor Any 3.24.0.0                    |
  |15 [ ] SystemManager G WebConsole Option Any 8.0.0.0                |
  └──────────────────────────────────────┘

   -------------------------------------------

   Please select product(s) by entering numbers separated by commas.
   [Example: 1, 3, 4]
   (b:back q:quit program): 13,14,15
```

8. Enter "y".

```
   ------------
   Confirmation
   ------------

  ┌──────────────────────────────────────┐
  | 1 [ ] MasterScope SystemManager G Agent 8.0.0.0                    |
  | 2 [ ] MasterScope SystemManager G Logical Agent Agent 8.0.0.0      |
  | 3 [ ] MasterScope SystemManager G OracleEM Linker Agent 8.0.0.0    |
  | 4 [ ] MasterScope SystemManager G RelayManager 8.0.0.0             |
  | 5 [ ] MasterScope SystemManager G Manager 8.0.0.0                  |
(Omitted)
  |13 [*] Application Server Any 8.0.41.0                              |
  |14 [*] MasterScope Service Governor Any 3.24.0.0                    |
  |15 [*] SystemManager G WebConsole Option Any 8.0.0.0                |
  └──────────────────────────────────────┘

   -------------------------------------------

   These product(s) will be installed, OK to continue?
   (default:y y:yes n:no q:quit program): y
```

9. Start to set up [Application Server]. Enter "s1". It is unnecessary to enter "s1" if you do not change the setting. Go to step 16.

```
   --------------------
   Installation settings
   --------------------

  ┌──────────────────────────────────────┐
  |    Other( Not Framework )                                          |
  |          1 Application Server Any 8.0.41.0 [ NEW ]                 |
  |          2 MasterScope Service Governor Any 3.24.0.0 [ NEW ]       |
```

```
|          3 SystemManager G WebConsole Option Any 8.0.0.0 [ NEW ]      |
|          4 New Product                                                 |
|________________________________________|

--------------------------------------------------------------------------------
(*) marked products or services require specific settings before installation.
--------------------------------------------------------------------------------
Please select operation to perform from following commands.
[Example: 's1' configures settings for first service listed above.]
(r[n.n]:remove s[n]:setting v[n]:view c:clear b:back e:execute q:quit program): s1
```

10. Specify the installation directory of [Application Server].

```
---------------------
Installation settings
---------------------
Install directory path
Maximum length: 128 characters.

(default:/opt/UMF/Operations b:back q:quit program):
```

11. Specify Tomcat. Enter "return".

```
---------------------
Installation settings
---------------------
Application Server
   2. Tomcat

(default:2 b:back q:quit program):
```

12. Specify the HTTP port number of Service Governor WebAPI Base Option. The default value is "12080".

```
---------------------
Installation settings
---------------------
HTTP port
Range: 1024-65535.

(default:12080 b:back q:quit program):
```

13. Specify the HTTPS port number of Service Governor WebAPI Base Option. The default value is "12443".

```
---------------------
Installation settings
---------------------
HTTPS port
Range: 1024-65535.

(default:12443 b:back q:quit program):
```

14. Specify the Tomcat management port number. The default value is "12005".

```
---------------------
Installation settings
---------------------
Tomcat management port
Range: 1024-65535.
```

```
(default:12005 b:back q:quit program):
```

15. Specify the Tomcat AJP/1.3 port number. The default value is "12009".

```
---------------------
Installation settings
---------------------
Tomcat APJ/1.3 port
Range: 1024-65535.

(default:12009 b:back q:quit program):
```

16. Check the installation settings of [Application Server]. When the settings are correct, enter "y".

```
------------
Confirmation
------------
Install directory path: /opt/UMF/Operations
Application Server: Tomcat
HTTP port: 12080
HTTPS port: 12443
Tomcat management port: 12005
Tomcat APJ/1.3 port: 12009

--------------------------------------------
Are these settings correct?
(default:y y:yes n:no q:quit program):
```

17. Start to set up [WebConsole Option]. Enter "s3". It is unnecessary to enter "s3" if you do not change the setting. Go to step 26.

```
---------------------
Installation settings
---------------------

┌──────────────────────────────┐
│   Other( Not Framework )                                                   │
│        1 Application Server Any 8.0.41.0 [ NEW ]                           │
│        2 MasterScope Service Governor Any 3.24.0.0 [ NEW ]                 │
│        3 SystemManager G WebConsole Option Any 8.0.0.0 [ NEW ]             │
│        4 New Product                                                       │
└──────────────────────────────┘
------------------------------------------------------------------------------
(*) marked products or services require specific settings before installation.
------------------------------------------------------------------------------
Please select operation to perform from following commands.
[Example: 's1' configures settings for first service listed above.]
(r[n.n]:remove s[n]:setting v[n]:view c:clear b:back e:execute q:quit program): s3
```

18. Specify the installation directory of [WebConsole Option].

```
---------------------
Installation settings
---------------------
Install directory path
Maximum length: 128 characters.

(default:/opt/nec/pf/opm/manager b:back q:quit program):
```

19. Specify the data directory.

```
---------------------
Installation settings
---------------------
Data directory path
Maximum length: 128 characters.

(default:/opt/nec/pf/opm/manager/data b:back q:quit program):
```

20. Specify the host name. Specify "localhost". Specify "localhost" also for cluster installation.

```
---------------------
Installation settings
---------------------
hostname
Maximum length: 64 characters.

(default:localhost c:clear b:back q:quit program):
```

21. Specify the API Gateway host name. Specify "localhost".

```
---------------------
Installation settings
---------------------
API Gateway hostname
Maximum length: 64 characters.

(default:localhost c:clear b:back q:quit program):
```

22. Specify the port number of the API Gateway. The default value is "22522".

```
---------------------
Installation settings
---------------------
API Gateway port
Range: 1024-65535.

(default:22522 b:back q:quit program):
```

23. Specify the IP address or a host name that enables name resolution of the PostgreSQL server. When specifying a host name other than "localhost", set up the access authority in pg_hba.conf, the PostgreSQLconfiguration file.

```
---------------------
Installation settings
---------------------
Database hostname
Maximum length: 64 characters.

(default:localhost c:clear b:back q:quit program):
```

24. Specify the port number of the PostgreSQL server. The default value is "5432".

```
---------------------
Installation settings
---------------------
Database port
Range: 1024-65535.
```

```
(default:5432 b:back q:quit program):
```

25. Specify the password of the PostgreSQL server administrator (postgres user). The available characters are alphanumeric characters and the following symbols: !#&()*,-./<=>?@[]_|}~. The default value is postgres.

```
---------------------
Installation settings
---------------------
Database Admin Password
Maximum length: 64 characters.

(default:postgres c:clear b:back q:quit program):
```

26. Check the installation settings of [WebConsole Option]. When the settings are correct, enter "y".

```
------------
Confirmation
------------
Install directory path: /opt/nec/pf/opm/manager
Data directory path: /opt/nec/pf/opm/manager/data
hostname: localhost
API Gateway hostname: localhost
API Gateway port: 22522
Database hostname: localhost
Database port: 5432
Database Admin Password: postgres

-------------------------------------------
Are these settings correct?
(default:y y:yes n:no q:quit program):
```

27. Start installation. Enter "e".

```
--------------------
Installation settings
--------------------

┌──────────────────────────────────────┐
│    Other( Not Framework )                                                  │
│          1 Application Server Any 8.0.41.0 [ NEW ]                         │
│          2 MasterScope Service Governor Any 3.24.0.0 [ NEW ]               │
│          3 SystemManager G WebConsole Option Any 8.0.0.0 [ NEW ]           │
│          4 New Product                                                     │
└──────────────────────────────────────┘
-------------------------------------------------------------------------------
(*) marked products or services require specific settings before installation.
-------------------------------------------------------------------------------
Please select operation to perform from following commands.
[Example: 's1' configures settings for first service listed above.]
(r[n.n]:remove s[n]:setting v[n]:view c:clear b:back e:execute q:quit program): e
```

28. Enter "y".

```
-----------------
Final confirmation
-----------------

┌──────────────────────────────────┐
│    Other( Not Framework )                                                  │
│          1 Application Server Any 8.0.41.0                                 │
```

```
  |          2 MasterScope Service Governor Any 3.24.0.0                |
  |          3 SystemManager G WebConsole Option Any 8.0.0.0            |
  |______________________________________|

  ----------------------------------------
  Is it OK to start installation?
  (default:y y:yes n:no q:quit program):
```

29. When installation of WebConsole Option is complete, the following is displayed.

```
-----------------------------------------
Installation result
-----------------------------------------
1 Application Server Any 8.0.41.0 (Success)
2 MasterScope Service Governor Any 3.24.0.0 (Success)
3 SystemManager G WebConsole Option Any 8.0.0.0 (Success)
-----------------------------------------
Success:3, Failure:0
```

30. Run the rpm command to check if the following software packages are installed.

```
# rpm -qa|grep msc
```

RPM	Component name
msc_common_library-8.0.0-0.x86_64	Common library
msc_apigateway-8.0.0-0.x86_64	API Gateway/License management
msc_auth-8.0.0-0.x86_64	Authority management
msc_messagestore-8.0.0-0.x86_64	Message store
msc_report-8.0.0-0.x86_64	Report
msc_status-8.0.0-0.x86_64	Monitoring status management
msc_extlink-8.0.0-0.x86_64	External interface linkage function
msc_businessview-8.0.0-0.x86_64	Business view
msc_perfdatastore-8.0.0-0.x86_64	Performance data store
msc_portal-8.0.0-0.x86_64	Portal/user management platform

Note

When installing WebConsole Option by using this installation procedure, rpm files are copied in the <WebConsole-install-path>/../msc_install directory.

31. Start up the msc components. Before starting up the msc components, you need to start up the database service.

Note

In installation in an AWS environment, you need to build the database manually. For details, see "AWS" of the "Environment Configuration Guide."

- For RHEL 6

```
# service msc_apigateway start
# service msc_auth start
# service msc_messagestore start
# service msc_businessview start
# service msc_status start
```

```
# service msc_report start
# service msc_extlink start
# service msc_perfdatastore start
```

- For RHEL 7

```
# systemctl start msc_apigateway
# systemctl start msc_auth
# systemctl start msc_messagestore
# systemctl start msc_businessview
# systemctl start msc_status
# systemctl start msc_report
# systemctl start msc_extlink
# systemctl start msc_perfdatastore
```

Chapter 3. Setting after the Installation

This chapter describes the settings to be made after the installation of WebConsole Option.

Contents

Overview

To enable the use of WebConsole Option once it has been installed, settings must be made for the installed components.

This chapter describes the following settings that must be made to enable the use of WebConsole Option.

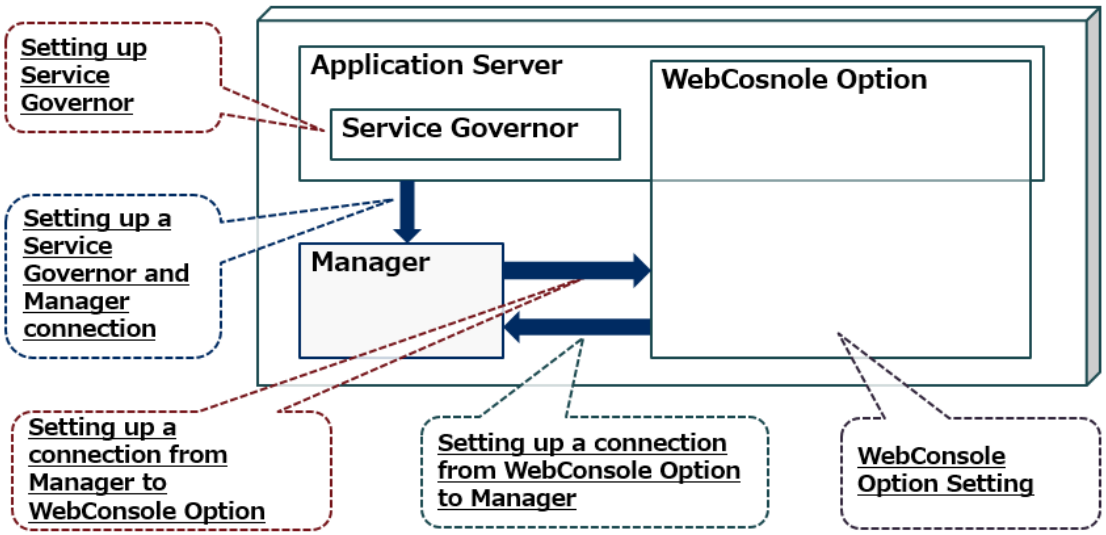


Figure 3-1 Overview of setup

The setting methods are described in detail in the following sections.

Settings	Section
Setting up the Service Governor	"3.2 Setting up Service Governor (page 40)"
Setting up a Service Governor and manager connection	"3.3 Setting up a Service Governor and manager connection (page 44)"
Setting up a connection from the manager to WebConsole Option	"3.4 Setting up a connection from a manager to WebConsole Option (page 48)"
Setting up the correspondences between the manager and WebConsole Option severities	"Appendix E. How to Set up Correspondences Between the Manager and WebConsole Option Severities (page 79)"
Setting up the disabling of the accumulation of performance data by the manager	"3.5 Disabling the accumulation of performance data by the manager (page 49)"
Setting up a connection from WebConsole Option to the manager	"3.6 Setting up a connection from an external interface linkage component to manager (page 50)"
Setting up WebConsole Option	"3.8.1 Enabling the business view function (for Windows environments) (page 53)"

3.1 Port numbers used

The default port numbers used with WebConsole Option are listed below.

The port numbers can be changed by making settings during the installation or settings in this chapter. In such cases, read the port numbers as appropriate.

If SystemManager G (MG) and WebConsole Option are installed on different machines, make the Firewall drilling settings for the following ports.

Table 3-1 Port numbers used by WebConsole Option

Communication purpose	Sender	Send port	Receiver	Receive port	Description
HTTP	Web browser	ANY/tcp	Application Server	12080/tcp	Application Server port. This is used to access from the Web browser.
HTTPS	Web browser	ANY/tcp	Application Server	12443/tcp	Application Server port. This is used to access from the Web browser.
Web API	Application Server	ANY/tcp	WebConsole Option	8243/tcp	Port used to make a connection from Application Server to WebConsole Option.
Message store	SystemManager G(MG)	ANY/tcp	WebConsole Option	22524/tcp	Used to report a message from SystemManager G (MG) to WebConsole Option.
Monitoring status management	SystemManager G(MG)	ANY/tcp	WebConsole Option	22523/tcp	Used to report a monitoring status from SystemManager G (MG) to WebConsole Option.
Performance data store	SystemManager G(MG)	ANY/tcp	WebConsole Option	22531/tcp	Used to report performance monitoring from SystemManager G (MG) to WebConsole Option.
External interface	SystemManager G(MG)	ANY/tcp	WebConsole Option	22529/tcp	Used for linkage between SystemManager G (MG) and WebConsole Option.
External interface	WebConsole Option	ANY/tcp	SystemManager G(MG)	20100/tcp	Used for linkage between SystemManager G (MG) and WebConsole Option.
Web API	Service Governor	ANY/tcp	SystemManager G(MG)	20100/tcp	Used for linkage between Service Governor and SystemManager G (MG).
Database	WebConsole Option	ANY/tcp	PostgreSQL	5432/tcp	Used by WebConsole Option to access the database.
Database	Application Server	ANY/tcp	PostgreSQL	5432/tcp	Used by Application Server to access the database.

3.2 Setting up Service Governor

This section describes how to create the access key for connecting Service Governor to the manager and how to set up the access key.

1. Confirm that WebApiTool.bat exists in the <manager-install-path>\Tools directory.

   The default is `C:\Program Files (x86)\NEC\UMF\Operations\Tools`.

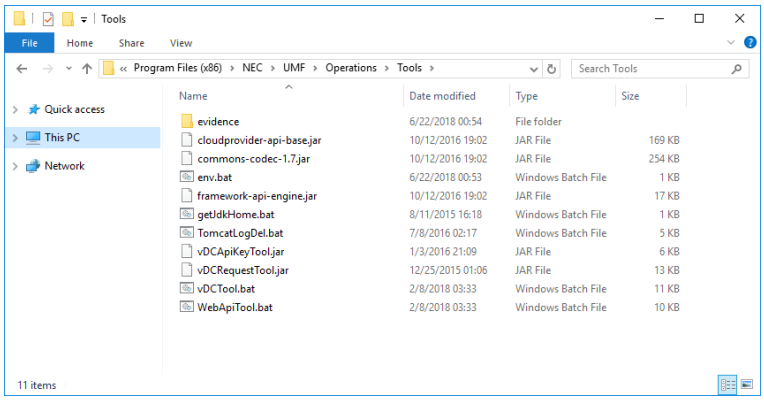


Figure 3-2 Tools directory

Note

For Linux, read the command name and the path in the description of this procedure as follows:

Command name: WebApiTool.sh

Default installation path: /opt/UMF/Operations

2. Start the command prompt and move to the <manager-install-path>\Tools directory.

```
cd C:\Program Files (x86)\NEC\UMF\Operations\Tools
```

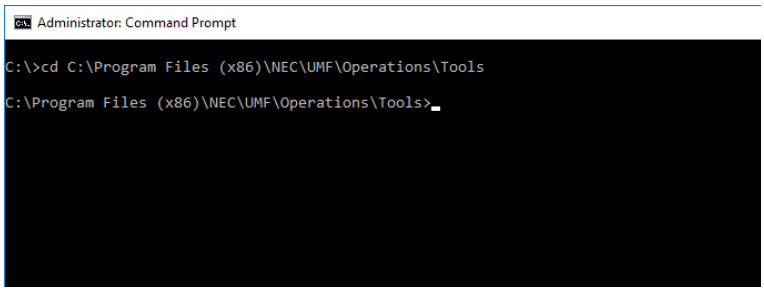


Figure 3-3 Moving to the Tools directory

3. Execute WebApiTool.bat to create an access key.

```
WebApiTool.bat createkey <UserName> -description "<Description>"
```

Specify any value for <*UserName*> *and* <*Description*>.

Caution

- For <UserName>, only ASCII characters or numbers can be specified.
- The character string specified for <UserName> is displayed as a user name in the [Audit Log] view on the monitoring terminal of the manager.

In the following example, webconsole is specified for both <*UserName*> and <*Description*>.

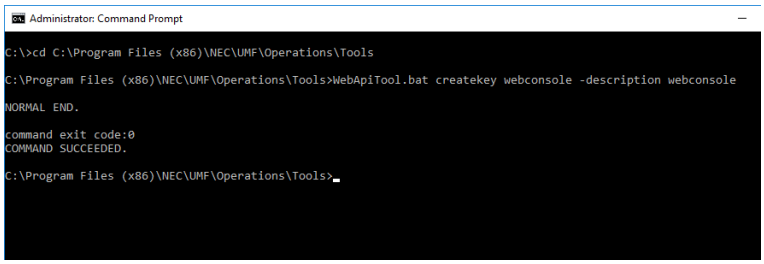


Figure 3-4 createkey command

Confirm that the following is displayed in the standard output.

```
NORMAL END.

command exit code:0
COMMAND SUCCEEDED.
```

Caution

If the following error is displayed when the command is run, the Service Governor may have not been started.

Service name: Confirm the service start state of the Apache Tomcat 8.5 Service Governor and, if it is stopped, restart the service and run the command again.

```
Exception in thread "main" java.lang.NoClassDefFoundError: com/nec/jp/websa
m/umf/base/common/apikey/exception/ApiKeyArgumentException
```

4. Confirm the created access key.

```
WebApiTool.bat showkey <UserName>
```

In the following example, webconsole is specified for <*UserName*>.

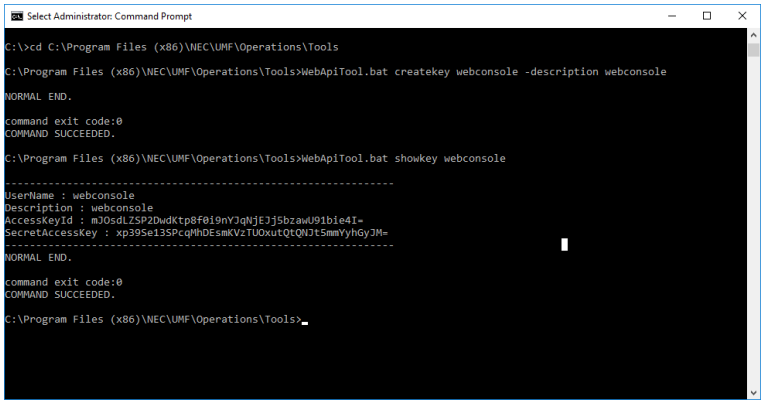


Figure 3-5 showkey command

Confirm that the following is displayed in the standard output. Make note of the values of AccessKeyId and SecretAccessKey.

```
------------------------------------------------------------
UserName : webconsole
Description : webconsole
AccessKeyId : mXjOXxj9bpZm3li/CGmpCD6AuHUg1l+f/Mc8EZBiKJ8=
SecretAccessKey : /sqLJe3LWJFXRjSBH1jh7uUt9oTI3TIKJp03Rk3PqA8=
------------------------------------------------------------
NORMAL END.
```

```
command exit code:0
COMMAND SUCCEEDED.
```

5. Register the created access key in the application server.

   Open webframework.properties in the Application Server installation directory.

   The default is `C:\Program Files (x86)\NEC\UMF\Operations\Tomcat\conf\NEC`.

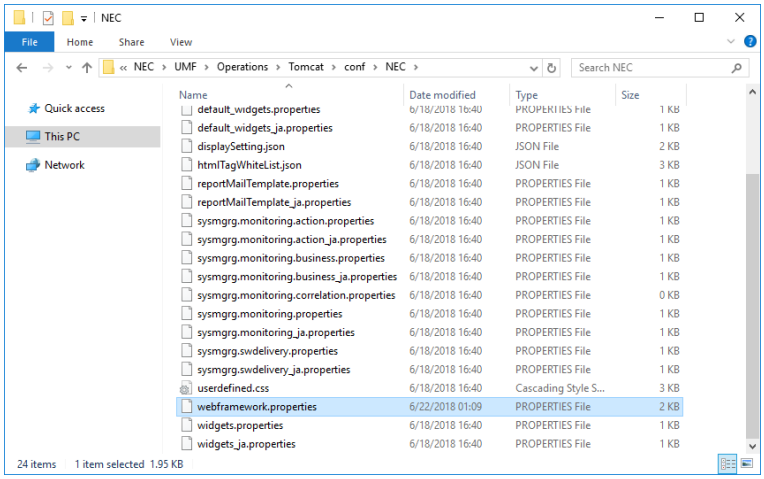


Figure 3-6 conf\NEC directory

6. Set the values that were made note of in step "4. (page 42)" for webframework.properties.

Table 3-2 Access key to be registered on the application server

Configuration file key	Setting value
product.cloudportal.service.monitoring.provider.webapibase.access.key.id	AccessKeyId written down in step "4. (page 42)"
product.cloudportal.service.monitoring.provider.webapibase.secret.access.key	SecretAccessKey written down in step "4. (page 42)"

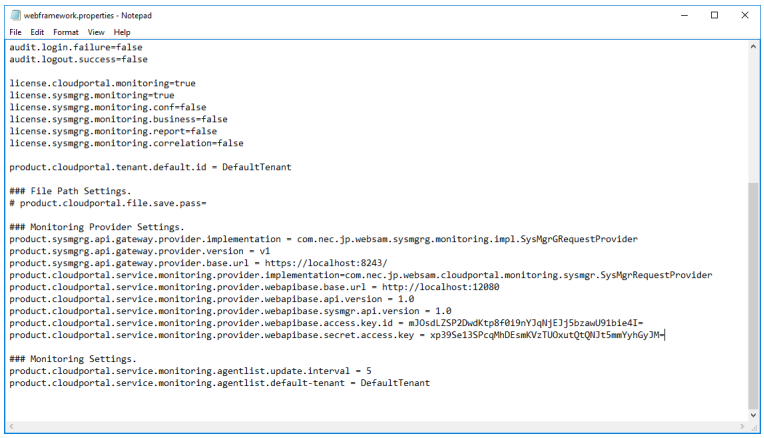


Figure 3-7 webframework.properties

7. After registering the access key, restart "Apache Tomcat 8.5 Service Governor" from the service list.

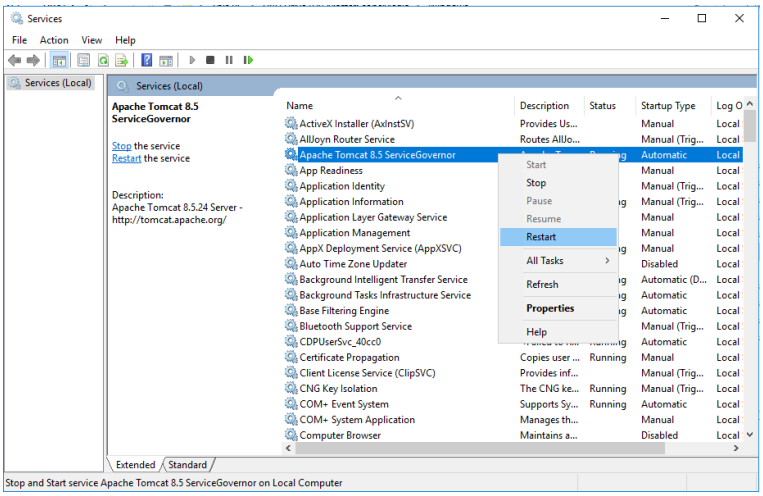


Figure 3-8 Restarting the application server

3.3 Setting up a Service Governor and manager connection

This section describes how to set up a Service Governor and manager connection.

To link Service Governor and manager, you must enable the Web API function of the manager and register the URL of the destination to connect the manager in Service Governor.

1. Start the view of SystemManager G and acquire the configuration mode.

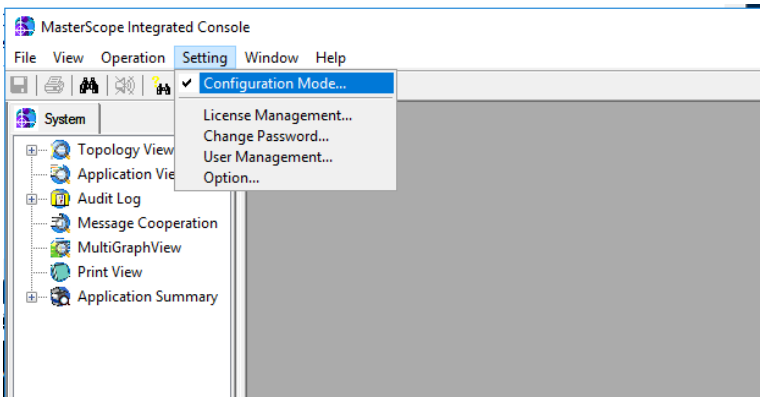


Figure 3-9 Acquiring the configuration mode

2. Select [Setting] - [Option...] to display the option setting screen.

   Select the [Web Monitoring View] tab and then select the [Use Web API Function] check box.

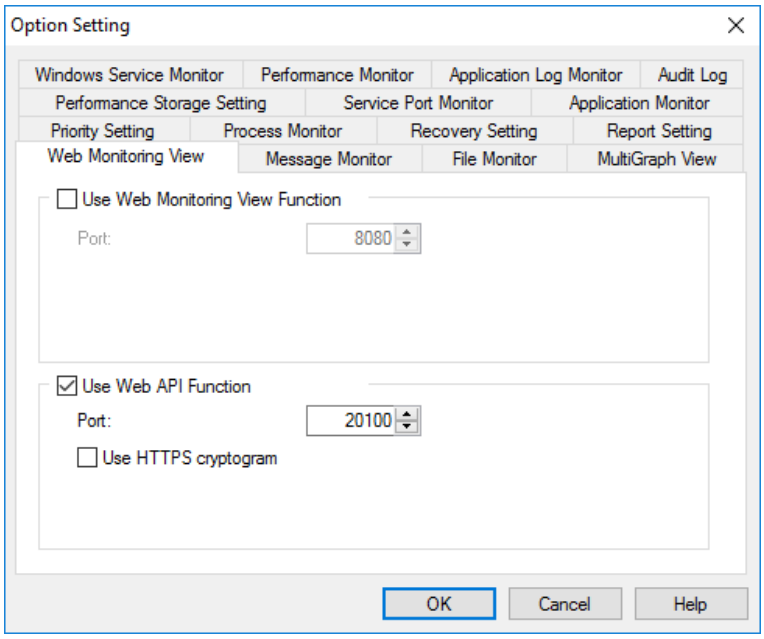


Figure 3-10 Enabling the Web API function

Table 3-3 Setting items of Web API function

Setting item	Description
Port	Specify the port number to be used to establish a connection between Service Governor and manager within a range of 1000 to 32767.
Use HTTPS cryptogram	If the check box is selected, the communication between Service Governor and manager is encrypted by HTTPS.

Note

If a warning message appears when the [Use HTTPS cryptogram] check box is selected or if you want to change the server certificate, further settings must be made.

For details on these settings, see "Before Operation" -"About WebAPI functions" in the "MasterScope SystemManager G Manual (Ver.8.0.0)."

3. Confirm that `SysMonMgr.ini` exists under the <manager-install-path>\Manager\sg directory.

   The default is `C:\Program Files (x86)\NEC\UMF\Operations\Manager\sg`.

4. Open `SysMonMgr.ini` and confirm the host name that is set when installing the manager (contents of the HostName parameter in the [SelfNode] section).

   In the following example, SMG71JP is the host name.

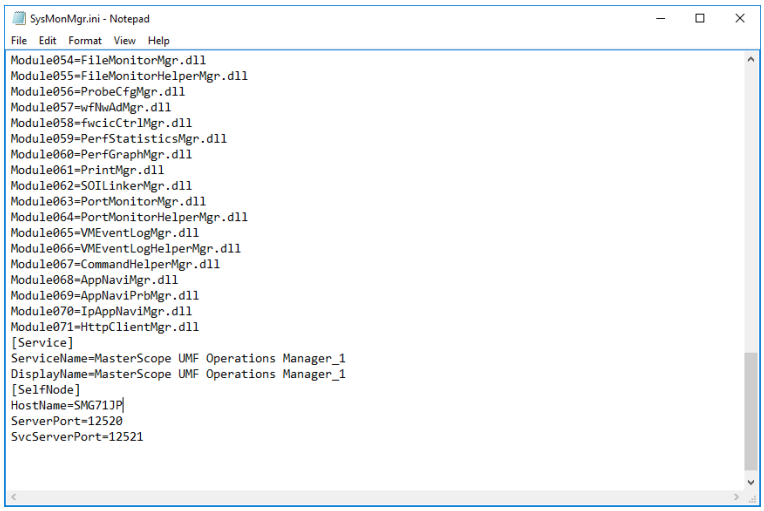


Figure 3-11 Confirming the host name of the manager

5. Open fwapi.properties in the <Tomcat-install-path>\conf directory.

   The default is `C:\Program Files (x86)\NEC\UMF\Operations\Tomcat\conf`.

6. While referring to the following parameter description, specify the information for the manager to be connected for fwapi.properties.

   ◆Parameter description

Parameter name	Description
fw.manager{n}.host	Specify the URL and port number of the manager. This parameter must be specified. In addition, name resolution must be possible with this parameter. The format of the parameter is as follows. fw.manager{n}.host={URL},{SelfHost},{Manager Type} The default value of port number is 20100.

   ◆Format of the fw.manager{n}.host parameter

   For this version, specify 1 for {n} of the fw.manager{n}.host key character string.

```
fw.manager1.host={URL},{SelfHost},{Manager Type}
```

   Set the following elements to the setting values. Use a comma (,) as a separator.

Setting element	Setting value
{URL}	http://<manager name>:<port number> In addition, name resolution must be possible with this parameter. The default value of port number is 20100.
{SelfHost}	Specify <manager name>. The manager name specified here must be the same as the HostName property in the [SelfNode] section that is set in the following file, which is in the installation directory of the manager. In addition, name resolution must be possible with this parameter. <manager-install-path>\Manager\sg\SysMonMgr.ini

Setting element	Setting value
	[SelfNode] HostName=MOM01
{Manager Type}	This item must be specified if multiple managers are linked in a hierarchy. This is not used with WebConsole Option, so omit this, including the comma immediately preceding it.

In the following example, a manager called SMG71JP is added.

```
http://SMG71JP:20100,SMG71JP
```

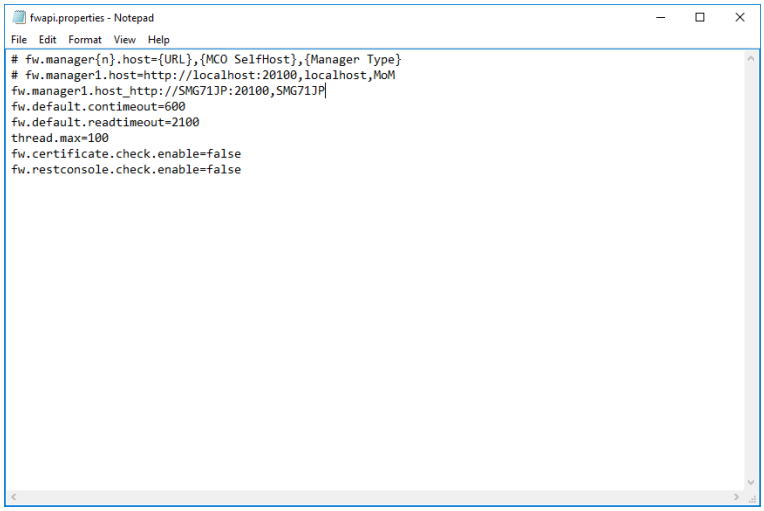


Figure 3-12 Adding a manager to fwapi.properties

Caution

As the manager name to specify for {URL} and {SelfHost}, do not use localhost.

7. Start the command prompt and move to the <manager-install-path>\Tools directory.

```
cd C:\Program Files (x86)\NEC\UMF\Operations\Tools
```

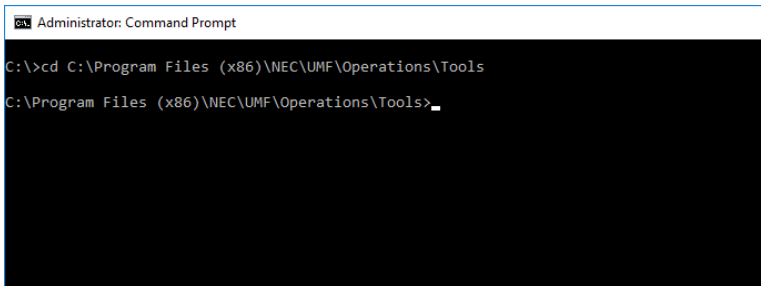


Figure 3-13 Moving to the Tools directory

8. To reflect the information set for fwapi.properties, run the following command.

```
WebApiTool.bat properties reload fwapi
```

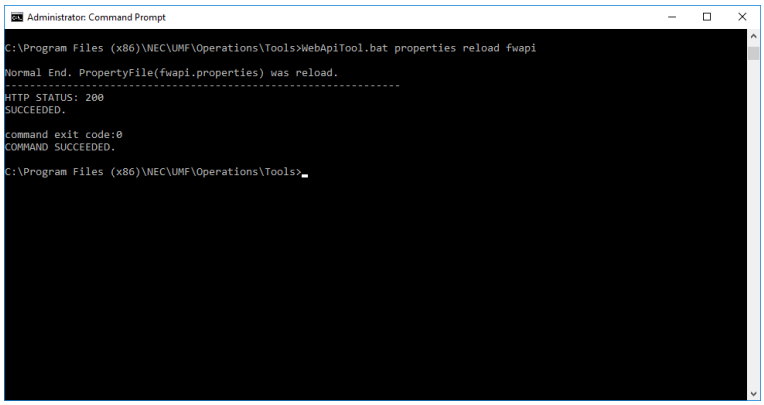


Figure 3-14 Reloading fwapi.properties

Confirm that the following is output in the standard output.

```
Normal End. PropertyFile(fwapi.properties) was reload.

------------------------------------------------------------------
HTTP STATUS: 200
SUCCEEDED.

command exit code:0
COMMAND SUCCEEDED.
```

3.4 Setting up a connection from a manager to WebConsole Option

This section describes how to set up a manager and WebConsole Option connection.

You must specify the host name and the port number for connecting to the components of WebConsole Option from the manager.

1. Open `HttpClientMgr.ini` in the <manager-install-path>\Manager\sg directory.

   The default is `C:\Program Files (x86)\NEC\UMF\Operations\Manager\sg`.

2. For HttpClientMgr.ini, specify the information for destination WebConsole Option.

   You can make the connection settings for the following components of WebConsole Option: Message store (MessageStore), monitoring status management (Status), external interface linkage (ExtLink), and performance data store (PerfStore).

Table 3-4 Connection setting items for WebConsole Option

Setting item	Description	Default value
HostName	Specify the name of the host in which the components are installed. The host name is the value of the host name/IP address specified when WebConsole Option is installed.	-
Port	Specify the port number that is used to connect the component.	Message store: 22524/tcp Monitoring status management: 22523/tcp External interface linkage function: 22529/tcp

Setting item	Description	Default value
		Performance data store: 22531/tcp

In the following example, SMG71JP is set for HostName while all other information is left set to the default values.

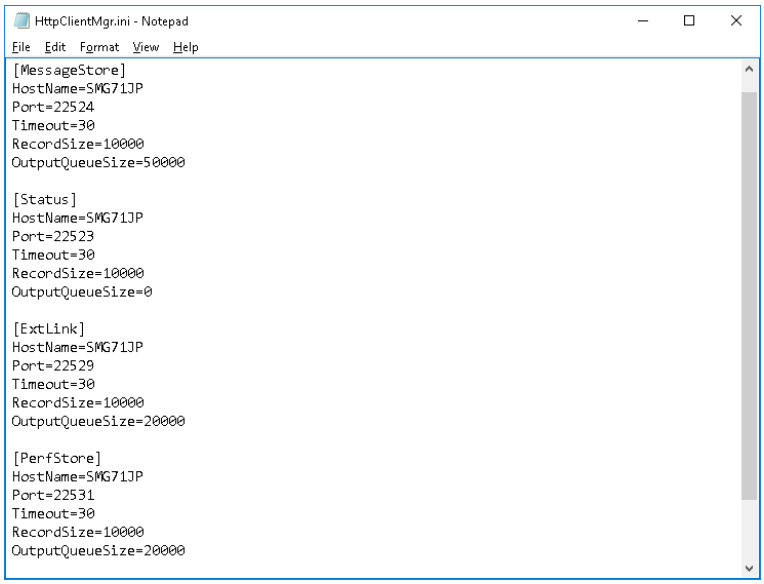


Figure 3-15 Editing HttpClientMgr.ini

Note

This section contains only the settings necessary to make a connection. For details about the other setting items that can be set in HttpClientMgr.ini, see "Appendix D. How to Make Detailed Settings for Connection between Manager and WebConsole Option (page 76)".

3. Restart the manager service.

   The default is MasterScopeUMF Operations Manager_1.

Note

The severity of the threshold of the counter previously registered in the performance data store of WebConsole Option is not updated. Using an appropriate command, synchronize SystemManager G Manager with the performance data store of WebConsole Option.

For details, see Appendix "Synchronizing with WebConsole Option with a Command" of the "Function Reference Guide."

3.5 Disabling the accumulation of performance data by the manager

If the performance data store of WebConsole Option is used, the same performance data as that for SystemManager G Manager is registered.

This section describes the settings required to disable the accumulation of data if performance data is not used with SystemManager G Manager.

To disable the accumulation of performance data, perform the following.

Tip

The period of accumulation of performance data in WebConsole Option is one year. To change the accumulation period, edit the performance data store configuration file.

For details, see Appendix "Setting Items of the Property File" of the "Environment Configuration Guide."

1. Start the view of SystemManager G and acquire the configuration mode.

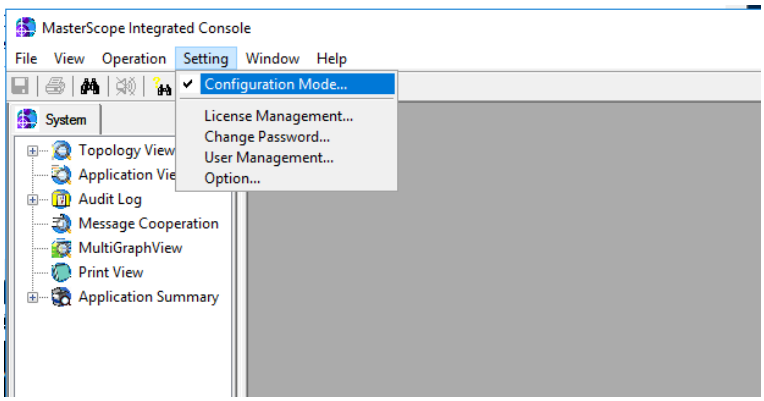


Figure 3-16 Acquiring the configuration mode

2. Open the [Option Setting] screen by selecting [Option] from the [Setting] menu, and then select the [Performance Storage Setting] tab.
3. For [Storage Mode] under [Storage Settings], select [Do not store], and then click the [OK] button.

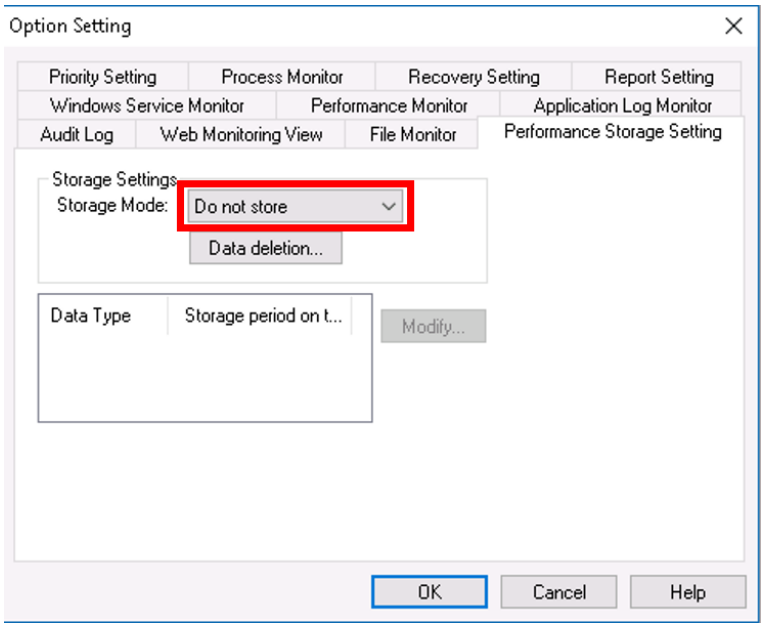


Figure 3-17 Option setting screen of SystemManager G Manager

3.6 Setting up a connection from an external interface linkage component to manager

To make it possible to perform start, stop, and other recovery operations on monitoring target Windows services and processes from WebConsole Option, set the information for the manager on which to execute them.

1. msc_extlink.properties, used to make the setting, does not exist immediately after installation.
   - For Windows environments

     Copy a sample file in the `<WebConsole-install-path>\conf\sample` directory to the `<WebConsole-install-path>\conf` directory.
     The default values are as follows:
     - Sample file: `C:\Program Files\NEC\pf\opm\manager\conf\sample`
     - Sample file copy destination: `C:\Program Files\NEC\pf\opm\manager\conf`
   - For Linux environments

     Copy a sample file in the `<WebConsole-install-path>/conf/sample` directory to the `<WebConsole-install-path>/conf` directory.

     The default values are as follows:
     - Sample file: `/opt/nec/pf/opm/manager/conf/sample`
     - Sample file copy destination: `/opt/nec/pf/opm/manager/conf`
2. Edit the msc_extlink.properties file.
   - For Windows environments

     `Edit the <WebConsole-install-path>\conf\msc_extlink.properties file.`
   - For Linux environments

     `Edit the <WebConsole-install-path>/conf/msc_extlink.properties file.`

   Setting items are described below.

Setting item	Description
external_product.count	Specify the number of managers to connect.
external_product. {n}.management_id	Value for identifying the destination manager. Specify the "manager's local host name," specified when installing the manager.
external_product.{n}.url	Specify the URL of the manager to execute recovery. The only specifiable protocol is "http". For the port number, specify the value that is set with the Web API function of the manager. Specification method http://<manager's-local-host-name>:<port-number>

   In this example, each setting item is as follows.
   - external_product.count=2
   - external_product.1.management_id=SMG801JP
   - external_product.1.url=http://SMG801JP:20100
   - external_product.2.management_id=SMG802JP
   - external_product.2.url=http://SMG802JP:20100

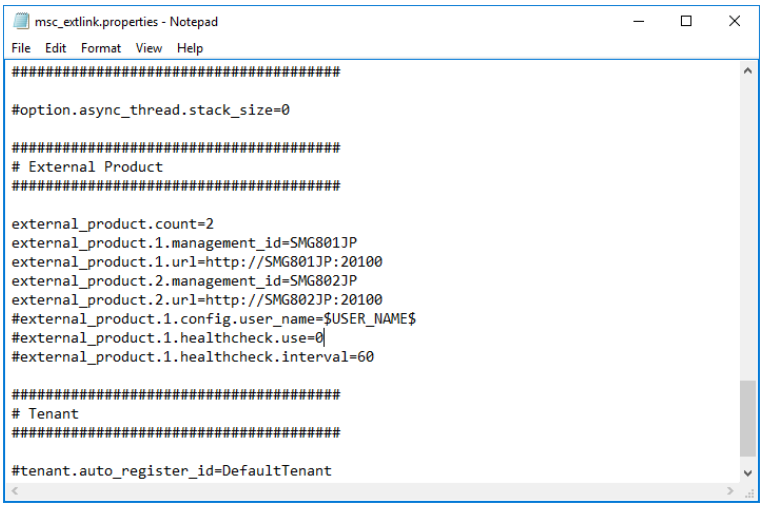


Figure 3-18 Setting msc_extlink.properties

Note

In the sample file, a "#" is placed at the beginning of the line containing each setting item.

Delete the "#" at the beginning of the line. If the "#" is left as is, the setting will not be reflected.

3. Restart the external interface linkage component.
   - For Windows environments

     Service name: SystemManager G ExternalLink Service
   - For Linux environments

     systemctl restart msc_extlink

3.7 Setting up a connection from a portal/user management platform component to manager

To make it possible to apply monitoring settings to the monitoring target node from WebConsole Option, set the information required for the destination manager.

1. Monitoring.conf that is used to make the setting does not exist immediately after installation.

   Create a new monitoring.conf file in the Application Server installation directory and open it by using a text editor.

   The default is `C:\Program Files (x86)\NEC\UMF\Operations\Manager\sg`.

2. Referring to the following parameter description, specify the information for the manager to be connected.

   ◆Parameter description

Parameter name	Description
ManagerSelfHost{n}	Specify <manager name>. The manager name specified here must be the same as the HostName property in the [SelfNode] section that is set in the following file, which is in the installation directory of the manager. In addition, name resolution must be possible with this parameter. Windows:

Parameter name	Description
	<manager-install-path>\Manager\sg\SysMonMgr.ini Linux: <manager-install-path>/Manager/sg/SysMonMgr.ini [SelfNode] HostName=MOM01

◆Format of the ManagerSelfHost{n} parameter

For this version, specify 1 for {n} of the ManagerSelfHost{n} key character string.

In the following example, a manager called SMG80JP is added.

```
ManagerSelfHost1=SMG80JP
```

3.8 Setting up WebConsole Option

3.8.1 Enabling the business view function (for Windows environments)

To enable the business view function with WebConsole Option, you must register the license file included in the installation medium.

1. Copy the BusinessView_Codeword file in the <Media Root>\tools\SysMgrG\WebConsole\license directory in the installation medium to <WebConsole-install-path>\bin.

```
C:\Program Files (x86)\NEC\UMF\Operations\Manager\sg>COPY D:\tools\SysMgrG\WebConsole\license\BusinessView_Codeword "C:\Program Files\NEC\pf\opm\manager\bin"
        1 file is copied.
```

2. To register the license, run the msc_license_cmd command as described below.

   The msc_license_cmd command is in the <WebConsole-install-path>\bin directory.

```
cd "C:\Program Files\NEC\pf\opm\manager\bin"
msc_license_cmd.exe --register=BusinessView_Codeword --force
```

   A registration completion message is displayed in the standard output.

```
Codeword registration has been completed.
```

   Note

   When the msc_license_cmd command is run, the following message may be displayed.

```
Register Codeword Fiald. msg=addCodeword() catch exception.
reason=Connection refused.
```

   If this message is displayed, the service (SystemManager G API Gateway Service) of the API Gateway may have been stopped.

   Start the service first and run the msc_license_cmd command again.

3. Upon completion, run the msc_license_cmd command as described below to check if the license has been registered.

```
msc_license_cmd.exe --list
```

```
SystemManager G BusinessView Option
```

If the above line is displayed, the registration of the license is complete.

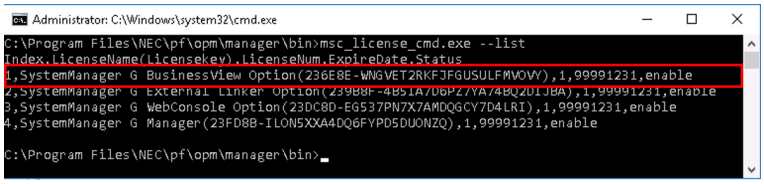


Figure 3-19 Confirming the registered license

4. Next, make the setting for enabling the display of a business view with WebConsole Option.

   In the `<Tomcat-install-path>\conf\NEC\webframework.properties` file, change the following setting value to true.

```
license.sysmgrg.monitoring.business = true
```

5. To reflect the setting, restart "Apache Tomcat 8.5 Service Governor" from the service list.

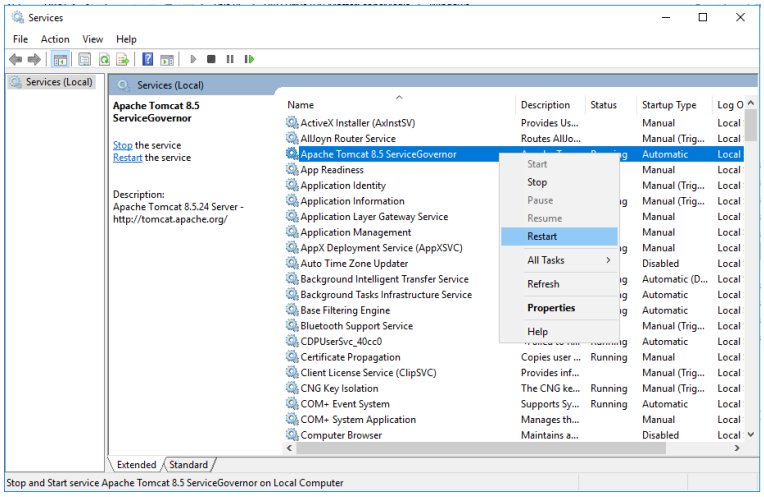


Figure 3-20 Restarting the application server

3.8.2 Enabling the business view function (for Linux environments)

To enable the business view function with WebConsole Option, you must register the license file included in the installation medium.

1. Copy the BusinessView_Codeword file in the `<Media Root>/tools/SysMgrG/WebConsole/license` directory in the installation medium to `<WebConsole-install-path>/bin`.

```
cp -p /mnt/tools/SysMgrG/WebConsole/license/BusinessView_Codeword /opt/nec/pf/opm/manager/bin
```

2. To register the license, run the msc_license_cmd command as described below.

   * Before running this command, add `<WebConsole-install-path>/lib/poco` and `<WebConsole-install-path>/lib/common` to LD_LIBRARY_PATH.

   The msc_license_cmd command is in the `<WebConsole-install-path>/bin` directory.

```
cd /opt/nec/pf/opm/manager/bin
./msc_license_cmd --register=BusinessView_Codeword --force
```

A registration completion message is displayed in the standard output.

```
Codeword registration has been completed.
```

Note

When the msc_license_cmd command is run, the following message may be displayed.

```
Register Codeword Fiald. msg=addCodeword() catch exception.
reason=Connection refused.
```

If this message is displayed, the service (msc_apigateway) of the API Gateway may have been stopped.

Start the service first and run the msc_license_cmd command again.

```
systemctl start msc_apigateway
```

3. Upon completion, run the msc_license_cmd command as described below to check if the license has been registered.

```
./msc_license_cmd --list
```

```
SystemManager G BusinessView Option
```

If the above line is displayed, the registration of the license is complete.

Figure 3-21 Confirming the registered license

4. Next, make the setting for enabling the display of a business view with WebConsole Option.

   In the `<Tomcat-install-path>/conf/NEC/webframework.properties` file, change the following setting value to true.

```
license.sysmgrg.monitoring.business = true
```

5. To reflect the setting, restart "Apache Tomcat 8.5 Service Governor".

```
systemctl restart ServiceGovernor
```

Chapter 4. Upgrading

This chapter describes how to upgrade and set up WebConsole Option.

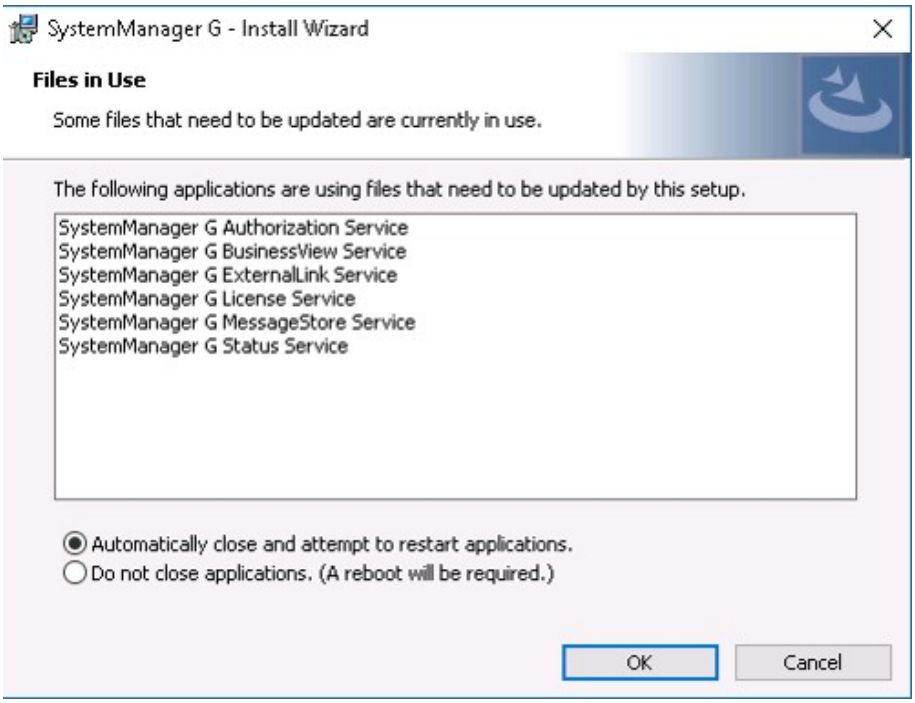
Contents

4.1 Upgrading WebConsole Option in a Windows environment

The procedure for upgrading WebConsole Option in a Windows environment is the same as that for installing it. See "2.2 InstaInstallation in a Windows environment (page 7)".

After the upgrade has been installed, make the necessary additional settings from version7.1, while referring to "4.2 Settings to be made after upgrading from version 7.1 (page 58)".

If a service is running, the following screen is displayed. If it is displayed, make a selection according to the situation.



Note

1. When installing the upgrade, the folder in which the previous version was installed is set as the installation folder. Do not change the installation folder. If the installation folder is changed, the settings specified with the previous version will not be inherited.
2. The counter performance data during the period monitored by version 7.1 is not displayed as a performance graph in version 8.0.
3. The counter name display format of version 8.0 differs from that of version 7.1.
   - Data types (System/Network) and the host name (agent name) are deleted.
   - The delimiter is changed from | (pipe) to :: (two colons).

   The display format differs from that of the monitoring terminal of the manager, but the same counter is presented.

```
・Monitoring terminal
System|DBSERVER1|Memory|% Memory Used Ex

・WebConsole Option
Memory::% Memory Used Ex
```

4.2 Settings to be made after upgrading from version 7.1

To use WebConsole Option after the upgrade installation from WebConsole Option version 7.1, the additional settings described in this section are necessary.

Make the necessary settings and confirm them as described below.

1. Addition of parameters to the portal/user management platform configuration file
   a. Edit the portal/user management platform configuration file (<Tomcat-install-path>\conf\NEC\webframework.properties) by using a text editor.

      The default <Tomcat-install-path> is C:\Program Files (x86)\NEC\UMF\Operations.

   b. Set the monitoring agent list update interval. Immediately after the upgrade, the interval is set to 0 (no periodic update).

      Set a value in the effective range (0 to 1440). The default value is 5. If 0 is set, the monitoring agent list for node monitoring is not updated.

      ```
      ### Monitoring setting
      product.cloudportal.service.monitoring.agentlist.update.interval
      = 5
      ```

   c. Specify the tenant ID used to update the monitoring agent list. Set "DefaultTenant" for the following setting value. If the key does not exist, add it.

      ```
      product.cloudportal.service.monitoring.agentlist.default-tenant =
       DefaultTenant
      ```

   d. Using WebConsole Option, make the settings necessary to enable the monitoring setting function. Change the following setting value to true. If the key does not exist, add it.

      ```
      license.cloudportal.monitoring=true
      ```

2. Adding the monitoring manager configuration file and adding parameters
   a. Edit the monitoring manager configuration file (<Tomcat-install-path>\conf\NEC\monitoring.con) by using a text editor.

      If the monitoring manager configuration file (monitoring.conf) does not exist, create it.

      The default <Tomcat-install-path> is C:\Program Files (x86)\NEC\UMF\Operations.

   b. Set the monitoring manager as described below.

      For details about the setting, see "3.7 Setting up a connection from a portal/user management platform component to manager (page 52)".

3. Adding the destination components

   You must add destination settings in the performance data store to the connection setting file of WebConsole Option.

   a. Edit the manager configuration file (<manager-install-path>\Manager\sg\HttpClientMgr.ini) by using a text editor.

      The default <manager-install-path> is C:\Program Files (x86)\NEC\UMF\Operations.

   b. In the [PerfStore] section, set the name of the host on which the performance data store component is installed, as well as the port number.

```
[PerfStore]
HostName=<host name>
Port=22531
Timeout=30
RecordSize=10000
OutputQueueSize=20000
```

For details about the connection setting, see "3.4 Setting up a connection from a manager to WebConsole Option (page 48)".

4. Deleting the cache of the browser being used

   If any files of an old version remain in the temporary Internet (cache) folder of the browser, events such as the following may occur: Buttons are disabled, images do not change, or the layout may be disrupted.

   Before using the browser, delete the folder from the cache, using the appropriate procedure for the browser.

5. Starting the services

   After an upgrade is applied, you must restart the following services, which would have been stopped to apply the upgrade.

   - PostgreSQL service
   - Each WebConsole component service
   - WebSAM Application Server service (Service Governor)

   For information about the services to be started and how to start them, see "Appendix A. How to Start and Stop the Product (page 70)".

6. Settings required to view messages of version 7.1

   To display pre-upgrade messages, you must add the information necessary to enable reference to the database of the message store.

   Perform the addition procedure by referring to "Appendix C. How to View Pre-upgrade Messages (page 75)".

7. Re-creating performance graph widgets

   If, in version 7.1, a performance graph widget was added to the dashboard, an error message may be displayed and graph display may fail.

   Add/delete widgets as described in the "Function Reference Guide."

8. Restarting the service

   After an upgrade is applied, you must restart the following services, which would have been stopped to apply the upgrade.

   - SystemManager G MessageStore Service

   For information about the services to be started and how to start them, see "Appendix A. How to Start and Stop the Product (page 70)".

Chapter 5. Uninstallation

This chapter describes how to uninstall WebConsole Option.

Contents

5.1 Uninstallation in a Windows environment

The following sections describe how to uninstall WebConsole Option in a Windows environment.

Uninstall WebConsole Option using either of the following procedures.

- Uninstallation using the MasterScope Media
- Uninstalling WebConsole Option

If any bundled packages are unnecessary, uninstall them by using the following procedure.

- Uninstalling bundled packages

5.1.1 Uninstallation using the MasterScope Media

The section describes how to uninstall WebConsole Option in a Windows environment by using the MasterScope Media.

1. Log on to the machine from which to uninstall the packages with the Administrator account.
2. Mount the MasterScope Media and execute `<Media Root>\Windows\Setup.exe`.

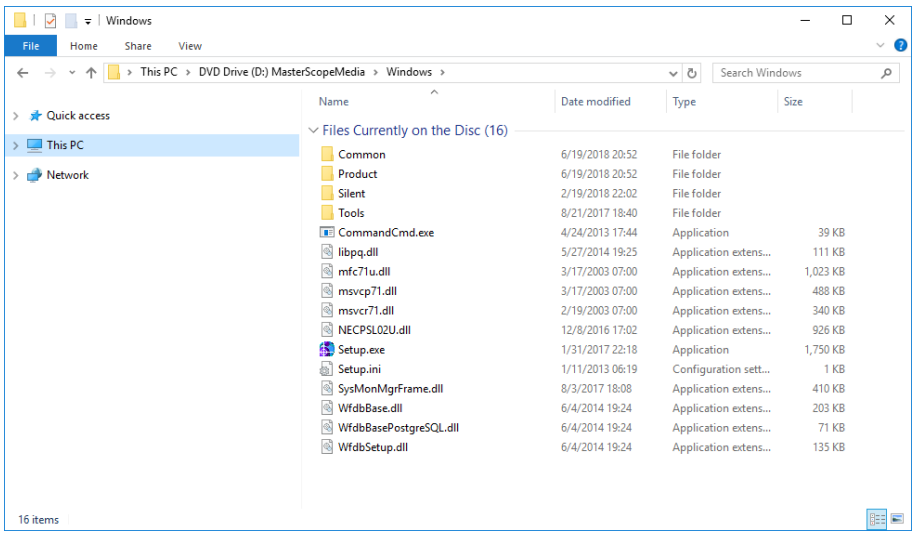


Figure 5-1 Executing Setup.exe

3. The [MasterScope Media Installer] window is displayed. Select [Uninstall] and click [Next].

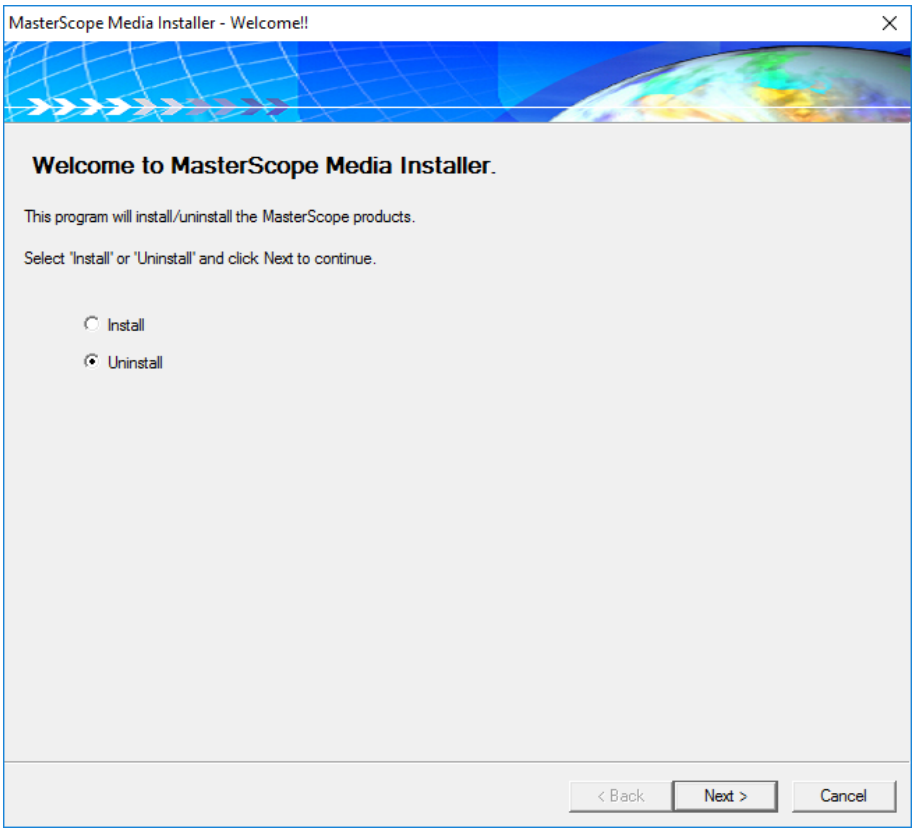


Figure 5-2 [MasterScope Media Installer] window

4. Select the product to uninstall. Select the check boxes of the following products and click [Next].
   - Application Server
   - MasterScope Service Governor
   - SystemManager G WebConsole Option

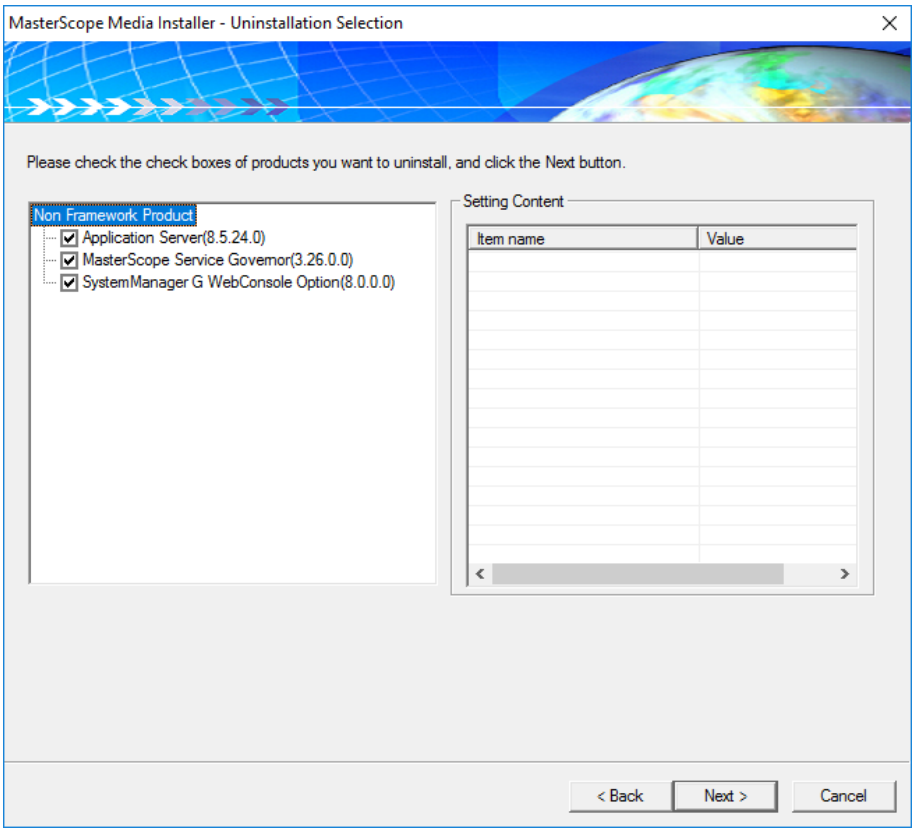


Figure 5-3 Selecting the product to uninstall

5. The "Uninstallation Confirmation" screen is displayed. Confirm the contents and then click the [Next] button.

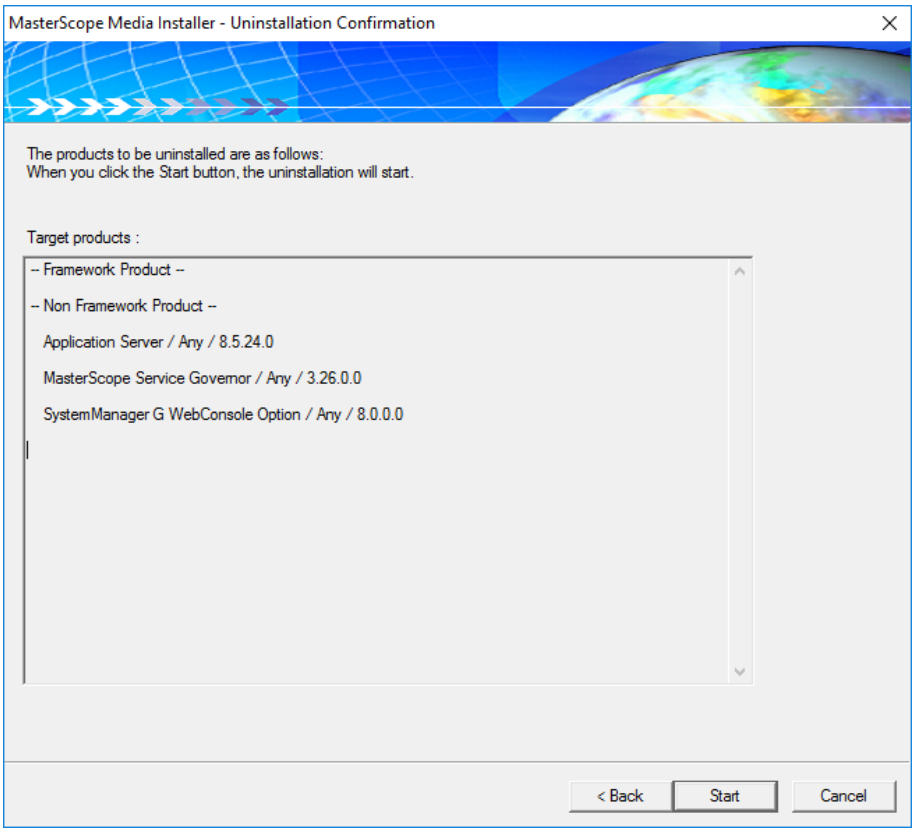


Figure 5-4 Uninstallation Confirmation screen

6. Click the [Finish] button.

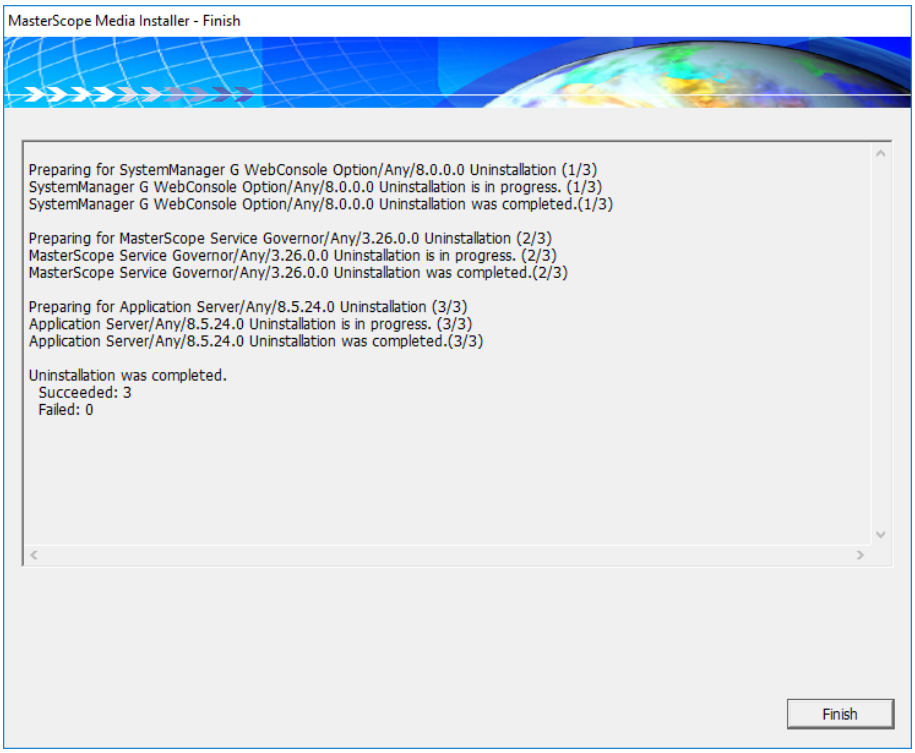


Figure 5-5 Uninstallation completion screen

7. Delete the files created after installation such as log files. Delete the following folder.
   - <WebConsole-install-path>
8. This completes the uninstallation.

5.1.2 Uninstalling WebConsole Option

This section describes how to uninstall WebConsole Option in a Windows environment.

1. Log on to the machine from which to uninstall the packages with the Administrator account.
2. Display [Control Panel] and then [Uninstall a program].

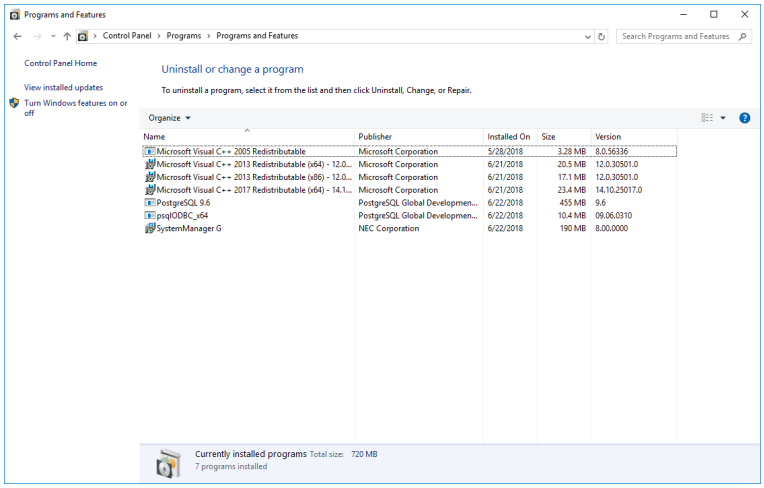


Figure 5-6 Programs and Features

3. Right-click [SystemManager G] and select [Uninstall].

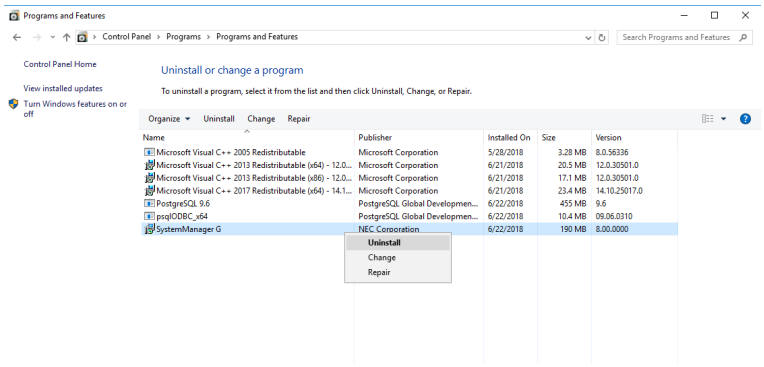


Figure 5-7 Selecting the program to uninstall

4. The uninstallation confirmation dialog box is displayed. Select [Yes].

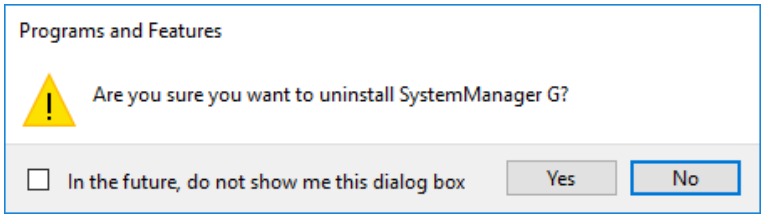


Figure 5-8 Confirmation dialog box

5. Delete the application server (Tomcat) service.

   Run the following command to delete the application server (Tomcat) service.

```
# set "CATALINA_HOME=<Tomcat-install-path>"
# "<Tomcat-install-path>\bin\service.bat" remove Service Governor
```

6. Delete the following folder.

   After the deletion of the service is complete, delete the following folders:

   - <Tomcat-install-path>
   - <manager-install-path>\Tools
   - <WebConsole-install-path>

7. This completes the uninstallation.

5.1.3 Uninstalling bundled packages

This section describes how to uninstall the packages bundled with WebConsole Option.

When installing WebConsole Option, the following packages have been installed. If they are unnecessary, uninstall them.

Table 5-1 Packages to be uninstalled

Required packages	• Microsoft Visual C++ 2017 Redistributable Package(x64) • psqlodbc_x64
Dependent packages	• PostgreSQL 9.6 Packages required for PostgreSQL 9.6: • Microsoft Visual C++ 2013 Redistributable Package(x64) • Microsoft Visual C++ 2013 Redistributable Package(x86)

1. Log on to the machine from which to uninstall the packages with the Administrator account.

2. Display [Control Panel] and then [Uninstall a program].

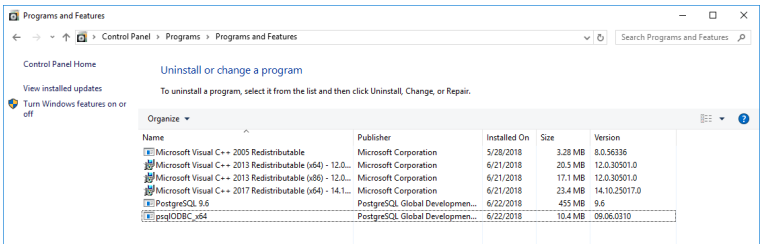


Figure 5-9 Programs and Features

3. Right-click the package to uninstall and select [Uninstall].

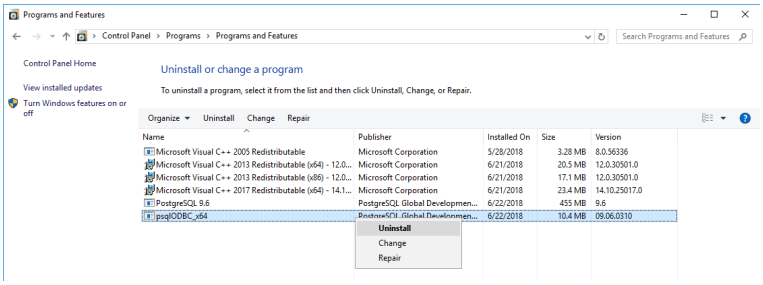


Figure 5-10 Selecting a package to uninstall

4. The uninstallation confirmation dialog box is displayed. Select [Yes].

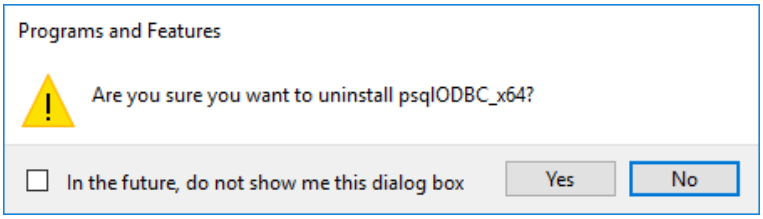


Figure 5-11 Confirmation dialog box

5.2 Uninstallation in a Linux environment

The following sections describe how to uninstall WebConsol Option in a Linux environment.

Uninstall WebConsol Option using either of the following procedures.

- Uninstallation using the MasterScope Media
- Uninstalling WebConsole Option

If any external packages are unnecessary, uninstall them by using the following procedure.

- Uninstalling external packages

5.2.1 Uninstallation using the MasterScope Media

The section describes how to uninstall WebConsole Option in a Linux environment by using the MasterScope Media.

1. Mount the MasterScope Media and execute `<Media Root>\Linux\Setup`.

```
# mkdir /mnt/cdrom
# mount /dev/cdrom /mnt/cdrom
```

```
# cd /mnt/cdrom/Linux
# ./Setup
```

2. The MasterScope Media Installer screen is displayed. Enter "2".

```
   ************************************
       Welcome to MasterScope Media !!
   ************************************

   This program will install/uninstall products.

   1. Install
   2. Uninstall

   Please select the operation.
   (1:install 2:uninstall q:quit program): 2
```

3. Select the products to uninstall. When uninstalling all the products, enter "1,2,3".

```
   ------------------
   Installed products
   ------------------

  ┌──────────────────────────────────┐
  │    Other( Not Framework )                                          │
  │          1 Application Server Any 8.0.41.0                         │
  │          2 MasterCope Service Governor Any 3.24.0.0                │
  │          3 SystemManager G WebConsole Option Any 8.0.0.0           │
  └──────────────────────────────────┘

   ----------------------------------------
   Please select product(s) to uninstall by entering numbers separated
 by commas.
   [Example: 1.1, 2.1]
   (v[n]:view b:back q:quit program): 1,2,3
```

4. Enter "y" to start uninstallation.

```
   ----------------------------------------
   Is it OK to start uninstallation?
   (y:yes n:no q:quit program):y
```

5. When uninstallation is complete, the following is displayed.

```
----------------------------------------
Uninstallation result
----------------------------------------
1 SystemManager G WebConsole Option Any 8.0.0.0 (Success)
2 MasterScope Service Governor Any 3.24.0.0 (Success)
3 Application Server Any 8.0.41.0 (Success)
----------------------------------------
Success:3, Failure:0
```

6. Delete the <WebConsole-installpath>/../msc_install directory.

```
# cd /opt/nec/pf/opm
# rm -rf msc_install
```

7. Delete the files, such as log files, created after installation. Delete the following folder.
   - <WebConsole-install-path>
8. This concludes uninstallation of WebConsole Option.

5.2.2 Uninstalling WebConsole Option

This section describes how to uninstall WebConsole Option in a Linux environment.

1. The following msc components are installed.
   - msc_common_library
   - msc_apigateway
   - msc_auth
   - msc_messagestore
   - msc_report
   - msc_status
   - msc_extlink
   - msc_businessview
   - msc_perfdatastore
   - msc_portal
2. Uninstall them by using the rpm command.

```
/bin/rpm -ev uninstall-pkgname
```

3. Delete the application server (Tomcat) service. Run the following command to delete the application server (Tomcat) service.
   - For Red Hat Enterprise Linux Server release 6

```
# chkconfig ServiceGovernor off
chkconfig --del ServiceGovernor
```

   - For Red Hat Enterprise Linux Server release 7

```
# systemctl -q disable ServiceGovernor
```

4. Delete the rpm files that are backed up in <WebConsole-installpath>/../msc_install/manager/8.0.0.

```
# cd /opt/nec/pf/opm
# rm -rf msc_install
```

5. Delete the files, such as log files, created after installation. Delete the following folders.
   - <WebConsole-install-path>
   - <Tomcat-install-path>
   - <manager-install-path>/Tools

6. This concludes uninstallation of WebConsole Option.

5.2.3 Uninstalling external packages

The following external packages are installed.

- unzip
- unixODBC
- unixODBC-devel
- postgresql96-odbc
- postgresql96
- postgresql96-server
- postgresql96-libs
- openssl

If these packages are unnecessary, uninstall them by using the rpm command.

```
/bin/rpm -ev uninstall-pkgname
```

Appendix A. How to Start and Stop the Product

This product automatically starts and stops with the start and stop of the OS. To start and stop this product manually, use the following methods.

A.1 Starting and stopping services in a Windows environment

Select [Administrative Tools] and then [Services] and start or stop the following services.

- PostgreSQL

Service name	Display name	Component name
postgresql-x64-9.6	postgresql-x64-9.6	PostgreSQL

- WebConsole component

Service name	Display name	Component name
msc_auth	SystemManager G Authorization Service	Authorization Component
msc_apigateway	SystemManager G API Gateway Service	API Gateway Component
msc_messagestore	SystemManager G MessageStore Service	MessageStore Component
msc_status	SystemManager G Status Service	Status Component
msc_businessview	SystemManager G BusinessView Service	BusinessView Component
msc_extlink	SystemManager G ExternalLink Service	ExternalLink Component
msc_perfdatastore	SystemManager G PerformanceDataStore Service	PerformanceDataStore Component
msc_report	SystemManager G Report Service	Report Component

For the WebConsole components, the services are stopped after installation. Either restart the system or start the service of each WebConsole component.

Before starting the WebConsole components, you must start the PostgreSQL server.

- The portal/user management platform is registered and operates as an application of the MasterScope Application Server.

  To start and stop the portal/user management platform, start and stop the MasterScope Application Server service (Apache Tomcat 8.5 Service Governor).

A.2 Starting and stopping services in a Linux environment

- Service list

Service name	Function name/Component name
postgresql-9.6	PostgreSQL

Service name	Function name/Component name
msc_auth	Authorization Component
msc_apigateway	API Gateway Component
msc_messagestore	MessageStore Component
msc_status	Status Component
msc_businessview	BusinessView Component
msc_extlink	ExternalLink Component
msc_perfdatastore	PerformanceDataStore Component
msc_report	Report Component
Service Governor	Portal/user management platform

- Service start and stop methods
  - For RHEL 6

```
# service ServiceName {start|stop}
```

  - For RHEL 7

```
# systemctl {start|stop} ServiceName
```

For *ServiceName*, specify a service name.

To start a service, specify start. To stop a service, specify stop.

Appendix B. How to Change a Port Number

This appendix describes how to change the listening port number of this product.

The following sections use the Windows notation to represent file paths. For a Linux environment, read a backslash (\ ) as a slash (/)

B.1 How to change the port number of an msc component

1. Edit the configuration file for each component.

Component	Configuration file
API gateway	<WebConsole-install-path>\conf\msc_license.properties, <WebConsole-install-path>\conf\msc_apigateway.properties
Authority management	<WebConsole-install-path>\conf\msc_auth.properties
Monitoring status management	<WebConsole-install-path>\conf\msc_status.properties
Message store	<WebConsole-install-path>\conf\msc_messagestore.properties
Business view	<WebConsole-install-path>\conf\msc_businessview.properties
Reporting	<WebConsole-install-path>\conf\msc_report.properties
External interface linkage function	<WebConsole-install-path>\conf\msc_extlink.properties
Performance data store function	<WebConsole-install-path>\conf\msc_perfdatastore.properties

Describe the port number in the http.listen_port key.

```
http.listen_port = 22599
```

Note

Specify it appropriately so that port numbers will not conflict within each machine.

2. Restart the msc components.
   - SystemManager G API Gateway Service
   - SystemManager G License Service
   - SystemManager G MessageStore Service
   - SystemManager G Authorization Service
   - SystemManager G ExternalLink Service
   - SystemManager G Status Service
   - SystemManager G Report Service
   - SystemManager G BusinessView Service
   - SystemManager G PerformanceDataStore Service

3. If you change the port number of the API gateway, you must also change the connection settings of the portal/user management platform that is connected to the API gateway.
   a. Edit the portal/user management platform configuration file (<Tomcat-install-path>\conf\NEC\webframework.properties).

```
product.sysmgrg.api.gateway.provider.base.url = https://localhost:8243/
```

   b. To reflect the setting, restart "Apache Tomcat 8.5 Service Governor" from the service list.

4. If you change the port number of the msc component to connect to the manager, you must change the connection settings of the manager that is connected to the msc component.
   a. Edit the manager configuration file (<manager-install-path>\Manager\sg\HttpClientMgr.ini).
   The default is C:\Program Files (x86)\NEC\UMF\Operations\Manager\sg.

```
[MessageStore]
HostName=SMG80JP
Port=22524

[Status]
HostName=SMG80JP
Port=22523

[ExtLink]
HostName=SMG80JP
Port=22529

[PerfStore]
HostName=SMG80JP
Port=22531
```

   b. Restart the manager service. The default is WebSAM UMF Operations Manager_1.

B.2 How to change the port number of the database

1. Edit the "C:\Program Files\PostgreSQL\9.6\data\postgresql.conf" file.

```
port = 5432
```

2. Restart the database.
   - postgresql-x64-9.6 - PostgreSQL Server 9.6
3. Edit the common configuration file of msc components.

   <WebConsole-install-path>\conf\msc_common.properties

```
database.port = 5432
```

   Describe the port number of the listening port of the database.
4. Restart the msc components.
   - SystemManager G API Gateway Service

- SystemManager G MessageStore Service
- SystemManager G Authorization Service
- SystemManager G ExternalLink Service
- SystemManager G Status Service
- SystemManager G Report Service
- SystemManager G BusinessView Service

5. Edit the configuration file of the portal.

   <Tomcat-install-path>\conf\NEC\webframework.properties

```
database.port = 5432
```

   Describe the port number of the listening port of the database.

6. Restart the portal.
   - Apache Tomcat 8.5 Service Governor

B.3 How to the port number of the portal/user authentication platform

1. Edit the Connector element of "<Tomcat-install-path>\conf\server.xml".

```
    <connector port="HTTP port number (Default:12080)" protocol="http/
1.1"
               connectiontimeout="20000"
               redirectport="HTTPS port number(Default:12443)" />
    <!-- a "connector" using the shared thread pool-->

    <Connector port="HTTPS port number(Default:12443)" protocol="org.a
pache.coyote.http11.Http11NioProtocol"
               maxThreads="150" SSLEnabled="true" scheme="https" secur
e="true"
               clientAuth="false" sslProtocol="TLS" />
```

2. Restart the portal/user authentication platform.
   - Apache Tomcat 8.5 Service Governor
3. Edit the configuration file of the authority management component.

   <WebConsole-install-path>\conf\msc_auth.properties

```
authentication_server.port=12080
```

4. Restart the authority management component.
   - SystemManager G Authorization Service

Appendix C. How to View Pre-upgrade Messages

If, upon making an upgrade, you continue to want to view pre-upgrade messages, you must add the information necessary for viewing to the message store DB. Add the information as described below.

Note

This procedure is intended to make it possible to view pre-upgrade messages in the message viewing API (POST /v1/messages/get) in the message store. After making the upgrade, perform the following. Depending on the version of PostgreSQL, the command may differ. Read the command name as appropriate.

1. Stop the message store service. For details about how to stop the message store service, see "Appendix A. How to Start and Stop the Product (page 70)".
2. Log in.

```
# psql -U msc_messagestore
```

3. Add information in a database.

```
# INSERT INTO business_message_option (message_no,business_node_id,rep
ort_total_status) (SELECT bm.message_no,bm.business_node_id,'NONE' FRO
M business_message AS bm LEFT OUTER JOIN business_message_option AS bm
o ON bm.message_no = bmo.message_no AND bm.business_node_id = bmo.busi
ness_node_id WHERE bmo.report_total_status IS NULL);
```

4. Log out.

```
# \q
```

5. Start the message store service. For details about how to start the message store service, see "Appendix A. How to Start and Stop the Product (page 70)".

Appendix D. How to Make Detailed Settings for Connection between Manager and WebConsole Option

In addition to the settings made as described in "3.4 Setting up a connection from a manager to WebConsole Option (page 48)", you can also set connection-time parameters. The procedure is described below.

Description details

```
[MessageStore]
HostName=<host name>
Port=22524
Timeout=30
RecordSize=10000
OutputQueueSize=50000

[Status]
HostName=<host name>
Port=22523
Timeout=30
RecordSize=10000
OutputQueueSize=0

[ExtLink]
HostName=<host name>
Port=22529
Timeout=30
RecordSize=10000
OutputQueueSize=20000

[PerfStore]
HostName=<host name>
Port=22531
Timeout=30
RecordSize=10000
OutputQueueSize=20000
```

The following describes the sections in the configuration file, as well as the msc components that can be subject to interface linkage settings.

Section	Description
MessageStore	Section in which to set up the destination to connect the message store Setting for sending messages accumulated in the manager to WebConsole Option.
Status	Section in which to set up the destination to which monitoring status management is to be connected. Setting for sending monitoring target status information from the manager to WebConsole Option.
ExtLink	Section in which to set up the destination to which the external interface is to be connected. Setting for sending the information of the agent to be connected to the manager to WebConsole Option.
PerfStore	Section in which to set up the destination to which the performance data store is to be connected. Setting for sending the performance data collected by the manager to WebConsole Option.

The items that can be set in each section are described below. For "HostName" and "Port," see "3.4 Setting up a connection from a manager to WebConsole Option (page 48)".

Key	Description	Default value
Timeout	Specify the time (in seconds) after which reconnection will be attempted if the connection to the target msc component is cut off.	30
RecordSize	Specify how many reports that were sent to the component are recorded.	10000
OutputQueueSize	Specify the upper limit of the queue in order to guarantee that reports are sent to the component. Usually, the queue is deleted once the sending has been completed. If the state is such that a report cannot be sent from the manager due to, for example, the stoppage of WebConsole Option, such that the upper limit on the queue is exceeded, queues are deleted starting with the oldest one. * If 0 is specified for OutputQueueSize, the upper limit on the queue is eliminated.	See the subsequent description.

The default value of OutputQueueSize differs with the section (msc component). This is described below.

- `Message store`

  The default value of the OutputQueue size of the message store is 50000. If 50000 messages are accumulated in the Queue, the disk usage is 100 MB.

  If the OutputQueue size is set to the default value of 50000, messages can be accumulated into the queue without losing any for about ten minutes, even if messages continue to be generated at a rate of 80/s. Any more than 50000 messages will be discarded and, therefore, lost.

  If setting an OutputQueue size exceeding 50000, pay careful attention to the disk usage.

- `Monitoring status management`

  The default value of the OutputQueue size for monitoring status management is 0 (no upper limit).

  The monitoring status provides important monitoring information representing "fatal," "warning," and other states. Thus, the default value is no upper limit.

  If an upper limit is set for OutputQueue, and status reports are discarded, a status inconsistency will occur between the manager and WebConsole Option. If an inconsistency occurs, the status inconsistency can be resolved by restarting the manager.

  An example of calculating the disk usage consumed by the monitoring status information is described below.

  Example: Assuming an environment in which there are 250 agents, each of which is monitoring 60 counters at 30-s intervals (15000 counters for all agents), and the statuses of 750 counters are changed every 30 s, the number of queues per day (24 hours) will total 2.16 million and the disk usage will be about 4.3 GB.

Number of agents	250
Number of process monitoring definitions (per agent)	10
Number of service monitoring definitions (per agent)	10
Number of file monitoring definitions (per agent)	10
Number of port monitoring definitions (per agent)	10
Number of performance monitoring definitions (per agent)	20

Monitoring interval (in seconds)	30
Status change percentage (of each monitoring interval) (%)	5
Disk usage of the queue (in KB per queue)	2

- `External interface`

  If connection with the external interface cannot be established for a long time, the disk resources might be run out. To prevent such disk resource shortage, the upper limit is set to the internal queues for the external interface linkage processing on the manager. (Initial value: 20,000, Disk usage: Approximately 40 MB)

- `Performance data store`

  If connection with the performance data store cannot be established for a log time, the disk resources might be run out. To prevent such a situation from occurring, the upper limit is set to the internal queue for the performance data store processing on the manager. (Initial value: 20,000, Disk usage: Approximately 40 MB)

Appendix E. How to Set up Correspondences Between the Manager and WebConsole Option Severities

Set up the correspondences between the severities of the messages and statuses of SystemManager G Manager and the severities of WebConsole Option.

If you want to set the severities of the manager in more detail, set severity correspondences in accordance with the following setting method.

1. Open <manager-share-path>\Manager\sg\Severity.ini.

   <manager-share-path> is the path specified for [Data Directory] upon installation. If a path is not specified, the default is <manager-install-path>.

2. In Severity.ini, include the correspondences between the severities of SystemManager G Manager and the severities of WebConsole Option.

   A severity can be set within a range of 0 to 255. A larger value indicates a greater level of importance.

```
[Severity]
<SystemManager G Manager severity name>=<Severity value of WebConsole
Option>
...
```

Table E-1 Severity setting item

Key (SystemManager G manager severity name)	Description	Severity value of WebConsole Option (Default)
STOP	Stopped	200
FATAL	Abnormal	200
CRITICAL	CRITICAL	200
PROCESSSTOP	Process stopped	200
SERVICESTOP	Service stopped	200
PERFUPERROR	Abnormal performance upper limit	200
PERFLOWERROR	Abnormal performance lower limit	200
HOSTEMPTY	Host not started	200
PROCESSUPERROR	Abnormal process upper limit	200
FORCEEND	Forcibly stopped	200
CONDSTOP	Conditionally stopped	200
DELAY	Delay/stagnation	200
CONFIRMATION	Wait for confirmation	200
MAJOR	MAJOR	150
MINOR	MINOR	150
WARNING	Warning	150

Key (SystemManager G manager severity name)	Description	Severity value of WebConsole Option (Default)
PERFUPWARNING	Warning on performance upper limit	150
PERFLOWWARNING	Warning on performance lower limit	150
UNKNOWN	Unknown	100
NOMESSAGE	NOMESSAGE	100
PROCESSUNKNOWN	Unknown process state	100
SERVICEUNKNOWN	Unknown service state	100
PERFUNKNOWN	Unknown performance state	100
NOTEXEC	Not executed	100
UNMANAGED	Unmanaged	10
NORMAL	Normal	50
PROCESSRUN	Processing in progress	50
SERVICERUN	Service in progress	50
PERFNORMAL	Normal performance	50
HOSTNORMAL	Host running	50
EXECUTING	In progress	50
USERx	User severity (x: 1 to 32)	50

The following shows part of the description for setting up the correspondences between the severities of SystemManager G and the default severities of WebConsole Option.

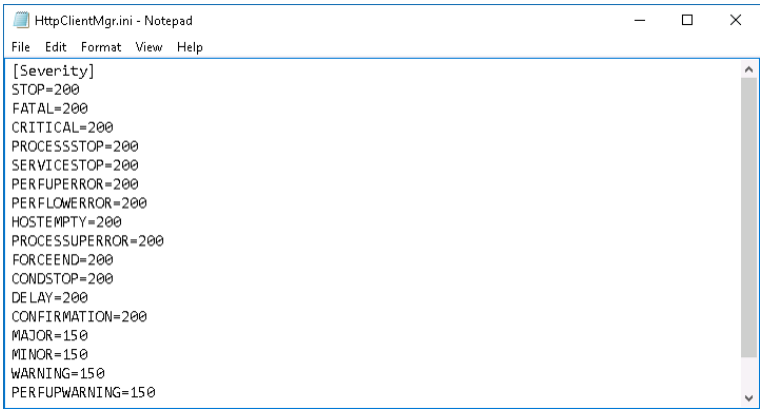


Figure E-1 Editing Severity.ini

3. Restart the manager service.

   The default is WebSAM UMF Operations Manager_1.

Appendix F. How to Enable the API Gateway Authentication Function

By enabling the API gateway authentication function, it is possible to reduce the load on WebConsole Option from external invalid requests (RESTful API).

By default, the authentication function is disabled.

It is recommended that, if the API gateway is connected to the Internet, the API gateway authentication function be enabled.

1. Log in to the machine on which WebConsole Option is installed.
2. Edit msc_apigateway.properties in the <WebConsole-install-path>\conf directory to enable API gateway authentication.

```
apigateway.authentication = token
```

3. Restart the API gateway (SystemManager G API Gateway Service).
4. Run the API gateway command to confirm the token required for authentication.
   - For Windows

```
cd C:\Program Files\NEC\pf\opm\manager\bin
msc_apigateway_cmd --token
Execute command to API Gateway.
6350ad89-faac-3429-b391-a4a99bd7fe94
Success.
```

   - For Linux

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/opt/nec/pf/opm/manager/lib/commo
n
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/opt/nec/pf/opm/manager/lib/poco
export LD_LIBRARY_PATH
cd /opt/nec/pf/opm/manager/bin
./msc_apigateway_cmd --token
Execute command to API Gateway.
6350ad89-faac-3429-b391-a4a99bd7fe94
Success.
```

   The token string (in the above example, 6350ad89-faac-3429-b391-a4a99bd7fe94) is output to the standard output. Set this value in the portal/user management platform configuration file.
5. Edit <Tomcat-install-path>\conf\NEC\webframework.properties to set the API gateway authentication token.

```
product.sysmgrg.api.gateway.provider.token = 6350ad89-faac-3429-b391-a
4a99bd7fe94
```

6. To reflect the setting, restart "Apache Tomcat 8.5 Service Governor" from the service list.

Appendix G. Revision History

- First edition (July 2018): Newly created

MasterScope SystemManager G 8.0 WebConsole Option
Installation Guide

SMG0800E-INST-1820

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NEC Corporation