

MasterScope Media July 2018 Release Notes

July 2018
NEC Corporation

Thank you for choosing our products. This document describes features and usage of the MasterScope Media you are going to use.

Change History

Edition	Chapter/section	Content of change
First Edition	-	New creation

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1. Introduction

1.1. Product Explanation

The MasterScope Media is integrated media that makes it easy to install the MasterScope products.

The MasterScope Media July 2018 contains the following products.

- ◆ MasterScope SystemManager G 8.0 (integrated management monitoring)
The all-in-one server monitoring function is provided. The application monitoring and integrated monitoring functions can be added. This is operation management software to monitor an entire system in an integrated manner. This software is easy to install and operate.
- ◆ MasterScope Network Manager 6.1(Network monitoring)
The MasterScope Network Manager supports various kinds of network monitoring operations including failure monitoring, performance monitoring and configuration management in multi vendor network, resulting in TCO reduction.
- ◆ MasterScope Invariant Analyzer Ver1.6 (Performance Analysis)
Using characteristics model built from the system running in the stable state, The MasterScope Invariant Analyzer can detect silent failures, which are an abnormal state that cannot be detected with conventional threshold monitoring. Detection of silent failure prevents further failures and consumption of time and cost for isolating cause of issue..

The products included in this media have introduced MasterScope Unified Management Framework (hereinafter, UMF) to attempt to make as many functions as possible common among them and provide integrity of their designs and that of operational feelings.

2. Media Architecture

2.1. Directory Architecture

The architecture of the MasterScope Media directory is as follows:

[Root]	
+- doc	MasterScope product documents
+- relmemo.pdf	MasterScope Media Release Notes (this document)
+- Windows	Windows installer
+- Linux	Linux Installer
+- HP-UX_IPF	HP-UX(IPF) Installer
+- Solaris	Solaris Installer
+- AIX	AIX Installer
+- tools	Tools
+- license	OSS license information that the products uses
+- image	Directory for storing images used during installation
+- version.txt	Version information of MasterScope Media

◆ MasterScope product documents (/doc)

Product release notes and manuals are placed under the following directories: When installing any one of the products, refer to its product release memo that resides under its directory. For other documents, refer to them as suggested in the description of each product release memo.

Directory name	Product/Package name
SysMgrG	MasterScope SystemManager G
NvPro	MasterScope NetworkManager
Inva	MasterScope Invariant Analyzer

◆ Installation materials (/Windows, /HP-UX_IPF, /Linux, /Solaris, /AIX)

As “4. Installation” explains the specific installation methods, refer to it when you actually install any product.

◆ Tools(/tools)

Materials attached to the product package are placed under tools.

Directory name	What is placed
SysMgrG	Tools for MasterScope SystemManager G
Inva	Tools for MasterScope Invariant Analyzer
dawebssaminfo	Tools for information collecting
Microsoft	Microsoft Visual C++ Redistributable Package
source	Source codes of OSS that the products uses
Patlite	Tools for patlite linkage
Java	Java Runtime Environment

For details of tools, please see release notes of each product/package.

◆ License information (/license)

Stores the OSS license information that the products use. Please refer to the information as needed.

◆ Image storage directory (/image)

Stores the image files that the installer uses. Normally, users do not have to refer to them.

2.2. Document List

The following tables show a list of documents under the MasterScope product documentation. Normally, as described in “MasterScope product documentation” of “2.1. Directory Architecture,” refer to a relevant product release memo and proceed with referring to the other documents as suggested in the release memo.

Table 2-1 MasterScope SystemManager G (/doc/SysMgrG)

File name	Title	Summary
BusinessCmdSgImport.pdf	MasterScope SystemManager G BusinessCmd monitoring definition batch registration operation manual	Procedure for batch-registering the business view monitoring definitions by using a command on the manager.
Calendar_Schedule_Import.pdf	MasterScope Framework Calendar Management and Schedule Management Import Definition File Reference	The reference of the import definition file (schedule, calendar) used by the scenario control command and the operation control command.
CDO_relememo.pdf	MasterScope SystemManager G Release Notes CDO Message API Edition	Describes a procedure for issuing messages using the CDO message API
CloudServiceMonitor_Guide.pdf	MasterScope SystemManager G Cloud Service (AWS) Monitoring Function User's Guide	This manual describes the procedure for monitoring Amazon Web Services.
Cluster_HP.pdf	MasterScope SystemManager G Manager (For HP-UX) Duplication Setup Guide	Describes a procedure for using HP Serviceguard to set up a cluster configuration for HP-UX.
Cluster_Linux_EXPRESSCLUSTER_X.pdf	MasterScope SystemManager G Manager (Linux Version) Duplication Setup Guide (ExpressCluster X Edition)	Describes a procedure for using ExpressCluster X to set up a cluster configuration for Linux.
Cluster_Win_EXPRSSCLUSTER_X.pdf	MasterScope SystemManager G Manager (Windows Version) Duplication Setup Guide (ExpressCluster X Edition)	Describes a procedure for using ExpressCluster X to set up a cluster configuration for Windows.
Cluster_Win_WSFC.pdf	MasterScope SystemManager G Manager Duplication Setup Guide (WSFC Edition)	Describes a procedure for using Windows Server Failover Cluster to set up a cluster configuration.
EventCorrelationCmdSgImport.pdf	MasterScope SystemManager G EventCorrelationCmd monitoring definition batch registration operation manual	Procedure for batch-registering the event correlation monitoring definitions by using a command on the manager.
HypervisorMonitor_Guide.pdf	MasterScope SystemManager G Hypervisor Monitor Option for VMware User's Guide	This document describes setting procedure for monitoring VMware ESXi and vCenter Server by MasterScope SystemManager G.
IA_relememo.pdf	MasterScope SystemManager G Release Notes Invariant Analyzer Edition	Describes a procedure for using Invariant Analyzer.
ITServiceResponseMonitrAgent_ClusterSetupGuide.pdf	MasterScope SystemManager G IT Service Response Monitor Probe Agent Duplex Setup Guide	Describes a procedure for set up a cluster configuration for probe agent.
Logical_Agent.pdf	Logical Agent Installation Guide	Describes a procedure for setting up

		logical system agents.
OperationCmdSgImp port.pdf	MasterScope SystemManager G OperationCmd Batch Registration of Action Definitions Operation Manual	The operation manual to batch registration of action definitions.
relememo.pdf	MasterScope SystemManager G Release Notes	Release notes of MasterScope SystemManager G.
RemoteMonitor_Clu sterSetupGuide.pdf	RemoteMonitor Duplication Setup Guide	Describes a procedure for set up a cluster configuration for Windows.
ScenarioCmdImport .pdf	MasterScope SystemManager G ScenarioCmd Import Definition File Reference	The reference of the import definition file used by the scenario control command.
ScenarioWriter.chm	MasterScope SystemManager G – Probe Scinario Writer Manual	A manual of MasterScope SystemManager G – Probe Scinario Writer.
SMLinker_relemem o.pdf	MasterScope SystemManager G Release Notes -ServiceManagerLinker-	Describes a procedure for using ServiceManager Linker.
SysMEvTrap_read me.pdf	MasterScope SystemManager G Envet Trap Utility Release Notes	Describes the procedure to set up the message linkage module that acquires messages from other products.
SystemManager G.chm	MasterScope SystemManager G Manual	A manual of MasterScope SystemManager G.
SystemManagerG_ VersionUpGuide.pdf	MasterSceop SystemManager G Upgrade Guide	This document is an upgrade guide for MasterScope SystemManager G.
TopologyCmdSgImp Exp_Cmd.pdf	MasterScope SystemManager G Command Reference (Help differences) TopologyCmd LIST TopologyCmd IMPORT TopologyCmd EXPORT	This document is a reference for the following commands which are not described in the standard Help.
TopologyCmdSgImp Exp_File.pdf	TopologyCmd Batch Registration and Setting Detail Confirmation of Monitoring Definitions	This document consists of the file specifications for batch registration and setting detail confirmation of the topology view monitoring definitions performed by executing commands on the manager.
user_ImportExport. pdf	About importing or exporting user information	Procedure for importing or exporting user information.
WebAPIReference. pdf	MasterScope SystemManager G WebAPI Reference.	The reference of MasterScope SystemManager G WebAPI.
webconsole_conf_e n.pdf	MasterScope SystemManager G WebConsole Option Environment Configuration Guide	This document describes the procedures and settings for applying SystemManager G to an actual system.
webconsole_func_e n.pdf	MasterScope SystemManager G WebConsole Option Function Reference Guide	This document describes how to use SystemManager G WebConsole.
webconsole_inst_e n.pdf	MasterScope SystemManager G WebConsole Option Installation Guide	This document describes the MasterScope SystemManager G WebConsole Option installation procedures.
webconsole_rel_en. pdf	SystemManager G WebConsole Option Release Memo	Release notes of MasterScope SystemManager G WebConsole Option.

Table 2-2 MasterScope Network Manager (/doc/NvPRO)

File name	Title	Summary
release.pdf	MasterScope Network Manager Release Notes	Release notes of MasterScope Network Manager
NvPRO_setup_win.pdf	MasterScope Network Manager Setup Guide (For Windows environment)	Explains how to set up Network Manager for Windows environment. (Single server environment)
NvPRO_CS_setup_win.pdf	MasterScope Network Manager Setup Guide (For Windows / ExpressCluster environment)	Explains how to set up Network Manager for Windows environment. (Failover cluster by ExpressCluster)
NvPRO.pdf	MasterScope Network Manager User's Manual	Operation manual of MasterScope Network Manager

Table 2-3 MasterScope Invariant Analyzer (/doc/Inva)

File name	Title	Summary
relememo.pdf	MasterScope Invariant Analyzer Release Notes	Release notes of MasterScope Invariant Analyzer
Invariant_Analyzer.chm	MasterScope Invariant Analyzer Manual	A manual of MasterScope Invariant Analyzer
LinkageCommandUserGuide.pdf	Linkage Command User Guide	Procedures for using Linkage Command tools.
IA_RISuite.pdf	MasterScope Invariant Analyzer Realtime Integration Suite Installation Instruction Manual	A manual of MasterScope Invariant Analyzer Realtime Integration Suite Installation Instruction

Table 2-6 Common document (/doc/Common)

File name	Title	Summary
cmdb_relememo.pdf	MasterScope Configuration Management Database (CMDB) Release Notes	A manual of procedures for setting and deletion required for using a CMDB in your product
ServiceGovernor_IntroductionGuide_Win.pdf	MasterScope ServiceGovernor Installation Guide (Windows)	The manual which indicated installation method of MasterScope ServiceGovernor (for Windows).
ServiceGovernor_IntroductionGuide_Linux.pdf	MasterScope ServiceGovernor Installation Guide (Linux)	The manual which indicated installation method of MasterScope ServiceGovernor (for Linux).

3. Operating Environment

The following provides a summary of platforms supported by the products included in MasterScope Media.

Table 3-1 Platforms Supported by Products (Summary)

Product Name	Target Function				
	Manager	Agent	Remote monitoring agent	Console	External Engine
MasterScope SyetemManager G	Windows, Linux HP-UX(IPF)	Windows, Linux, HP-UX(IPF), Solaris, AIX	Windows	Windows	Windows Linux, HP-UX(IPF)
MasterScope Network Manager	Windows	-	-	Windows	-
MasterScope Invariant Analyzer	Windows, Linux	-	-	Windows	Windows, Linux

The versions and editions of supported OSs vary from product to product. For details, refer to the release memos of the products.

The manager functions or console function support the following timezone settings.

Table 3-2 Supported timezone

Windows (Manager Function, Console Function)	Linux (Manager Function)(*1)	HP-UX (Manager Function)(*2)
(UTC-12:00) International Date Line West	Etc/GMT+12	N/A
(UTC-11:00) Midway Island, Samoa	Pacific/Apia, Pacific/Midway	N/A
(UTC-11:00) Coordinated Universal Time-11	Etc/GMT-11	N/A
(UTC-10:00) Hawaii	Pacific/Honolulu	HST10
(UTC-09:00) Alaska	America/Anchorage, America/Juneau, America/Sitka, America/Yakutat, America/Nome	YST9YDT
(UTC-08:00) Tijuana, Baja California	America/Santa_Isabel	N/A
(UTC-08:00) Pacific Time (US & Canada)	America/Los_Angeles, America/Vancouver, America/Whitehorse, America/Dawson, America/Tijuana	PST8PDT
(UTC-07:00) Mountain Time	America/Denver, America/Yell	MST7MDT

(US & Canada)	owknife,America/Inuvik,America/Edmonton,America/Cambridge_Bay,America/Shiprock,America/Boise	
(UTC-07:00) Chihuahua, La Paz, Mazatlan - Old	N/A	N/A
(UTC-07:00) Chihuahua, La Paz, Mazatlan - New	America/Chihuahua,America/Ojinaga,America/Mazatlan	N/A
(UTC-07:00) Arizona	America/Phoenix,America/Dawson_Creek,America/Hermosillo	MST7
(UTC-06:00) Saskatchewan	America/Regina	N/A
(UTC-06:00) Guadalajara, Mexico City, Monterrey - Old	N/A	N/A
(UTC-06:00) Guadalajara, Mexico City, Monterrey	America/Mexico_City,America/Monterrey	N/A
(UTC-06:00) Central Time (US & Canada)	America/Chicago,America/Indiana/Tell_City,America/Indiana/Knox,America/Winnipeg,America/North_Dakota/New_Salem,America/North_Dakota/Center,America/Menominee,America/Rankin_Inlet,America/Rainy_River,America/Belize,America/Tegucigalpa,America/Cancun,America/Merida,America/Matamoros,America/Bahia_Banderas,America/Managua,America/North_Dakota/Beulah,America/Costa_Rica	CST6CDT
(UTC-06:00) Central America	America/Guatemala	N/A
(UTC-05:00) Indiana (East)	America/Indiana/Indianapolis,America/Indiana/Winamac,America/Indiana/Vevay,America/Indiana/Petersburg,America/Indiana/Marengo,America/Indiana/Vincennes	N/A
(UTC-05:00) Eastern Time (US & Canada)	America/New_York,America/Iqaluit,America/Thunder_Bay,America/Detroit,America/Toronto,America/Nipigon,America/Pangnirtung,America/Kentucky/Monticello,America/Montreal,America/Kentucky/Louisville,America/Nassau,America/Port-au-Prince,America/Grand_Turk,America/Resolute	EST5EDT
(UTC-05:00) Bogota, Lima, Quito, Rio Branco	America/Bogota,America/Lima	SAT5

(UTC-04:30) Caracas	America/Caracas	SAT4:30
(UTC-04:00) Santiago	America/Santiago	N/A
(UTC-04:00) Manaus	America/Cuiaba	N/A
(UTC-04:00) La Paz	America/La_Paz	SAT4
(UTC-04:00) Atlantic Time (Canada)	America/Halifax,America/Glace_Bay,America/Moncton,America/Goose_Bay,America/Thule	AST4ADT
(UTC-04:00) Asuncion	America/Asuncion	N/A
(UTC-03:30) Newfoundland	America/St_Johns	NST3:30NDT
(UTC-03:00) Montevideo	America/Montevideo	N/A
(UTC-03:00) Greenland	America/Godthab	N/A
(UTC-03:00) Buenos Aires, Georgetown	America/Cayenne,America/Fortaleza,America/Recife,America/Maceio	SAT3
(UTC-03:00) Buenos Aires	America/Buenos_Aires,America/Argentina/Buenos_Aires,America/Argentina/Cordoba,America/Argentina/Salta,America/Argentina/Jujuy,America/Argentina/Tucuman,America/Argentina/Catamarca,America/Argentina/La_Rioja,America/Argentina/San_Juan,America/Argentina/Mendoza,America/Argentina/Rio_Gallegos,America/Argentina/Ushuaia	N/A
(UTC-03:00) Brasilia	America/Sao_Paulo	N/A
(UTC-02:00) Mid-Atlantic	Etc/GMT+2	N/A
(UTC-02:00) Coordinated Universal Time-02	Etc/GMT-2	N/A
(UTC-01:00) Cape Verde Is.	Atlantic/Cape_Verde	N/A
(UTC-01:00) Azores	Atlantic/Azores	N/A
(UTC) Casablanca	Africa/Casablanca	WAT0
(UTC) Casablanca, Monrovia, Reykjavik	Atlantic/Reykjavik	IST1
(UTC) Coordinated Universal Time	Etc/GMT	N/A
(UTC) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London	Europe/London,Europe/Dublin,Europe/Lisbon	GMT0BST,PWT0PST,WET0WETDST
(UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna	Europe/Berlin,Europe/Amsterdam,Europe/Rome,Europe/Stockholm,Europe/Vienna	MEZ-1MESZ
(UTC+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague	Europe/Budapest,Europe/Belgrade,Europe/Ljubljana,Europe/Prague	MET-1METDST
(UTC+01:00) Brussels, Copenhagen, Madrid, Paris	Europe/Paris,Europe/Copenhagen,Europe/Madrid,Europe/B	N/A

	russels	
(UTC+01:00) Sarajevo, Skopje, Warsaw, Zagreb	Europe/Warsaw,Europe/Sarajevo,Europe/Skopje,Europe/Zagreb	N/A
(UTC+01:00) West Central Africa	Africa/Lagos	WAT-1
(UTC+01:00) Windhoek	Africa/Windhoek	N/A
(UTC+02:00) Amman	Asia/Amman	N/A
(UTC+02:00) Athens, Bucharest	Europe/Athens,Europe/Bucharest	N/A
(UTC+02:00) Beirut	Asia/Beirut	N/A
(UTC+02:00) Cairo	Africa/Cairo	N/A
(UTC+02:00) Damascus	Asia/Damascus	N/A
(UTC+02:00) Harare, Pretoria	Africa/Johannesburg,Africa/Harare	SAST-2
(UTC+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius	Europe/Kiev,Europe/Helsinki,Europe/Riga,Europe/Sofia,Europe/Tallinn,Europe/Vilnius	N/A
(UTC+02:00) Istanbul	Europe/Istanbul	EET-2EETDST
(UTC+02:00) Jerusalem	Asia/Jerusalem	N/A
(UTC+02:00) Minsk	Europe/Minsk	WST-2WSTDST
(UTC+03:00) Baghdad	Asia/Baghdad	N/A
(UTC+03:00) Kaliningrad	Europe/Kaliningrad	N/A
(UTC+03:00) Kuwait, Riyadh	Asia/Riyadh,Asia/Kuwait,Asia/Bahrain,Asia/Qatar,Asia/Aden	WAT-3
(UTC+03:00) Nairobi	Africa/Nairobi	EAT-3
(UTC+03:30) Tehran	Asia/Tehran	N/A
(UTC+04:00) Abu Dhabi, Muscat	Asia/Dubai,Asia/Muscat	N/A
(UTC+04:00) Baku	Asia/Baku	N/A
(UTC+04:00) Caucasus Standard Time	N/A	N/A
(UTC+04:00) Moscow, St. Petersburg, Volgograd	Europe/Moscow,Europe/Volgograd	WST-3WSTDST
(UTC+04:00) Port Louis	Indian/Mauritius	N/A
(UTC+04:00) Tbilisi	Asia/Tbilisi	N/A
(UTC+04:00) Yerevan	Asia/Yerevan	N/A
(UTC+04:30) Kabul	Asia/Kabul	N/A
(UTC+05:00) Islamabad, Karachi	Asia/Karachi	PST-5
(UTC+05:00) Islamabad, Tashkent	Asia/Tashkent	N/A
(UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi	Asia/Calcutta,Asia/Kolkata	IST-5:30
(UTC+05:30) Sri Jayawardenepura	Asia/Colombo	IST-5:30
(UTC+05:45) Kathmandu	Asia/Katmandu	N/A
(UTC+06:00) Astana	Asia/Almaty	N/A

(UTC+06:00) Dhaka	Asia/Dhaka	N/A
(UTC+06:00) Ekaterinburg	Asia/Yekaterinburg	WST-5WSTDST
(UTC+06:30) Yangon (Rangoon)	Asia/Rangoon	N/A
(UTC+07:00) Bangkok, Hanoi, Jakarta	Asia/Bangkok,Asia/Jakarta,Asia/Pontianak,Asia/Ho_Chi_Minh	TST-7
(UTC+07:00) Novosibirsk	Asia/Novosibirsk,Asia/Novokuznetsk,Asia/Omsk	WST-7WSTDST
(UTC+08:00) Beijing, Chongqing, Hong Kong, Urumqi	Asia/Shanghai,Asia/Chongqing,Asia/Hong_Kong,Asia/Urumqi,Asia/Harbin,Asia/Kashgar,Asia/Macau	EAT-8
(UTC+08:00) Krasnoyarsk	Asia/Krasnoyarsk	N/A
(UTC+08:00) Kuala Lumpur, Singapore	Asia/Singapore,Asia/Kuala_Lumpur,Asia/Kuching	SST-8
(UTC+08:00) Perth	Australia/Perth	WST-8
(UTC+08:00) Taipei	Asia/Taipei	EAT-8
(UTC+08:00) Ulaanbaatar	Asia/Ulaanbaatar	N/A
(UTC+09:00) Irkutsk	Asia/Irkutsk	N/A
(UTC+09:00) Osaka, Sapporo, Tokyo	Asia/Tokyo,Japan	JST-9
(UTC+09:00) Seoul	Asia/Seoul,Asia/Pyongyang	KST-9
(UTC+09:30) Adelaide	Australia/Adelaide,Australia/Broken_Hill	CST-9:30CDT
(UTC+09:30) Darwin	Australia/Darwin	N/A
(UTC+10:00) Brisbane	Australia/Brisbane,Australia/Lindeman	N/A
(UTC+10:00) Canberra, Melbourne, Sydney	Australia/Sydney,Australia/Melbourne	EST-10EDT
(UTC+10:00) Guam, Port Moresby	Pacific/Port_Moresby,Pacific/Guam	N/A
(UTC+10:00) Hobart	Australia/Hobart,Australia/Currie	N/A
(UTC+10:00) Yakutsk	Asia/Yakutsk	N/A
(UTC+11:00) Magadan, Solomon Is., New Caledonia	Pacific/Guadalcanal	N/A
(UTC+11:00) Vladivostok	Asia/Vladivostok,Asia/Sakhalin	WST-10WSTDST
(UTC+12:00) Auckland, Wellington	Pacific/Auckland	NZST-12NZDT
(UTC+12:00) Coordinated Universal Time+12	Etc/GMT-12	N/A
(UTC+12:00) Fiji, Kamchatka, Marshall Is.	Pacific/Fiji	N/A
(UTC+12:00) Magadan	Asia/Magadan	N/A
(UTC+12:00) Petropavlovsk-Kamchatsky -	Asia/Kamchatka	WST-12WSTDST

Old		
(UTC+13:00) Nuku'alofa	Pacific/Tongatapu	N/A

(*1) Listed values are the ZONE parameter or the TIMEZONE parameter in the /etc/sysconfig/clock file. For RHEL 7.1 or later, check the time zone by using the timedatectl command. Check the time zone displayed for Timezone: (Etc/GMT in the following command execution example).

```
# timedatectl status
    Local time: Tue 2015-09-08 04:59:35 GMT
    Universal time: Tue 2015-09-08 04:59:35 UTC
    RTC time: Tue 2015-09-08 04:59:35
    Timezone: Etc/GMT (GMT, +0000)
    NTP enabled: yes
    NTP synchronized: no
    RTC in local TZ: no
    DST active: n/a
```

(*2) Listed values are the TZ parameter in the /etc/TIMEZONE file.

4. Installation

4.1. Prepare Installation

4.1.1. Installation Information

This chapter describes the installation information on the products to be installed according to the procedure described in "4.2 Installation of Products (Windows) " and "4.7 Installation of Products (UNIX)". Please check the installation configuration and the setting contents, and prepare the values to be set according to your environment.

4.1.1.1. Installation Configuration

The MasterScope products can be installed with various methods based on monitoring frameworks. The following describes each of such methods:

■ Installing more than one product into the same directory (recommended)

Some of the products included in MasterScope Media can be installed into the same directory. If you adopt this method, the installed products will be integrated as one process under OS. This method has the following features:

- Sharing system resources
Compared to cases where each of the some products is installed to a different directory, integrating them into one process can curtail memory usage.
- Integrating console
If each of those products is installed into a different directory, a separate console must be started for each product, but as this method aggregates such consoles into one, users can perform a wide variety of management activities from the integrated console.
- Enhancing cooperation among products
The functions of the products can seamlessly be integrated. For example, it enables you to pass the network failure information detected by Network Manager to Business View of SystemManager G (message management function from a business viewpoint).

Each of the products belongs to a classification called "Category." The products that belong to the same category can be installed into the same directory. For information on categories to which the products belong, refer to "Table 4-2 Product-Category Comparison Table."

Note that it is recommended in MasterScope that the products that belong to the same category should be installed into the same directory. However, as the products cannot be installed into the same directory in the following cases, please cautiously proceed with installing them:

- When some products are operated in a cluster configuration, and the others are not
- When connection destinations (such as hostnames and port numbers of managers) of the products are different
- When the products belong to different categories

■ Installation on a-per-product basis

The products that “can be installed into the same directory” as described above, may also be installed into their respective, different directories on a-per-product basis as in the past. However, note that the benefits described above cannot be enjoyed if that is the case.

■Installing multiple instances of one product (multi-instance)

In some of the products included in MasterScope Media, multiple instances of agent and those of console can be installed into one machine. Such configuration is called multi-instance .The multi-instance configurations have the following features:

- Monitoring the same node with multiple managers

You can manage one machine with multiple managers by installing multiple instances of agent to the machine and connecting each of those instances to each different manager. However, note that monitored results may be different due to monitoring timings and other reasons.

- Sharing a console machine

You can manage each of multiple managers with one machine by installing multiple instances of console to that machine.

■Logical system agent

Some of the products included in MasterScope Media enable an agent to run with the shared resources in a cluster attached to it. Such an agent is called a logical system agent. Logical system agents have the following features:

- Monitoring the shared resources on a cluster

When monitoring the shared resources (such as processes working with a cluster and files on the shared disk) on a cluster with a normal agent (local agent), the agent will always be made to discover that the resources are in an unknown or abnormal state because it cannot obtain the information on them from the stand-by machine. As logical system agents run with the shared resources attached to them, such problems will not occur.

They are also managed as separate nodes different from local agents, and can monitor any packages that adopt cluster configurations without being aware which host is running.

In addition, icons to be displayed on Topology View are specific to those for logical systems.

■Remote monitor agent

Some of the products included in MasterScope Media can be monitored the monitoring target to which any agent has not been installed. The state of server is monitored via a remote monitor agent and a called agent. For more information about the remote monitor agent, refer to “MasterScope SystemManager G Release Notes of Table 2-1 MasterScope SystemManager G (/doc/SysMgrG).”

■External engine

In some of the products included in MasterScope Media, to offload manager’s workload, you can put external engine capability on the other machine. External engine performs high cost modeling and analysis process. If external engine is not used, Manager will do the same process. For details such as creating the environment , etc. refer to “[MasterScope SystemManager G Release Notes Invariant Analyzer Edition of Table 2-1 MasterScope SystemManager G (/doc/SysMgrG)] or [MasterScope Invariant Analyzer Release Notes of Table 2-3 MasterScope Invariant Analyzer (/doc/Inva)].”

4.1.1.2. Setting Services

The products included in MasterScope Media are managed with a mechanism of “service” as a-per-installation basis. For example, when you install more than one product into the same directory, they will be regarded as one “service”. On the other hand, when multiple instances of one product are installed into one machine, they are regarded as separate services. In addition, managers, agents, and consoles are regarded as separate services.

Settings when installing products must be configured on a-per-service basis. When multiple products are installed as one service, the settings will be shared among them. The following table shows the items to be used by each service. Please see the setting values described later and prepare values to be set. For the setting values, please see "4.1.1.3 Default Values for Each Product."

- When you install services as the same one on the environment where the products for MasterScope Framework have been installed, you cannot change the settings. However, you can set only the service identifier if there are more than two services which don't have a service identifier as well as you are adding or overwriting a multi-instance enabled product.
- It depends on each product or function about cluster and multi-instance support condition. Please refer to the release notes of each product

Table 4-1 List of Items to Be Set(Target Function)

Item to be set	Function to which an item is set				
	Agent	Manager	Remote Monitoring Agent	Console monitor (View)	External engine
Install directory path	Yes	Yes	Yes	Yes	Yes
Self hostname	Yes	Yes(*7)	Yes	Yes	Yes
Manager hostname	Yes		Yes	Yes	Yes
Manager port	Yes		Yes	Yes	Yes
Agent port		Yes			Yes
Viewer port		Yes			
Change Data Directory	Yes	Yes	Yes		
Data Directory	Yes	Yes	Yes		
Store initial setting data	Yes	Yes	Yes		
Update the Data Directory at startup		Yes			
Service Identifier	Yes		Yes	Yes	
Service Number	Yes	Yes	Yes		Yes
Port for Agent Internal Communication	Yes		Yes		
Using CMDB		Yes			
CMDB Port		Yes			

Table 4-1 List of Items to Be Set(Description)

Setting item name Text enclosed in () is displayed for UNIX	Description
Install directory path	Folder paths where the product and included database are installed (*1), (*2), (*11) Maximum number of digits is 128. (*13)
Self hostname	Computer name (virtual host name in a cluster environment) (*3), (*10) Maximum number of digits is 64. Default value: None
Manager hostname	Manager host name Maximum number of digits is 64.
Manager port	Communication port between the manager and agent The setting range is from 1,024 to 65,535.
	Communication port between the manager and console The setting range is from 1,024 to 65,535.
	Communication port between the manager and external engine The setting range is from 1,024 to 65,535.
Agent port	Communication port between the manager and agent The setting range is from 1,024 to 65,535. (*12)
Viewer port	Communication port between the manager and console The setting range is from 1,024 to 65,535. (*12)
Change Data Directory	Can be specified only for products supporting the cluster (*4), (*11) To use a different folder for the data area (including the data for the included database): [Yes] Default value: [No]
Data Directory	Can be specified only for products supporting the cluster (*1), (*2), (*5), (*11) Data folder to separate the data area (including the data for the included database) Maximum number of digits is 128. Default value: None
Store initial setting data	Can be specified only for products supporting the cluster (*6) Install the initial data in the data area. Default value: [Yes] ([No] for standby node)
Update the Data Directory at startup	Select whether to update the data area of the shared disk at startup of the FW service. This can be set only if all of the following conditions are satisfied when rolling update is performed in the cluster environment. - Overwrite installation is performed in the standby system. - Only the target products for rolling update as described in "7.1 Rolling Update" are selected. Default value: Yes
Service Identifier	A value to identify the service of multi-instance products, the maximum number of digits is 16 characters. (*1) Default value: None
Service number	A number to be added to the service name (rc script name for

	UNIX). Can be omitted. (*9) The setting range is from 1 to 999.
Port for Agent Internal Communication	Agent internal communication port The setting range is from 1,024 to 65,535. (*12)
Using CMDB	Select one of the following three items, whether or not to use CMDB.(*8) - Not use - Use other DB - Use Bundled DB Default value: Use Bundled DB When NetworkManager is selected as the product to be installed, [Do not use] cannot be selected.
CMDB Port	Communication port used by CMDB Can be specified only when "Use Bundled DB" is selected for "Using CMDB". The setting range is from 1,024 to 65,535. (*12)

[Notes]

- (*1) – Do not input a multibyte character such as Japanese to a folder name or identifier when you are installing into UNIX. alphanumeric characters, /, ., _, - and + can be used for a folder name, while only alphanumeric characters can be used for an identifier.
- You can use JIS2004 on Windows Vista and later, but regarding to the characters added by JIS2004, please be aware of the following respects about inputs for folder name and identifier.
 - Please don't use the characters added by JIS2004 for Network Manager and Unified Management Framework.
 - Other than above products, such character would be counted as two characters when counting the character length (in the case of using surrogate pair)
Example: Maximum length of the identifier is 16, but becomes 15 if using one surrogate pair character.
For detailed information, please refer to OS vendor's information.
 - You can skip specifying the identifier per a function type on a same server, but can not skip if configuring a same product to multi-instance
- (*2) You cannot duplicate install directory path and data directory among services.
- (*3) Please don't duplicate Self hostnames of agents and external engines which are connected to a same manager. However, hostname of a logical system agent must be same same as other agents in a same cluster package and must be different from other normal agents. (Example: Self hostname which represents a cluster package such as a hostname for floating IP address of the cluster.)
- (*4) [Change Data Directory] can be set only for cluster enabled product. If [Change Data Directory] has been set to true, please change the status of [Data Directory] to the access-enabled status before the installation. Also, please do not add a non-cluster enabled product to the service for which Yes is set for [Change Data Directory].
- (*5) [Data Directory] is specified when installing a shared folder of a cluster.
Note that \<function name>\sg folder is added to the specified data folder at the installation.

(*6) To install a product as a running cluster, set [Yes] for [Store initial setting data]. To install as a standby, set [Not]. When specifying "Yes" (active cluster), configure the initial settings so that the data area folder can be accessed. When specifying "No" (standby cluster), configure the initial settings so that the data area folder cannot be accessed.

(*7) If you omit specifying a self hostname, an abbreviated machine name (e.g.: MANAGER) will automatically be set. Ensure that [Self hostname] and [Manager hostname] can be resolved from other machines to which this host will be connected. It is recommended that you should specify them in a fully qualified form or with IPv4 addresses. IPv6 addresses cannot be specified.

(*8) When adding, overwriting, or upgrading an installation, this item can be selected only when [Not use] is specified.

If [Use other DB] is selected, be sure to set up the DB after installation. If the DB is not set up, [Not use] is displayed for [Using CMDB] when checking installed services in the dialog box described in "4.3 Installation Settings (Service/Product Setting)" ("4.7.5 Installation Settings (Installation Configuration)" for UNIX).

If a product other than Network Manager is installed in the service, these settings will not be deleted even if Network Manager is removed. These settings are cleared when all products in the service are removed.

(*9) If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products. Use this item when service names (rc script names for UNIX) for products installed between cluster configuration machines must match.

An appropriate service number is automatically allocated when installing by using an integrated installer. Directly execute installation from the MasterScope Media when a service number needs to be specified.

(*10) The following characters can be used for the local host name.

One-byte alphanumeric characters, hyphens ("-"), underbars ("_"), and periods (".").

(*11) The installation destination of the included DB is the same folder as the folder specified for [Install directory path] of the product.

When [Change Data Directory] is specified, the data area for the included DB is also the same as the folder specified for [Data Directory]

(*12) As the following communication ports are server ports for TCP/IP communication, they must be unique on the same machine, including communication ports used by other products than the MasterScope products; communication ports specified for those with agents (Agent port), those with consoles (Viwer port), those for communication within agents (Port for Agent Internal Communication), and those with CMDB (CMDB Port).

(*13) The number of characters is restricted based on the installation target OS. For details, see "8.4.1 Restrictions on the installation path".

(*14) If an old version of this product has already been installed for the same service, the product may not operate normally after a new version is installed.

4.1.1.3. Default Values for Each Product

In this media, the products in the same category are installed as the same service by default. The default values of the setting items to be set by the MasterScope Media Installer defined by product categories in the service. However, if the same category already exists when the service separation is performed, the default value for each product will be set.

The following describes the comparison table between products and their categories by the product.

Table 4-2 Product-Category Comparison Table

Product Name	Category to which Products Belong
MasterScope SystemManager G	Integrated Console Group
MasterScope Network Manager	
MasterScope Invariant Analyzer	Invariant Analyze Group
MasterScope SystemManager G Logical System	Logical Integralete Console Group
MasterScope SystemManager G Remote Monitor (agent)	Remote Monitor Group
MasterScope SystemManager G IT Service Response monitor (agent)	Service Monitor Group

The following table shows the default values of setting items for each category and product.

[Notes]

- For information on how to change a port for agent internal communication, refer to "4.1.2.3 How to Change the Port for Agent Internal Communication."

■ Default values firstly used by the category MasterScope Integrated Console product

PF common	Connection port	Between the manager and the agent	12520
		Between the manager and the console monitor	12521
		For agent internal communication	A value between 12570 and 12589 and not used by MasterScope Framework products
		Between the manager and the External engine	12520
Windows	Installation path	%ProgramFiles%\NEC\UMF\Operations	
	Service name	Agent	MasterScope UMF Operations Agent_ <i>identifier</i> _n *1
		Manager	MasterScope UMF Operations Manager_ <i>identifier</i> _n *1
		External engine	MasterScope UMF Operations RelayManager_ <i>identifier</i> _n *1
Unix	Installation path	/opt/UMF/Operations	
	rc file name	Agent	UMFOperationsAgent_ <i>identifier</i> _n *1
		Manager	UMFOperationsManager_ <i>identifier</i> _n *1
		External engine	UMFOperationsRelayManager_ <i>identifier</i> _n *1

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products. However, if the installation directories are the same, their names will be the same service name/file name.)

■ MasterScope SystemManager G (MasterScope Integrated Console category)

Default values when service separation was performed

PF common	Connection port	Between the manager and the agent	12520
		Between the manager and the console monitor	12521
		For agent internal communication	A value between 12570 and 12589 and not used by MasterScope Framework products
Windows	Installation path	%ProgramFiles%\NEC\SystemManagerG	
	Package name	Agent	MasterScope SystemManager G Agent_ <i>identifier</i>
		Manager	MasterScope SystemManager G Manager_ <i>identifier</i>
		External engine	MasterScope SystemManager G RelayManager_ <i>identifier</i>
		Console monitor	MasterScope SystemManager G Svc_ <i>identifier</i>
	Service name	Agent	MasterScope UMF Operations Agent_ <i>identifier</i> _n *1
		Manager	MasterScope UMF Operations Manager_ <i>identifier</i> _n *1
		External engine	MasterScope UMF Operations RelayManager_ <i>identifier</i> _n *1
UNIX	Installation path	/opt/NEC/WebSAM/SystemManagerG	
	Package name	Agent	NECUMFMCOag_ <i>identifier</i> *1

		Manager	NECUMFMComg_ <i>identifier</i> *1
		External engine	NECUMFMCom_ <i>identifier</i> *1
	rc file name	Agent	UMFOperationsAgent <i>identifier</i> _n *1
		Manager	UMFOperationsManager <i>identifier</i> _n *1
		External engine	UMFOperationsRelayManager <i>identifier</i> _n *1

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products. However, if the installation directories are the same, their names will be the same service name/file name.)

■ MasterScope Network Manager (MasterScope Integrated Console category)

Default values when service separation was performed

PF common	Connection port	Between the manager and the agent	-
		Between the manager and the console monitor	12521
		For agent internal communication	-
Windows	Installation path	%ProgramFiles%\NEC\UMF\Operations	
	Package name	Agent	-
		Manager	MasterScope Network Manager Manager_ <i>identifier</i>
		Console monitor	MasterScope Network Manager Svc_ <i>identifier</i>
	Service name	Agent	-
		Manager	MasterScope UMF Operations Manager <i>identifier</i> _n *1
		Manager	NECUMFNvmg_ <i>identifier</i> *1
Manager		UMFOperationsManager <i>identifier</i> _n *1	

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products. However, if the installation directories are the same, their names will be the same service name/file name.)

■ MasterScope Invariant Analyzer (MasterScope Invariant Analysis category)

Default values when service separation was performed

PF common	Connection port	Between the manager and the agent	-
		Between the manager and the console monitor	12528
		For agent internal communication	-
		Between the manager and the external engine	12527
Windows	Installation path	%ProgramFiles%\NEC\Invariant Analyzer	
	Package name	Agent	-
		Manager	MasterScope Invariant Analyzer Manager_ <i>identifier</i>
		Console monitor	MasterScope Invariant Analyzer Svc_ <i>identifier</i>
	Service name	Agent	-
		Manager	MasterScope Invariant Analyzer Manager <i>identifier</i> _n *1
External engine		MasterScope Invariant Analyzer RelayManager <i>identifier</i> _n *1	
UNIX	Installation path	/opt/NEC/WebSAM/Invariant_Analyzer	
	Package name	Manager	NECUMFSIATmg_ <i>identifier</i> _n *1
		External engine	NECUMFSIATrm_ <i>identifier</i> _n *1
	rc file name	Manager	InvariantAnalyzerManager__ <i>identifier</i> _n *1
		External engine	InvariantAnalyzerRelayManager__ <i>identi</i> <i>fier</i> _n *1

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products. However, if the installation directories are the same, their names will be the same service name/file name.)

■ Default value firstly used by the category MasterScope Integrated Console Logical System

PF common	Connection port	Between the manager and the agent	12520
		For agent internal communication	A value between 12570 and 12589 and not used by MasterScope Framework products
Windows	Installation path	%ProgramFiles%\NEC\UMF\OperationsLogical	
	Service name	Agent	MasterScope UMF Operations Logical Agent_ <i>identifier</i> _n *1
UNIX	Installation path	/opt/UMF/OperationsLogical	
	rc file name	Agent	UMFOperationsLogicalAgent <i>identifier</i> _n *

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products. However, if the installation directories are the same, their names will be the same service name/file name.)

*2: A logical system product cannot share a service with a standard product.

■ MasterScope SystemManager G Logical System (MasterScope Integrated Console category)
Default values when service separation was performed

PF common	Connection port	Between the manager and the agent	12520
		For agent internal communication	A value between 12570 and 12589 and not used by MasterScope Framework products
Windows	Installation path	%ProgramFiles%\NEC\SystemManagerGLogical	
	Package name	Agent	MasterScope SystemManager G Logical Agent <i>identifier</i> *1
	Service name	Agent	MasterScope UMF Operations Logical Agent <i>identifier</i> <i>n</i> *1
UNIX	Installation path	/opt/NEC/WebSAM/SystemManagerGLogical	
	Package name	Agent	NECUMFMCOLGmg__ <i>identifier</i> *1
	rc file name	Agent	UMFOperationsAgentLogical__ <i>identifier</i> <i>n</i> *1

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products.

However, if the installation directories are the same, their names will be the same service name/file name.)

*2: A logical system product cannot share a service with a standard product.

■ Default value firstly used by the category Remote Monitor product

Windows	Connection port	Between the manager and the agent	12520
		For agent internal communication	A value between 12570 and 12589 and not used by MasterScope Framework products
	Installation path	%ProgramFiles%\NEC\UMF\OperationsRemote	
	Service name	Agent	MasterScope UMF Operations RemoteAgent <i>identifier</i> <i>n</i> *1

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products.

However, if the installation directories are the same, their names will be the same service name/file name.)

■ MasterScope SystemManager G (MasterScope Remote Monitor category)

Default values when service separation was performed

Windows	Connection port	Between the manager and the agent	12520
		For agent internal communication	A value between 12570 and 12589 and not used by MasterScope Framework products
	Installation path	%ProgramFiles%\NEC\SystemManagerGRemoteMonitor	
	Package name	Agent	MasterScope SystemManager G RemoteMonitorAgent <i>identifier</i>
	Service name	Agent	MasterScope UMF Operations RemoteAgent <i>identifier</i> <i>n</i> *1

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products. However, if the installation directories are the same, their names will be the same service name/file name.)

■ MasterScope SystemManager G IT Service Response Monitor (MasterScope Service Monitor category)

Default values when service separation was performed

PF common	Connection port	Between the manager and the agent	12520
		Between the manager and the console	-
		For agent internal communication	A value between 12570 and 12589 and not used by MasterScope Framework products
Windows	Installation path	%ProgramFiles%\NEC\UMF\OperationsProbe	
	Package name	Agent	MasterScope SystemManager G Probe Agent_ <i>_identifier_n</i> *1
		Manager	-
	Service name	-	-
		Agent	MasterScope SystemManager G Probe Agent_ <i>_identifier_n</i> *1
-		-	
UNIX	Installation path	—	
	Package name	Agent	-
		Manager	-
	Installation path	Agent	-
		Manager	-

*1: *_Identifier* is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number that can be specified during installation. If this item is omitted, a value to which "1" is added is specified automatically on each installation of UMF related products. However, if the installation directories are the same, their names will be the same service name/file name.)

4.1.2. Changing Settings

This section describes how to change the setting values that can be changed after installing a product(s).

※ The default value for <Installation Path> is C:\Program Files\NEC\UMF\Operations.

4.1.2.1. How to Change a Destination (Manager) to which an Agent Is Connected

To change the manager to which an agent is connected, follow the method below:

[Connection destination manager]

1. Check that the agent whose connection destination is to be changed is not currently connected to this manager.
2. Delete the following files:
<Manager installation directory (*1)>\Manager\sg\ApLogHelper\[Agent]_***.pos
<Manager installation directory (*1)>\Manager\sg\EventLogHelper\[Agent]_***.pos
<Manager installation directory (*1)>\Manager\sg\Message\[Agent]_***.pos
<Manager installation directory (*1)>\Manager\sg\SysLogHelper\[Agent]_***.pos

(*1) Path of the shared disk if a shared disk is used.

* Only delete the files in which [Agent] is the name of the agent whose destination is to be changed.

* Replace *** with any number.

* The files mentioned above may not exist.

Perform steps 1 and 2 above, and then perform the steps from step 3 below.

[Agent whose connection destination is to be changed]

1. Exit the agent
2. Open <Installation path to the agent function (*2)>\Agent\sg\SysMonAgt.ini with your editor, and change the manager name in the following statement to a new name:

```
...  
[UpperNode]  
HostName=ManagerA  
...
```

E.g.: When changing the destination from ManagerA to ManagerB

```
...                               ...  
[UpperNode]                       [UpperNode]  
HostName=ManagerA   →   HostName=ManagerB  
...                               ...
```

3. Delete the following directories under <Installation path to the agent function (*2)>\Agent\sg.
PerformanceHelper
NTServiceHelper
EventLogHelper
ProcessHelper
SysLogHelper

ApLogHelper
FileMonitorHelper

(*2) Path of the shared disk if a shared disk is used for the logical agent.

* The directory may not exist.

4. Start the agent.

[Note]

After the connection destination of the agent is changed, agent messages generated before the connection to a new manager is established will be lost. In the case of UNIX agents, the files to be edited and the directories to be deleted are found under the following directory. File names, setting methods, and directories to be deleted are similar to those for Windows agents.

<Installation path to the agent function>/Agent/sg

4.1.2.2. How to Change a Destination (Manager) to which console is Connected

To change the manager to which console is connected, follow the method below:

1. Exit the console.
2. Open <Installation path to the console function>\Svc\sg\SysMonSvc.ini with your editor, and change the manager name in the following statement to a new name:

```
...  
[UpperNode]  
HostName=ManagerA  
...
```

E.g.: When changing the destination from ManagerA to ManagerB

```
...                               ...  
[UpperNode]                       [UpperNode]  
HostName=ManagerA   →   HostName=ManagerB  
...                               ...
```

3. Start the console.

4.1.2.3. How to Change the Port for Agent Internal Communication

To change the port used for agent internal communication, perform the following procedure:

1. Stop the agent.
2. Open the following file in an editor.
 - Windows
<Installation path to the agent function>\Agent\sg\SysMonAgt.ini
 - UNIX
<Installation path to the agent function>/Agent/sg/SysMonAgt.ini
3. Change the following value to a new port number and save it.
Ex.) When you change the port for agent internal communication to 12595.

```
....  
[SelfNode]  
....
```

SvcServerPort=12595

....

4. Exit the editor, and start up the agent.

4.1.3. Considerations when Installing a Product

■ Consideration when installing a product in a cluster environment

• If you install a product in a cluster environment, ensure that the shared disk is mounted and made accessible to the installation process before starting to install it.

■ Considerations on logical system agents

• Logical system agents only support Active-Standby type of redundancy systems where one active server runs.

• Installation configurations

When using a logical system agent, you must install a normal agent from the same product, which is not a logical system agent.

Ensure that normal agents should be installed to all the servers (in both active and standby systems) that make up the cluster.

• Self hostnames of logical agents

The Self hostnames of logical system agents must be the same within the same cluster package (Note 1), and must be set to the ones which are different from each of those of normal agents.

• License

Logical system agents do not require separate licenses if normal agents are installed.

• Setting a cluster package

Logical system agents must be switched in conjunction with the cluster package, but as any product enabled for MasterScope Framework does not perform this control, you are advised to set any which is necessary such as creating scenarios by following the instructions of your cluster software.

■ Considerations on installation and upgrading from a previous version

• If you install a product to an environment where a previous version of the product is installed, the installed product will not adopt the setting values described in “4.1.1.3 Default Values for Each Product,” but inherit the old ones that were set before the installation.

(Note 1) It is recommended to use hostnames that indicate cluster packages, such as hostnames for floating IP for a cluster .

■ Notes on the installation of Windows version products

When [Disabled] is specified for the startup type of the Application Experience (AeLookupSvc) service, the installation may fail with the error code 65. If this error occurs, change the startup type for the Application Experience (AeLookupSvc) service to [Manual], install MasterScope, and then change the startup type for the Application Experience (AeLookupSvc) service back to [Disabled].

■ Notes on installing the console functions

When installing consoles for several products as one service, the [Help] button located in every window of each console brings up the manual for the product that is installed first. If you want to change the order, modify the following setting file.

1. Exit the Monitor Window

- Open <Installation path to the console function>\Svc\sg\SystemMonSvc.ini with your editor, and change the manager name in the following statement to a new name:

```
...
[Product001]
...
HelpFile=< Full path to the help file >
...
```

For <Full path to the help file>, specify <Installation path to console function>%bin\<Help file name>.

The help file name is as follows for each product:

SystemManager G :	SystemManagerG.chm
Network Manager :	NvPro.chm

E.g.: When changing the help file to be started from SystemManager G to Network Manager (Before the change)

```
...
[Product001]
HelpFile=C:\Program Files\NEC\UMF\Operations\Svc\bin\SystemManagerG.chm
...
```

(After the change)

```
...
[Product001]
HelpFile=C:\Program Files\NEC\UMF\Operations\Svc\bin\NvPro.chm
...
```

- Start the Monitor Window.

[Note]

For the Web monitor window (see 4.13 Setting the Web Monitoring View), edit the following files:

For the Windows manager:

<Installation path to the manager function>%Manager\Svc\Common\sg\SystemMonSvc.ini

For the HP-UX/Linux manager:

<Installation path to the manager function>/Manager/Svc/Common/sg/SystemMonSvc.ini

Note that the settings for the Web console are applied to all Web consoles. Also, if the manager is in a cluster environment, specify these settings for both the active and standby nodes.

When installing consoles for several products as one service at once, they are installed in the following order:

In the case of consoles:

1. SystemManagerG
2. Network Manager

In the case of Web monitoring windows

1. SystemManagerG
2. Network Manager

Before you can uninstall the products, restore the modifications to the original.

■ Notes on the installation of manager functions

- When installing multiple product managers on the same server as different services, be sure not to use the same local host name for the managers. Note that when installing the AssetSuite manager

and other product managers on the same server, they are installed as different services automatically.

- When installing the SystemManager G manager and Invariant Analyzer manager on the same server, be sure not to use the same port number.

■ Cautions after the UNIX version product is installed

Do not change the mount point of any directory under the install directory or data directory created after installation. The install directory and data directory are managed and used assuming that each of them has a single mount point.

Changing the mount point of a directory under the install directory or data directory may cause an unexpected behavior.

4.2. Installation of Products (Windows)

The following table shows the installation procedure with the MasterScope Media Installer.

1.	Start installation ↓
2.	Welcome screen(Selecting installation or uninstallation) ↓
3.	Select the products to install ↓
4.	Installation settings (Installation configuration) ↓
5.	Installation settings (Service/product setting) ↓
6.	Confirmation window ↓
	(Install the selected products) ↓
7.	Installation Completed window

4.2.1. Items to Be Checked

- Ensure that you read the release memo for a product to be installed.
- Perform the installation as a user with Administrator authority.
- You do not need to restart the system after installing the product.
- Before installing, quit all applications currently running. Also, don't execute any command provided by this product.
- About 900MB free capacity is required in the environment variables %TMP% or the %TEMP% directory to install the products. Moreover, free capacity equal to the installation directory is required for a second or later installation because the existing files will be backed up.
- Here, the DVD-ROM drive will be referred to as the E: drive. If the DVD-ROM drive is assigned to a different drive name, take the E: drive to mean that drive name.
- To install this product, full control access authority for the following folders is required.
 - Environment variable %ProgramFiles%
(%ProgramFiles(x86)% for Windows x64 Edition environment)
 - Environment variable %TMP% or %TEMP%
 - Installation destination folder
- - Data area folder when "Change Data Directory" is specified
- For a running cluster environment, install the products on the environment where a shared folder can be viewed.
- When using a logical system agent, you must install a normal agent from the same product, which is not a logical system agent.
- To start the installation manually, click [Start] and then click [Run].
Enter E:\Windows\Setup.exe, and click the [OK] button. The Splash window appears. Upon completing preparations, the Welcome screen appears.

- If Network Manager has been installed on the server you're installing on, stop the following services before the installation and then start them after the installation as necessary.

NvPRO ResourceManagerAPI Service
 NvPRO DataCollect Manager
 NvPRO Base Manager
 MasterScope UMF Operations Manager_ *n* *1

*1 *n* is 1 or larger numbers (This number will increase as a product for UMF is installed).

Also if you're using sFlow function of Network Manager, confirm that NvPROSFlowCmd.exe process is not running and start the installation after NvPROSFlowCmd.exe process has been terminated.

- If SystemManager G or MISSION CRITICAL OPERATIONS has been installed on the server to install and you're using CDO message API, stop the following services before the installation and then start them after the installation as necessary.

MasterScope MISSION CRITICAL OPERATIONS CDO

- When installing the following products in a Windows x64 Edition environment, the runtime components of the Visual C++ 2010 library need to be installed in advance. For details, see "8.3.2 Cautions when using a 64-bit Windows environment".

Product name	Function name
MasterScope SystemManager G	Manager function (*1)
	IA external engine function
MasterScope Invariant Analyzer	Manager function
	External engine function

(*1) Only required when the performance analysis function of the MasterScope SystemManager G Invariant Analyzer Option (sold separately) is used.

- When installing MasterScope Media by specifying [Use bundled DB] in a Windows environment, first read "8.3.3.1 Cautions when using the bundled DB on the Windows".

4.2.2. Starting Installation

Insert the MasterScope Media DVD-ROM into the DVD-ROM drive and start Windows Explorer. Double click E:\Windows\Setup.exe to start the installation of the products/package you want to install.

However, if a dialog as shown in Figure 4-3 appears before or after the splash window of “Figure 4-3 Error Dialog when Starting installation” is displayed,, refer to "Table 4-3 Error Code List".



Figure 4-2 Splash window

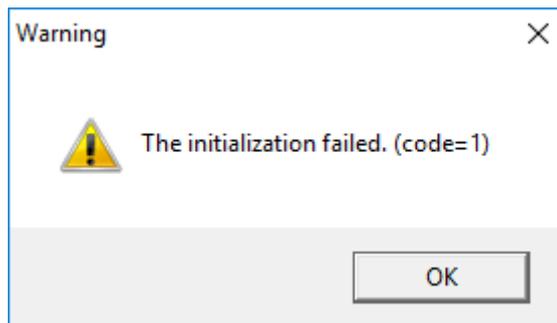


Figure 4-3 Error Dialog when Starting installation

Table 4-3 Error Code List

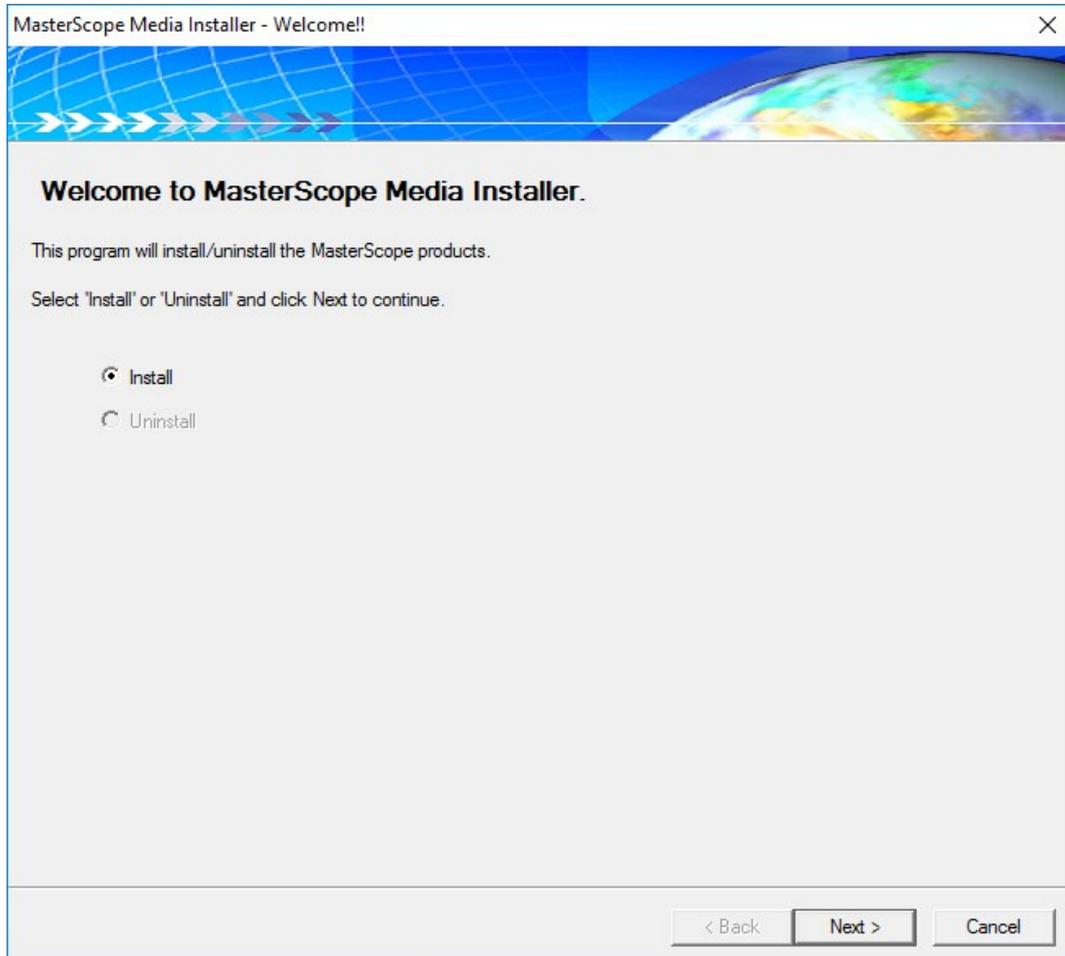
Error Code	Description	Solution
1	Deletion or creation of the temporary folder for the Media Installer failed.	Please check the status (capacity, authority, and busy) of the temporary directory (environment variable %TMP% or %TEMP%).
10	Allocation of the memory failed.	Please check whether other heavy

		load programs are running, in addition to the memory capacity.
14, 16	Read of the product media information failed.	Please check that the media you are using is correct.
15	Other initialization errors	Please check whether or not you moved or deleted any system files of the installed MasterScope Framework product by mistake.

4.2.3. Welcome Screen (Selecting Install or Uninstall)

When the Welcome screen appears, select [Install] and click the [Next] button.

Details of display is little different depending on the media and product you're using.



4.2.4. Selecting the Products to Install

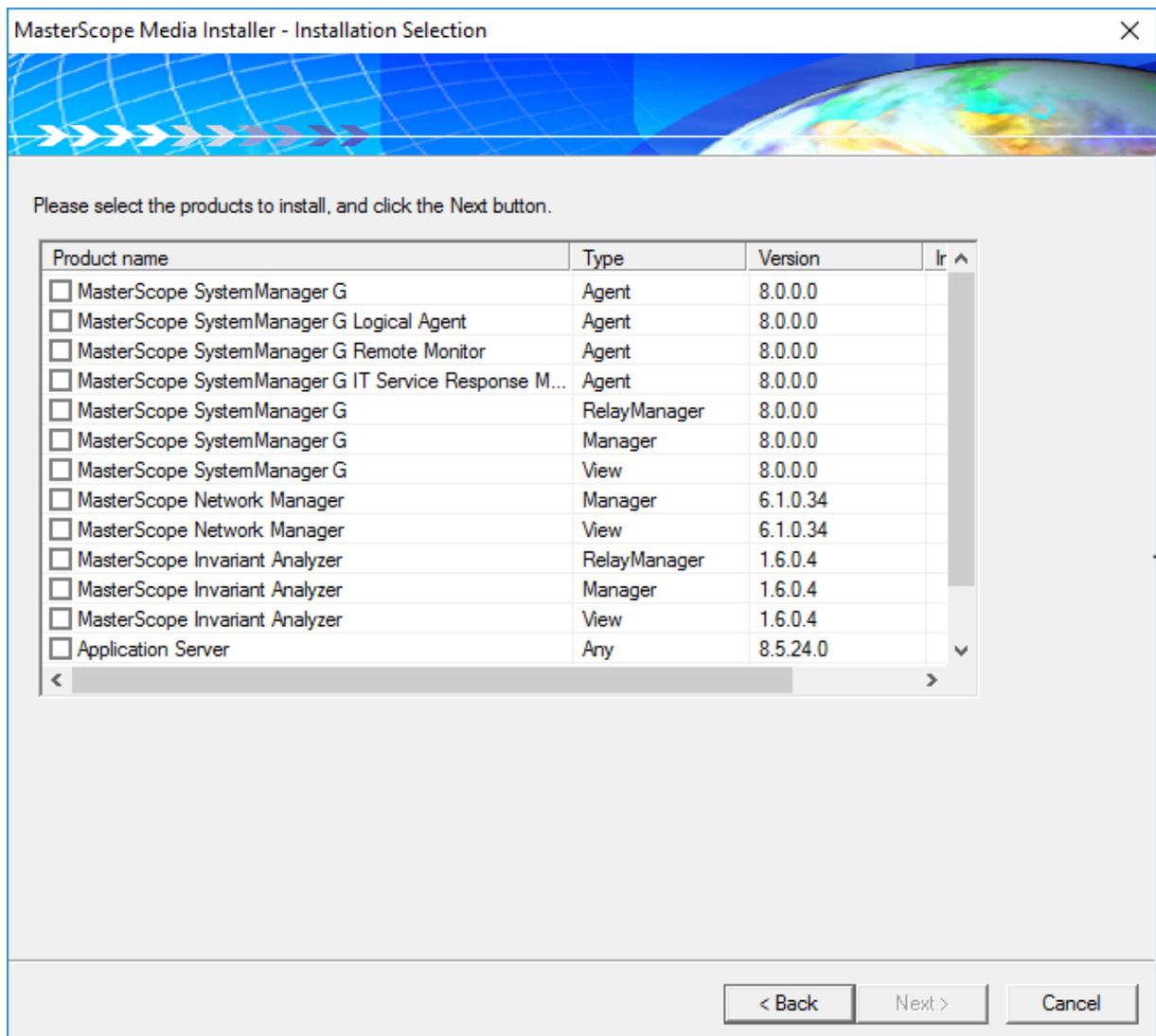
A list of the products that can be installed appears.

If the same product has been already installed, its version is displayed in the [Installation situation].

However, a checkbox will be disabled in the following cases and the product cannot be installed.

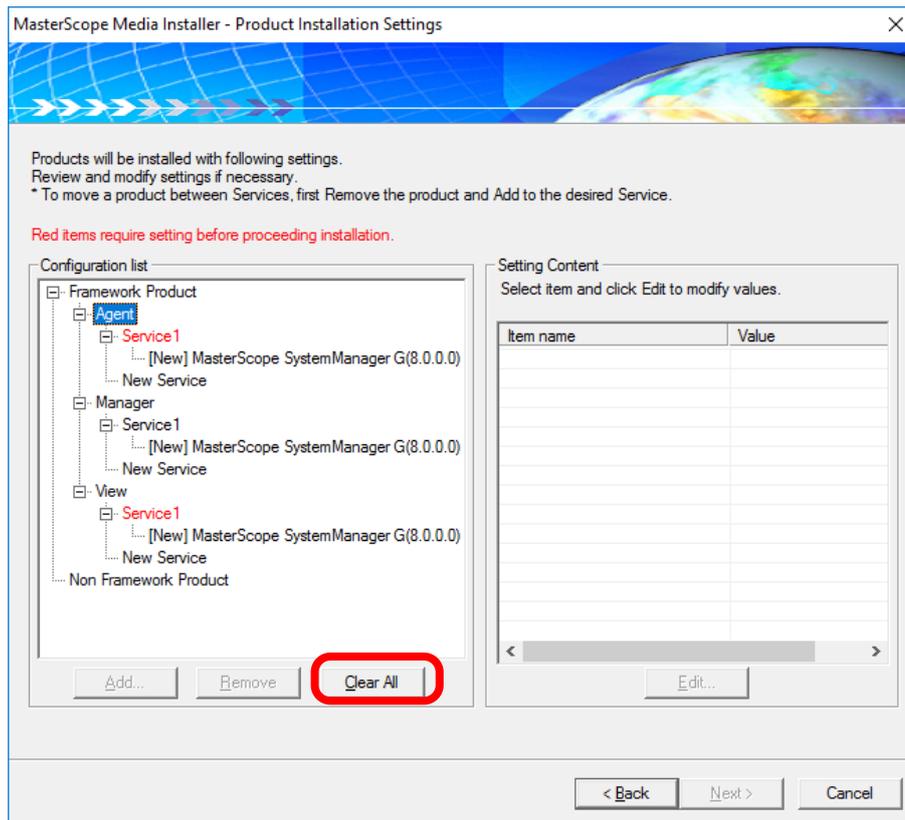
- The installed product was versioned-down
- A product that cannot be overwritten

Check the checkboxes of the products you want to install, click the [Next] button.



When you select the product you want to add and click the [OK] button, the selected product will be added under the corresponding service in the Configuration list.
The product that has been already added or non multi-instance enabled product is grayed out and cannot be selected.

4.2.8. Changing the installation configuration (Clear All)



When you click the [Clear All] button, the configuration list and all settings will be initialized.
Please be careful to do this operation because the products you have selected on the previous window will be removed from the Configuration list.
Only the information on the products that have been already installed is displayed.

4.3. Installation Settings (Service/Product Setting)

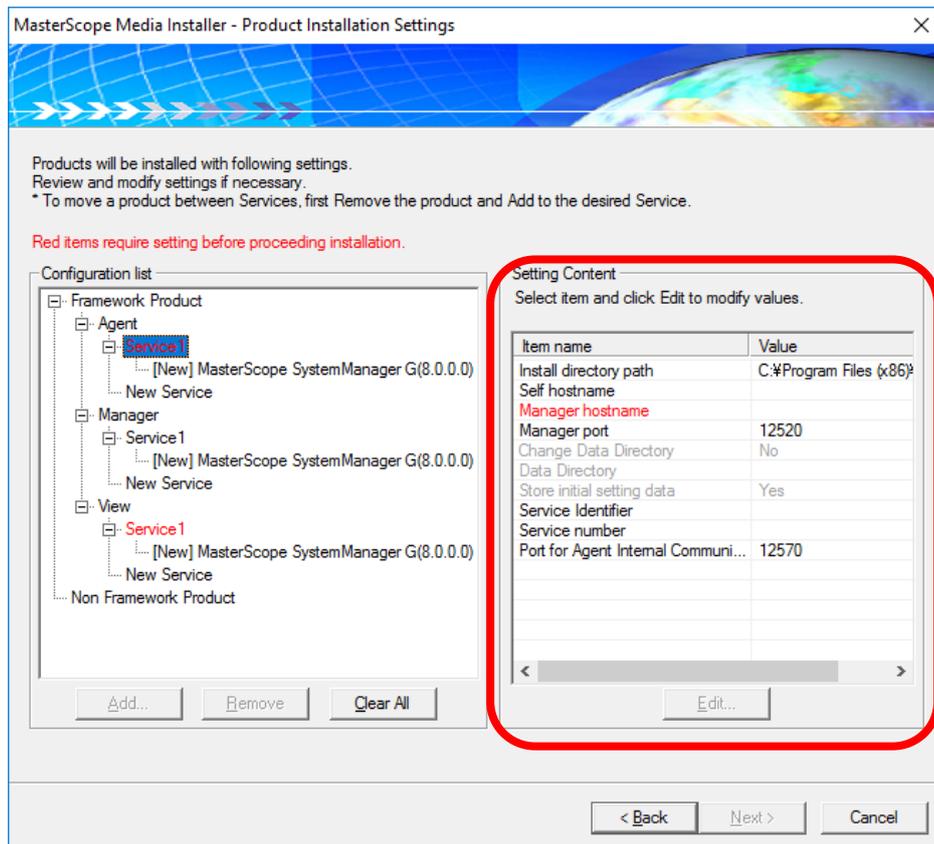
4.3.1. Entering Settings

The setting contents of the services and products that you selected from the Configuration list are listed in the Setting Content box at lower right. Change them as needed.

Red items in the list require setting before proceeding installation. If the selected product does not have any setting item, no item appears in this list.

The default value of the setting item of a service is defined for each category, and the value is displayed at the first installation of the product. When you perform service separation, the values you defined for each product will be displayed. Thus, if you add or cancel product repeatedly after the service separation, the setting may be overlapped. Careful attention is needed to do this operation.

As the default values are overlapped in the case of multi-instance, change the setting.



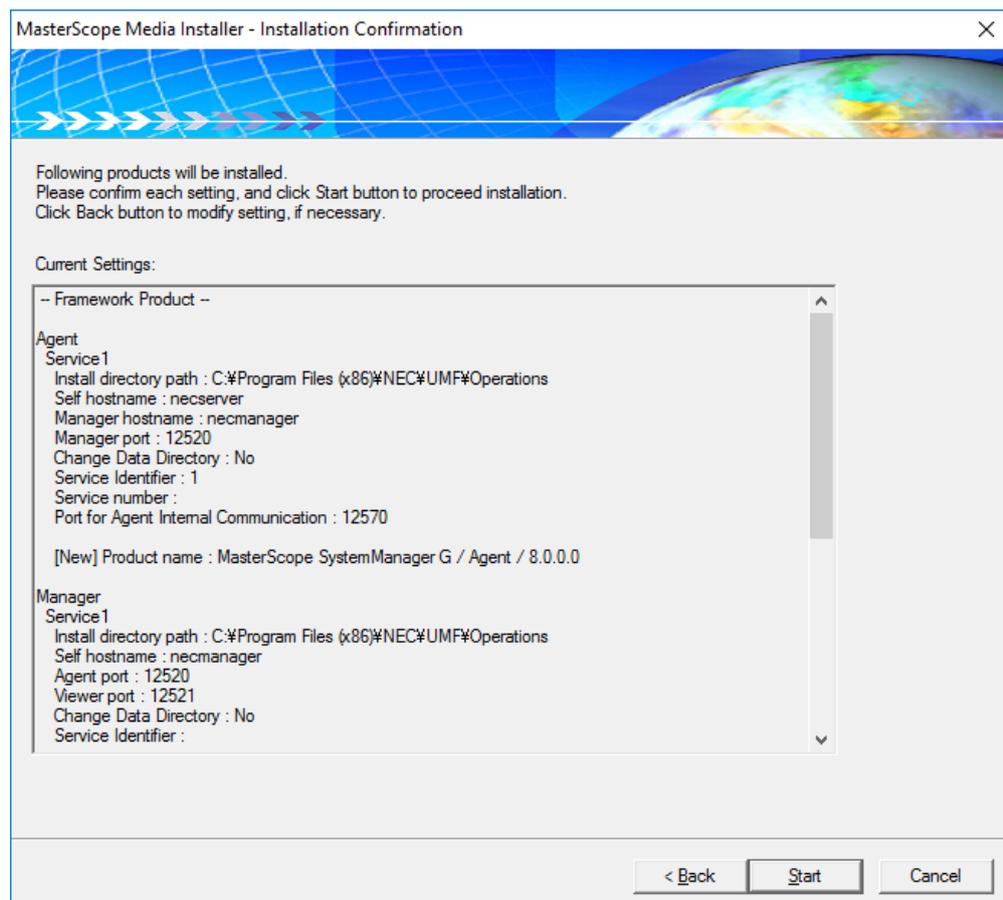
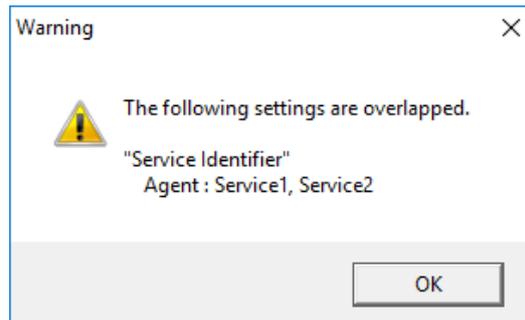
When you select the setting item you want to set and click the [Edit] button, an edit window of the setting item appears. Set values, and click the [OK] button.

For setting items and values, please see "4.1.1 Installation Information."

4.4. Confirmation Window

When you click [Next] on the Installation Settings window, the Installation Confirmation window appear.

When the following dialog appears after clicking [Next] button at the installation dialog, the product cannot be installed due to parameter duplication. Start the installation again after resolving the duplication.



Check the settings and click the [Start] button.

The Executing Installation window appears and installation of the selected products starts.

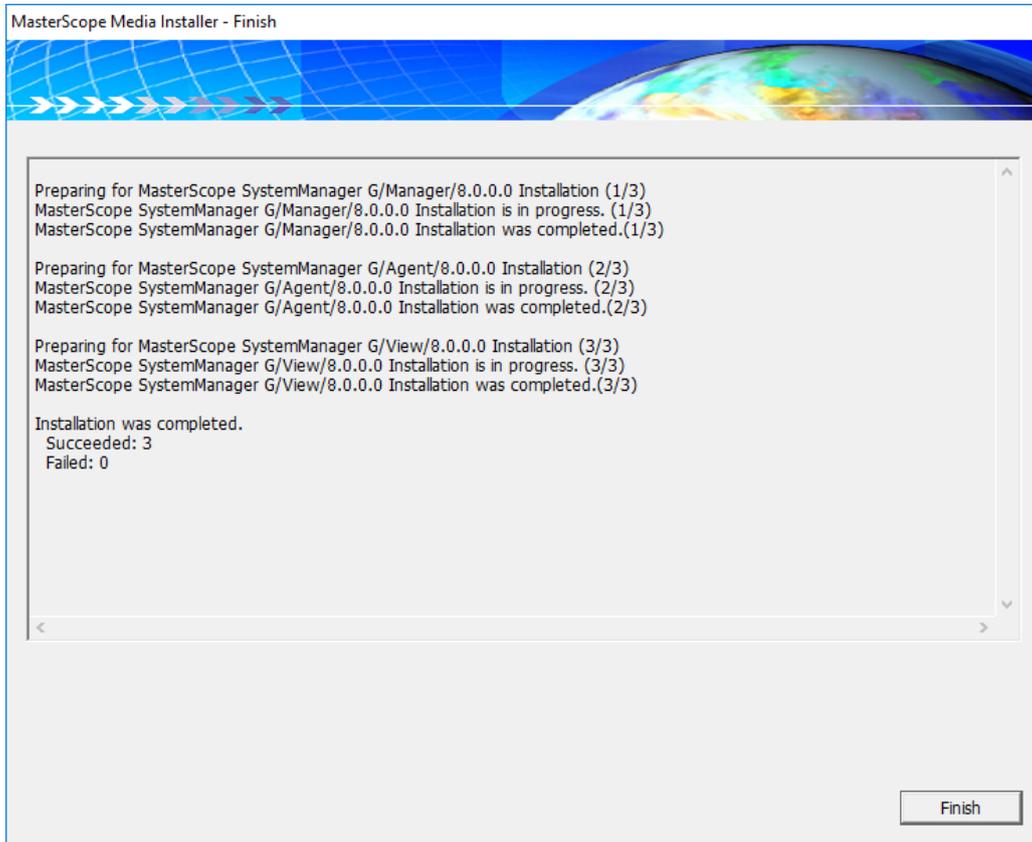
Once the installation starts, you cannot abort it.

If [Use bundled DB] is specified for the installation, the [License agreement] dialog box for the runtime components of the Visual C++ 2005 library is displayed after the installation starts. Read the contents, and then click the [Yes] button to agree. The dialog boxes are displayed automatically and no further operations are required. (The dialog boxes also close automatically.)

The runtime components of the Visual C++ 2005 library will not be installed if the [No] button is clicked. Note that installation of the product may fail in this case. See "8.3.3.1 Cautions when using the bundled DB on the Windows" for details.

4.5. Installation Completed Window

The installation progress status window appears during the installation.



When the installation completes normally, the Installation Completed window appears. Click the [Finish] button to end the installation.

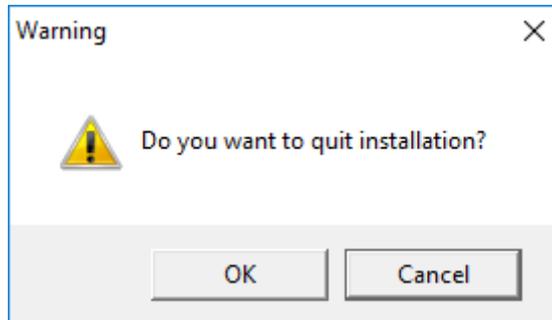
Now, the installation completed.

4.5.1. What to Be Checked after Installation

On this product, the license is confirmed by the License management function. You can use this product for three month after installation as the trial period. After the trial period is over, you need to register the regular license to use this product. Please refer to the bundled manual for obtaining the regular license, and refer to the main manual for the registration. Note that no additional license is needed for a logical system agent as long as a normal agent has been installed.

4.6. Cancelling the Installation

When you click the [Cancel] button or the [x] button on the wizard, the cancel confirmation window shown below appears.



When you click the [OK] button, the installation will be aborted.
When you click the [Cancel] button, the previous window will return.

4.7. Installation of Products (UNIX)

The following table shows the installation procedure with the MasterScope Media Installer.

1.	Start installation ↓
2.	Welcome screen(Selecting installation or uninstallation) ↓
3.	Select the products to install ↓
4.	Installation settings (Installation configuration) ↓
5.	Installation settings (Service/product setting) ↓
6.	Confirmation window ↓
	(Install the selected products) ↓
7.	Installation Completed window

4.7.1. Items to Be Checked

- Ensure that you read the release memo for a product to be installed.
- Perform the installation as a root user.
- You don't need to reboot your system after the installation.
- You do not need to restart the system after installing the product.
- Also, don't execute any command provided by this product during the installation.
- The following software is needed to perform the installer of this media. Refer to the documents of each product regarding to other system requirements.
- For the following software, packages and OS patches required to be installed additionally based on the minimum OS configuration installation are described.

Red Hat Enterprise Linux 5.x Oracle Enterprise Linux 5.x	Package:compat-libstdc++-33(32bit) Package:ncompress or gzip Package:rpm-build (*1) Package:ncurses(32bit) Package:libgcc(32bit) Package:glibc(32bit) Package:e2fsprogs-libs(32bit) Package:redhat-lsb
Red Hat Enterprise Linux 6.x Oracle Linux 6.x	Package:compat-libstdc++-33(32bit) Package:ncompress or gzip Package:rpm-build (*1) Package:ncurses-libs(32bit)

	Package:libgcc(32bit) Package:glibc(32bit) Package:libuuid(32bit) Package:redhat-lsb
Red Hat Enterprise Linux 7.x	Package:compat-libstdc++-33(32bit) Package:ncompress or gzip Package:rpm-build (*1) Package:net-tools (*5) Package:ncurses-libs(32bit) Package:libgcc(32bit) Package:glibc(32bit) Package:libuuid(32bit) Package:redhat-lsb
SUSE Linux Enterprise Server 11	Package:gzip Package:lsb Package:glibc(32bit) Case of 32bitOS:glibc-XXXXX.rpm Case of 32bitOS:glibc-32bit-XXXXX.rpm Package:glibc-locale(32bit) Case of 32bitOS:gilbc-locale-XXXXX.rpm Case of 32bitOS:gilbc-locale-32bit-XXXXX.rpm Package:libstdc++33(32bit) Case of 32bitOS:libstdc++33-XXXXX.rpm Case of 32bitOS:libstdc++33-32bit-XXXXX.rpm Package:libgcc43(32bit) Case of 32bitOS:libgcc43-XXXXX.rpm Case of 32bitOS:libgcc43-32bit-XXXXX.rpm Package:libuuid1(32bit) Case of 32bitOS:libuuid1-XXXXX.rpm Case of 32bitOS:libuuid1-32bit-XXXXX.rpm Package:libncurses5 (32bit) Case of 32bitOS:libncurses5-XXXXX.rpm Case of 32bitOS:libncurses5-32bit-XXXXX.rpm
HP-UX 11iv3	Package:HPUXLocales
Solaris 10	Package :SUNWuiu8 Package :SUNWjiu8 OS patch :12100-04 Kernel Update Patch (*4) OS patch :120473-05 libc nss ldap PAM zfs Patch (*4) OS patch :125800-01 Fault Manager Patch (*4)
Solaris 11.x	Package :SUNWiconv-unicode Package :SUNWuiu8
AIX 6.1 (*3) AIX 7.1 (*3)	Package :xlc.rte Package :bos.rte.iconv Package :bos.rte.libpthreads Package :bos.rte.libc Package :bos.rte.bind_cmds Package :bos.rte.security Package :bos.rte.libcur Package :bos.adt.insttools (*1)

	Package :bos.iconv Package :bos.net.ncs Package :bos.acct Package :bos.perf.tools Package :bos.net.tcp.client UTF-8 language environment (*2)
AIX 7.2	Package :xIC.rte Package :bos.rte.iconv Package :bos.rte.libpthreads Package :bos.rte.libc Package :bos.rte.bind_cmds Package :bos.rte.security Package :bos.rte.libcur Package :bos.adt.insttools (*1) Package :bos.iconv Package :bos.acct Package :bos.perf.tools Package :bos.net.tcp.client UTF-8 language environment (*2)

(*1) Required to set a service identifier to the installed service. Identifier setting can be omitted in the normal configuration (this package is not required when it is omitted) but not in multi-instance configuration.

(*2) For the UTF-8 language environment, set the media for OS, run the following command and select [Add Additional LanguageEnvironments], and select and install “UTF-8 English (United States) [EN_US]” with [CULTURAL convention to install] and “UTF-8 English (United States) [EN_US]” with [LANGUAGE translation to install].

```
# smitty lang
```

(*3) To use AIX, apply the patches provided by IBM Japan Ltd. The APAR numbers and Fixpacks currently verified are shown below.

OS	Patch
AIX 6.1	Fixpack IV56395/TL9SP3 or later
AIX 7.1	Fixpack IV56004/TL3SP3 or later

Information about patches can be obtained from the IBM Japan Ltd. website.

(*4) These three patches are required to install MasterScope Application Navigator. It is recommended to also apply these patches for other products. Note that these patches are automatically included in the Solaris 10 Release of June 2007 and later releases.

(*5) This product must be installed with [Use Bundled DB] selected for [Using CMDB].

- About 1.5GB free capacity is required at the /tmp directory. Moreover, free capacity equal to the installation directory is required for a second or later installation because the existing files will be backed up.
- If the /tmp directory does not have sufficient capacity, specify the path to an appropriate directory in the environmental variable FW_TEMP to use it as the temporary directory for the /temp directory when installing the product. Note that the notes when using the environmental variable FW_TEMP are as follows:
 - As the directory specified in the environmental variable FW_TEMP must have been created before, it is advisable to specify an existing directory for it.

- For the directory you want to specify in FW_TEMP, specify the absolute path to it.
- Here, the DVD-ROM drive will be referred to as mounted on /SD_CDROM. If the DVD-ROM drive is mounted on other mount point, take the /SD_CDROM to mean that mount point name.
- For a running cluster environment, install the products on the environment where a shared folder can be viewed.
- Set your terminal to UTF-8.
- If SystemManager G or MISSION CRITICAL OPERATIONS has been installed on the server to install and you're using CDO message API, stop the following daemon before the installation and then start them after the installation as necessary.
 - <<Linux>>
 - /etc/rc.d/init.d/UMFMCOperationsCDO stop
 - <<HP-UX(IPF)>>
 - /sbin/rc.d/init.d/UMFMCOperationsCDO stop
 - <<Solaris>>
 - /etc/init.d/UMFMCOperationsCDO stop
- Disable SELinux when installing the product on Linux.

[Note]

On this product, the license is confirmed by the License management function. You can use this product for three month after installation as the trial period. After the trial period is over, you need to register the regular license to use this product. Please refer to the bundled manual for obtaining the regular license, and refer to the main manual for the registration. Note that no additional license is needed for a logical system agent as long as a normal agent has been installed.

4.7.2. Starting Installation

Mount MasterScope Media and run /SD_CDROM/[OS type]/Setup.

For RedHat Enterprise Linux 5, the following option is needed for the mount command.

```
# mount -t iso9660 -o ro,exec /dev/dsk/c0t0d0 /SD_CDROM
```

4.7.3. Welcome Screen (Selecting Install or Uninstall)

When the installation is started, the following screen appears.

If the screen is improperly displayed, restart the installer after setting the environment variable TERM to vt100.

(Example) B shell, or POSIX shell : export TERM=vt100
C shell : setenv TERM vt100

```
*****  
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):
```

Put the following key and hit [Enter] depending on your purpose.

- 1 : Proceed to select a product to install.
- q : Quit the installer.

4.7.4. Selecting the Products to Install

A list of the products that can be installed appears. If a same product has been installed, the version of the product is displayed inside of right []. You can see more products which cannot displayed in the size by upper or down arrow key.

In the following cases, the number is not added on top and the product cannot be installed.

- Version down of installed product.
- Overwriting disabled product.

```
-----  
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 RelayManager 8.0.0.0  
4 [ ] MasterScope SystemManager G Manager 8.0.0.0  
5 [ ] MasterScope Invariant Analyzer RelayManager 1.6.0.4  
6 [ ] MasterScope Invariant Analyzer Manager 1.6.0.4  
  
-----  
  
Please select product(s) by entering numbers separated by commas.  
[Example: 1, 3, 4]  
(b:back q:quit program):
```

Put the following key and hit [Enter] depending on your purpose.

Number : Select the numbered product. Two or more numbers separated by comma can be selected.

If you put "b" in the next screen and get back after specifying a number, the selected product is marked with "*" and is deselected by specifying the number. The next screen

q : Quit the installer.

Confirmation screen is displayed. You can see more products which cannot displayed in the size by upper or down arrow key.

```
-----  
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 RelayManager 8.0.0.0  
4 [*] MasterScope SystemManager G Manager 8.0.0.0  
5 [ ] MasterScope Invariant Analyzer RelayManager 1.6.0.4  
6 [ ] MasterScope Invariant Analyzer Manager 1.6.0.4
```

Put the following key and hit Enter depending on your purpose.

- y : Proceed to setting screen of the installation.
- n : Back to the selecting screen of products.
- q : Quit the installer.

Without specifying any key and hit [Enter], it is regarded as specifying y.

4.7.5. Installation Settings (Installation Configuration)

Configuration list of products to install is displayed.

The products that you selected on the previous window are categorized by the resource that they can share and they are displayed under Service *n* in tree. Please change the configuration of the products to be installed as needed.

To separate a product which has been installed as a same service, remove the relevant product and add it to a new service respectively with referring to the following sections.

When the same product has been installed, it is overwritten by default. In the case of no-overwriting such as multi-instantiated, remove the relevant product or change the default configuration with referring to the following sections. To multi-instantiated, add it to a new service.

The items starting with * in the [Installation Settings] require setting before proceeding installation. Refer to [4.8 Installation Settings (Service/Product Setting)] and perform setting. You can see more products which cannot displayed in the size by upper or down arrow key.

```
-----
Installation settings
-----
Agent
  (*) 1 Service1
      1.1 MasterScope SystemManager G Agent 8.0.0.0
      2 New Service
Manager
  3 Service1
      3.1 MasterScope SystemManager G Manager 8.0.0.0
-----
(*) marked products or services objects require specific settings before
installation.
-----
Please select operation to perform from following commands.
[Example: 's1' configures settings for first service listed above.]
(a[n]:add r[n.n]:remove s[n]:setting v[n]:view c:clear b:back e:execute q:quit
program):
```

Put the following key and hit [Enter] depending on your purpose.

- rx.x(Product number): Remove the product from Service*n* (Cannot uninstall a product which has been installed).
- ax(Service number) : Add the product to the target service (Cannot be performed if there is no product to add).
- sx.x(Product number): Perform setting to the product (Cannot perform setting if there is no product specific setting).
- sx(Service number) : Perform setting to the service (Cannot perform setting to a new service).
- vx(Service number) : Display settings of the specified service.
- c : Clear all configurations and settings.
- b : Back to the previous screen.
- q : Quit the installer.
- e : Execute the installation (Cannot be performed if mandatory parameter is unset).

4.7.6. Changing the installation configuration (Cancelling a product.)

Hit r or [Enter] after putting the number of the product you'd like to remove, a confirmation dialog appears.

```
-----  
These products will be removed from install list  
-----  
Agent  
  1 Service  
    1.1 MasterScope SystemManager G Agent 8.0.0.0  
-----  
Are you sure?  
(default:y y:yes n:no q:quit program):
```

Put y and hit [Enter], then selected product disappears.

```
-----  
Installation settings  
-----  
Agent  
  1 New Service  
RelayManager  
  2 New Service  
Manager  
  3 Service1  
    3.1 MasterScope SystemManager G Manager 8.0.0.0  
-----  
(* 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.]  
(a[n]:add r[n.n]:remove s[n]:setting v[n]:view c:clear b:back e:execute q:quit  
program):
```

4.7.7. Changing the installation configuration (Adding a product)

Put a and the number of the product which you'd like to install and hit [Enter], then products which can be added to the service is listed.

Note that you cannot execute it if there is no product which can be added to the service.

Non multi-instance enabled product is not displayed in the list when the product has been added another service.

```
-----  
Products  
-----  
1 MasterScope SystemManager G Agent 8.0.0.0  
-----  
Please input number by entering number. [Example: 1]  
(b:back, q:quit program):
```

Put the following key and hit Enter depending on your purpose.

Number : Specify the product. Two or more number separated by comma can be selected.

b : Back to the previous screen.

q : Quit the installation.

Put the number of the product you'd like to add and hit [Enter], then the selected product is added to the relevant service in the Installation settings

```
-----  
Installation settings  
-----  
Agent  
  (*) 1 Service1  
        1.1 MasterScope SystemManager G Agent 8.0.0.0,  
        2 Service2  
Manager  
  3 Service1  
        3.1 MasterScope SystemManager G Manager 8.0.0.0  
-----  
(* marked products or services objects require specific settings before installation.  
-----  
Please select operation to perform from following commands.  
[Example: 's1' configures settings for first service listed above.]  
(a[n]:add r[n.n]:remove s[n]:setting v[n]:view c:clear b:back e:execute q:quit  
program):
```

4.7.8. Changing the installation configuration (Clear All)

Hit c and [Enter], then confirmation dialog for initialization is displayed.

```
-----  
Confirmation  
-----  
All products and settings will be cleared.  
  
-----  
Are you sure?  
(default:n y:yes n:no q:quit program):
```

Put the following key and hit Enter depending on your purpose.

- y : Initialize all configurations and settings.
- n : Back to the previous screen without initialization of configurations and settings.
- q : Quit the installation.

Hit [Enter] without specifying any key is regarded as specifying q.

Put y and hit [Enter], then all configurations and settings are initialized.

Here, the product information selected in the previous screen is also deleted.

When there is a product which has been installed, only such information is displayed.

```
-----  
Configuration  
-----  
Agent  
    1 New Service  
RelayManager  
    2 New Service  
Manager  
    3 New Service  
  
-----  
(* 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.]  
(a[n]:add r[n.n]:remove s[n]:setting v[n]:view c:clear b:back e:execute q:quit  
program):
```

4.8. Installation Settings (Service/Product Setting)

4.8.1. Input Settings

Hit [Enter] after putting “s” and the number of service or product, then Installation Settings screen of the service or product is displayed. Input settings as necessary.

Note that you cannot perform settings by specifying the product ID if there is no product specific settings.

The default value of the setting item of a service is defined for each category, and the value is displayed at the first installation of the product. When you perform service separation, the values you defined for each product will be displayed. Thus, if you add or cancel product repeatedly after the service separation, the setting may be overlapped. Careful attention is needed to do this operation.

As the default values are overlapped in the case of multi-instance, change the setting.

Installation settings

Install directory path
Maximum length: 128 characters.

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

Put the following key and hit [Enter] depending on your purpose.

Parameter : Put a value as necessary.

b : Back to the previous screen.

c : Clear the settings (Enabled only if the parameter can be null).

q : Quit the installation.

Hit [Enter] without specifying any key is regarded as default values being put.

For information on the parameters, refer to [4.1.1.2 Setting Services].

4.8.2. Confirmation of Settings

The settings are displayed after all the parameter has been set.

```
-----  
Confirmation  
-----  
Install directory path: /opt/UMF/Operations  
Self hostname: necserver  
Manager hostname: Manager1  
Manager port: 12520  
Change Data Directory: No  
Data Directory:  
Store initial setting data: Yes  
Service Identifier:  
Port for Agent Internal Communication: 12571  
Service number:  
  
-----  
Are these settings correct?  
(default:y y:yes n:no q:quit program):
```

Put the following key and hit [Enter] depending on your purpose.

- y : Input the product information again.
- n : Back to the Installation Settings screen.
- q : Quit the installation.

Hit [Enter] without specifying any key is regarded as specifying y.

4.9. Confirmation Window

Put e and hit [Enter] on the Installation settings screen, then the Final confirmation screen is displayed.

```
-----  
Final confirmation  
-----  
Agent  
  1 Service1  
    1.1 MasterScope SystemManager G Agent 8.0.0.0  
Manager  
  4 Service1  
    4.1 MasterScope SystemManager G Manager 8.0.0.0  
  
-----  
Is it OK to start installation?  
(default:y y:yes n:no q:quit program):
```

Put the following key and hit [Enter] depending on your purpose.

y : Start the installation.

n : Back to the Installation settings screen.

q : Quit the installation.

Hit [Enter] without specifying any key is regarded as specifying y.

You cannot cancel it after starting the installation.

When the message like below is displayed after putting y in the Final confirmation screen, the installation can not be started because the settings are overlapped. Restart the installation after changing the settings and resolving the overlap.

```
-----  
The service or product setting is overlapped. 'Install directory path'  
Agent : Service1, Service2  
-----  
  
Press Enter to continue. :
```

4.10. Installation Completed Screen

The installation status like below is displayed at installation.

```
MasterScope SystemManager G Agent 8.0.0.0 Preparing for Installation (1/2)
MasterScope SystemManager G Agent 8.0.0.0 Installation in progress (1/2)

      : (skip)

MasterScope SystemManager G Manager 8.0.0.0 was successfully installed (2/2)

-----
Installation result
-----
1 MasterScope SystemManager G Agent 8.0.0.0 (Success)
2 MasterScope SystemManager G Manager 8.0.0.0 (Success)
-----
Success:2, Failure:0
```

Here, the installation has been completed.

4.10.1. What to Be Checked after Installation

- Even if you manually edited the rc script before installing a product, the manually edited items in the script will not be reflected when overwriting the existing product, or adding a different product as the same service. As such a previous rc file is saved as the following file, edit rc file again by referring to it:
 - For Linux: /tmp/WEBSAM_FW_LOG/[rc script name].bk_v*
 - For other UNIXs: [rc script name].bk_v* under the same directory as the rc script (where * is a number higher than 0. Please use the most recent one.)
- In a MasterScope product, a licensing check is performed by the license management function. Although users are allowed to use it in the 3 months after installing it, they need to register the official license if they continue to operate it after the initial 3 months have elapsed. For information on obtaining the license and registering it, refer to the procedure document provided with the product and the product manual, respectively.

4.11. Environment Settings after Installation

This chapter describes environment settings required to be done after the installation.

To set up the environment after the Network Manager is installed, perform the procedures described in the MasterScope Network Manager Setup Guide.

4.11.1. Setup CMDB

To use the configuration management database (CMDB), execute the procedure described in "How to set up CMDB" in "MasterScope Configuration Management Database (CMDB) Release Notes".

This setup procedure is not required when using the internal database included on the MasterScope Media as the configuration management database (CMDB).

4.11.2. Firewall Settings

1. If a firewall is enabled, you need to register the port numbers described in the following table as exceptions.

Default Value	Usage
4135	For Network Manager
12520	SystemManager G for between the manager and the agent
12521	SystemManager G / Network Manager for between the manager and the console monitor
12527	Invariant Analyzer for between the manager and external engine
12528	Invariant Analyzer for between the manager and console monitor
(*1)	For agent internal communication

(*1) Number in the range of 12570 to 12589 unused by MasterScope Framework-enabled products

[Notes]

- When you specified any port number other than the above (the default value) at installation, you need to register the specified port number, not the default one.
- If you use Network Manager, you must specify an additional port number in addition to the above. For details, refer to the "MasterScope Network Manager Setup Guide."
- When you are using the Windows firewall, you can register the following program, not the port number, as exceptions to operate this product.
A program to be registered as exceptions:
<Installation directory for the manager function>\bin\SysMonMgr.exe
- For more details, please see a document of each product.

4.11.3. Setup Cluster

Refer to the clustering guide of each product and set up clustering.

For information on how to configure clustering of each product, refer to the following document.

Product Name	Related Document
MasterScope SystemManager G	"Clustering Guide" of the product
MasterScope Network Manager	"Release Note" of the product

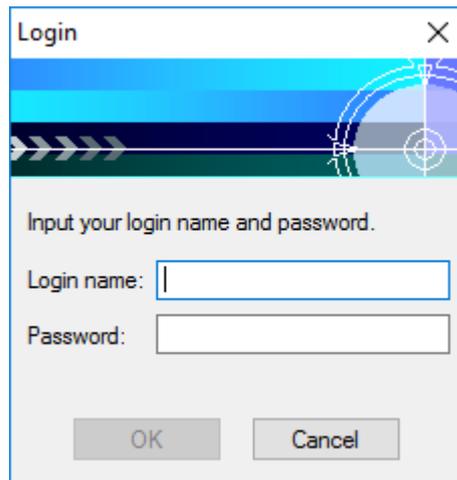
4.12. First Login

The SystemManager G have the user management function.

Please perform the following procedure to change the Administrator's password after installation.

1. Login

When the console monitor function starts, the following window appears:

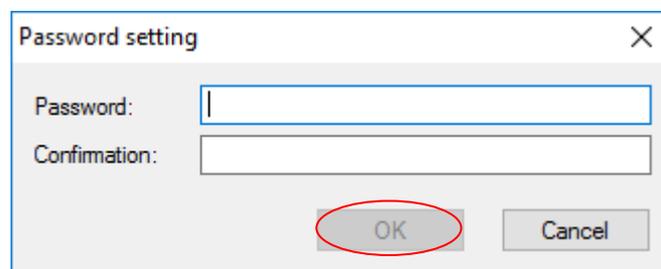


When you log in to the system for the first time, please use the following account information:

User name: Administrator

Password: websam

2. After your login, select [Setting], and then [Configuration Mode] to change the mode to Configuration Mode
3. Select [Setting], and then [Change Password...].
4. Enter the password and click the [OK] button.



Now, the password was changed.

4.13. Setting the Web Monitoring View

The products included in MasterScope Media allow users to utilize the Web Monitoring View using an Internet Explorer (hereinafter, "IE")/Active X control. Before using the Web Monitoring View, users must configure settings specific to it. Set up the Web Monitoring View by following the instructions below:

When using the SystemManager G WebConsole, see the following "WebSAM SystemManager G WebConsole Option Environment Configuration Guide"

[Note]

- To use the Web Monitoring View, at least one Windows console is required to set it up.
- The Web Monitoring View uses a different port from the one used by the Windows console to connect to its manager. Deselect the port specified in the following by referring to "4.11.2 Firewall Settings".
- Unlike Windows consoles, the console functions available to the Web Monitoring View are those of all the products on the manager service to which the View is connected. (In Windows consoles, only the functions provided by products that have been installed as consoles can be used.)
- To use the Web Monitoring View, you must configure security settings in IE as follows:
 1. Select [Tool (T)] – [Internet Options (O)] from the IE menu.
 2. Select the [Security] tab, and add the site of the manager machine viewed from the console machine to [Trusted sites].
 3. Select [Medium-low] for the level of IE security for [Trusted sites].
- When you use the Web Monitoring View, you must have administrative authority for the OS when connecting the View from its machine to the manager for the first time.
 1. When using the Web monitoring window on a computer for the first time, start the Web monitoring window as an Administrator user.
 2. The Web monitoring window can subsequently be used on that computer by logging in as an OS user belonging to the Administrator group. However, in environments where elevation is required by UAC, when using other than the Administrator user, please launch from "Run as Administrator" when starting up Internet Explorer.
- The "Self hostname" to be set when installing the manager must be able to be resolved normally as the manager machine from the Web Monitoring View machine. (For name resolution of "Self hostname", see "4.1.1.2. Setting up the services".)
- A message prompting you to restart your computer may be displayed when starting the Web Monitoring View. When the restart window appears, select [Yes] to restart the computer.
- The Web monitoring window can be registered as a shortcut to the IE's [Favorites(A)] menu and can be started from that shortcut. However, if the shortcut in the [Favorites] folder is copied to the Desktop, the Web monitoring window cannot be started from that copied shortcut (an Internet shortcut (*.url)).
- The Web monitoring window cannot be connected to the manager via a proxy. In the browser settings, remove the connection destination manager host from the proxy connection targets.
- The assets of the Web console are installed in the following folder, however, do not execute them directly.
<Manager Installation Path>\Manager\Svc\Common
- When using the Web monitoring screen, disable the pop-up blocking function. If the pop-up blocking function is enabled in the Internet option setting or as a unique function on the toolbar (e.g. Google Toolbar), the Web monitoring screen may not start up successfully.

[Restrictions]

- When using the Web Monitoring View on Windows Vista and Windows 7, you need to configure the following settings. Otherwise, when you change the window size of the Web Monitoring View, the window may freeze.
 1. Open [Control Panel] – [Administrative Tools] - [Services].
 2. In the [Services] dialog box, right-click the [Themes] service and select [Properties(R)] from the displayed pop-up menu.
 3. Click the [Stop(T)] button to stop the [Themes] service.
 4. Select [Disabled] for [Startup type(E)].

- To use the Web monitoring screen with Windows Internet Explorer 10, access the URL of Web monitoring screen in compatibility view mode.
 1. Open “F12 developer tools” from the Tools menu of Internet Explorer.
 2. Change the browser mode to “Internet Explorer 10 Compatibility View”.

- To use the Web monitoring window with Windows Internet Explorer 11, change the browser display mode to compatibility view in advance (refer to steps 1 and 2 below), and then access the URL of the Web monitoring window. The Web monitoring window can also be used in Enterprise Mode. For Enterprise Mode, it may be required to apply updates, depending on the Windows version. For details, refer to the Microsoft support website, etc.
 1. Open “Compatibility View Settings” from the Tools menu of Internet Explorer.
 2. Register the URL of the Web monitoring screen to “Add this website” in the “Compatibility View Settings” dialog box.
http://MANAGER:PORT/
MANAGER: Manager host name or IPv4 address
PORT: Port number of HTTP service used by the Web monitoring screen

1. Connecting to a Windows console

Start the console by double-clicking the icon on the desktop of the machine to which you installed the console or click the shortcut for each product under [All Programs] in the [Start] menu, and connect it to its Windows manager.

2. Setting the port number for the Web Monitoring View

To connect the View to the manager from IE, check the port number for the HTTP service on the manager.

After you log in to the Windows console, select [Setting], and then [Configuration Mode] to change the mode to Configuration Mode. Next, open the option setting window by selecting [Setting] and [Option], and select the [Web Monitoring View] tab.

After confirming that [Use Web Monitoring View Function] is checked, specify the port number for one of the free ports in the system. As the default value is 8080, change it as needed.

3. Starting the Web Monitoring View

Start IE. Enter the following in URL:

http://MANAGER:PORT/

MANAGER: Hostname or IPv4 address of the manager

PORT: Port number specified in Item 2 for HTTP service

Note that if a popup about installing ActiveX controls appears when starting IE for the first time, you must select [Install]. In addition, note that it may take several minutes to download files after the initial startup of IE.

5. Uninstallation

5.1. Prepare Uninstallation

This chapter describes an environment setting before your uninstallation.

5.1.1. Delete CMDB

When uninstalling all products that were using the configuration management database (CMDB), execute the procedure described in "How to delete CMDB" in "MasterScope Configuration Management Database (CMDB) Release Notes" in advance.

This setup procedure is not required if the internal database included on the MasterScope Media was being used as the configuration management database (CMDB).

5.1.2. Considerations when Uninstalling a Product

- Consideration when uninstalling a product in a cluster environment
 - When uninstalling a product in a cluster environment, files on the shared disk will not be removed. After the uninstallation has been completed, remove them manually.

5.2. Uninstallation of Products (Windows)

The following table shows the uninstallation procedure with the MasterScope Media Installer. Please make sure to refer to the release notes of each product.

1.	Start uninstallation ↓
2.	Welcome screen(Selecting installation or uninstallation) ↓
3.	Select the products to uninstall ↓
4.	Confirmation window ↓
	(Uninstall the selected products) ↓
5.	Uninstallation Completed window

5.3. Items to Be Checked

- Perform the uninstallation as a user with Administrator authority.

- Before uninstalling, quit all applications currently running. Also, don't execute any command provided by this product during uninstallation.
- When uninstalling a product, the target machine does not check whether it has sufficient free disk capacity required to execute the process. Confirm whether the installation machine has sufficient free disk capacity before starting the uninstallation. As the uninstallation process makes a backup of existing files, the machine needs to have the same amount of free disk space as that under the installation directory.
- About 200MB free capacity is required in the environment variables %TMP% or the %TEMP% directory to uninstall the products.
- Here, the DVD-ROM drive will be referred to as the E: drive. If the DVD-ROM drive is assigned to a different drive name, take the E: drive to mean that drive name.
- To start the uninstallation manually, select [Run] from the [Start] menu. Enter E:\Windows\Setup.exe, and click the [OK] button. The Splash window appears. Upon completing preparations, the Welcome screen appears.
- If Network Manager has been installed on the server you're installing on, stop the following services before the uninstallation and then start them after the uninstallation as necessary.
 - NvPRO ResourceManagerAPI Service
 - NvPRO DataCollect Manager
 - NvPRO Base Manager
 - MasterScope UMF Operations Manager_ *n* *1

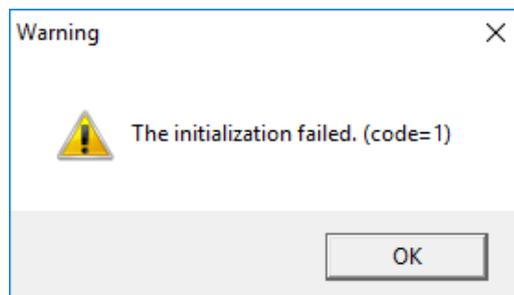
*1 *n* is 1 or larger numbers (This number will increase as a product for UMF is installed).

Also if you're using sFlow function of Network Manager, confirm that NvPROSFlowCmd.exe process is not running and start the uninstallation after NvPROSFlowCmd.exe process has been terminated.
- If SystemManager G or MISSION CRITICAL OPERATIONS has been installed on the server to uninstall and you're using CDO message API, stop the following services before the uninstallation and then start them after the uninstallation as necessary.
 - MasterScope MISSION CRITICAL OPERATIONS CDO

5.4. Starting Uninstallation

Insert the MasterScope Media DVD-ROM into the DVD-ROM drive, start Windows Explorer, and double-click E:\Windows\Setup.exe. The splash window and then the setup start window are displayed.

The following error dialog, not the splash window, may appear after you click [Install]. For details, please see "7 Troubleshooting."



Error code	Description	Solution
1	Deletion or creation of the temporary folder for the MasterScope Media Installer failed.	Please check the status (capacity, authority, and busy) of the temporary folder (environment variable %TMP% or %TEMP%).
10	Allocation of the memory failed.	Please check the memory capacity as well as other high-loading program and try again.
14, 16	Read of the product media information failed.	Please check that the media you are using is correct.
15	Other initialization error	Please check whether or not you moved or deleted any system file of the installed MasterScope framework product by mistake.

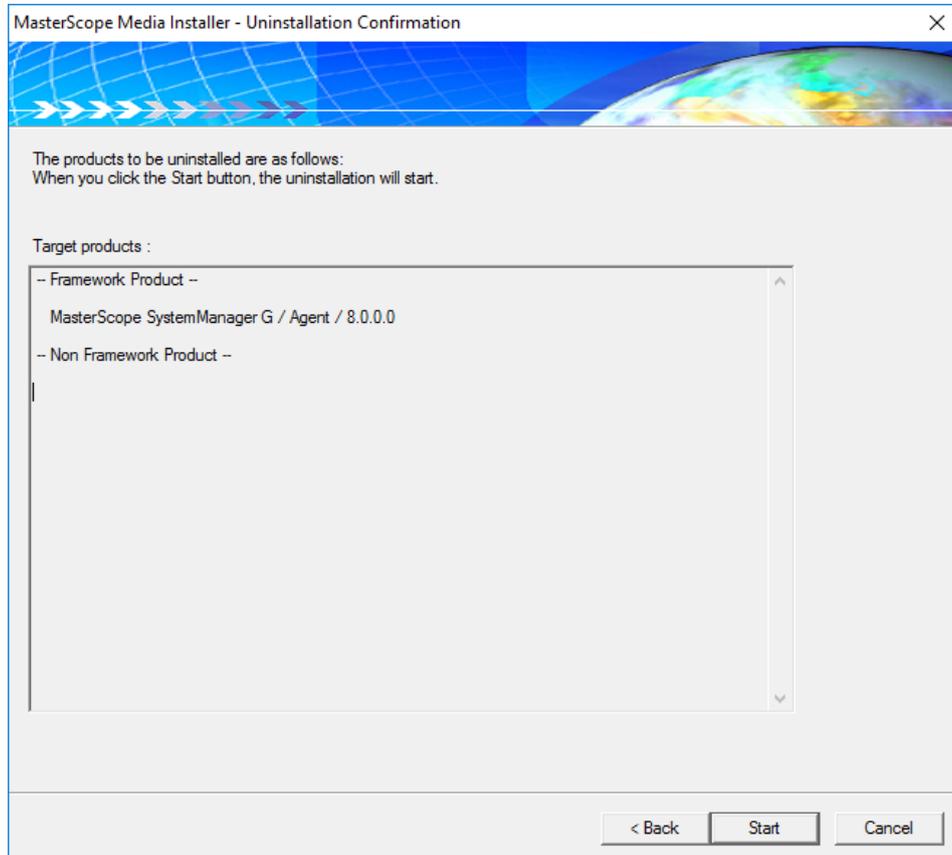
5.5. Welcome Screen (Selecting Install or Uninstall)

When the Welcome screen appears, select [Uninstall] and click the [Next] button.

If there is no product that can be uninstalled with the MasterScope Media Installer, the [Uninstall] button cannot be selected.

5.7. Confirmation Window

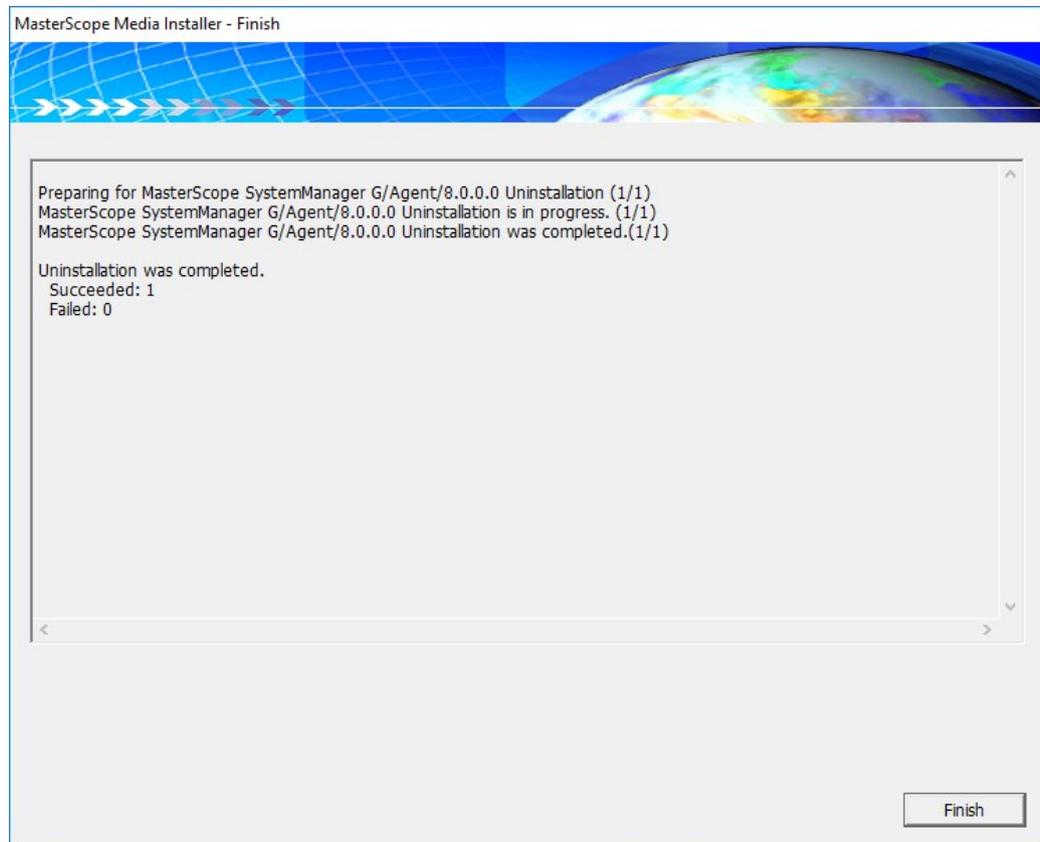
When the name of the product to be uninstalled appears, check it and click the [Start] button. The uninstallation of the selected products starts.



Once the uninstallation starts, you cannot abort it.

5.7.1. Uninstallation Completed Window

The uninstallation progress status window appears during the uninstallation. When the uninstallation completes normally, the Finish window appears. Click the [Finish] button to end the installation.



For some installed products, prompt you to reboot your computer. In such a case, click the [OK] button and reboot your computer manually.

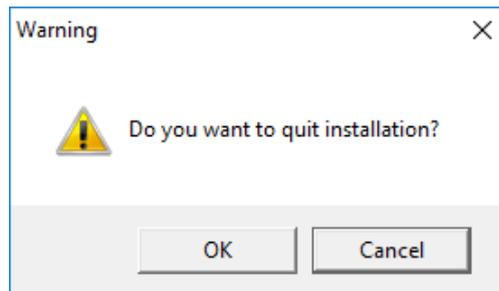
Now, the uninstallation completed.

5.7.2. Cancelling the Uninstallation

When you click the [Cancel] button or the [x] button on the wizard, the cancel confirmation window shown below appears.

When you click the [OK] button, the uninstallation will be aborted.

When you click the [Cancel] button, the previous window will return.



5.8. Uninstallation of Products (UNIX)

The following table shows the uninstallation procedure with the MasterScope Media Installer. Please make sure to refer to the release notes of each product.

1.	Start uninstallation ↓
2.	Select the products to uninstall ↓
3.	Confirmation window ↓
	(Uninstall the selected products) ↓
4.	Uninstallation Completed window

5.9. Items to Be Checked

- Don't perform an uninstallation by **rpm**, **pkgrm**, **swremove** commands. If you have performed the operation, refer to [7Troubleshooting] and perform a recovery.
- Perform the uninstallation as a root user.
- Don't execute any command provided by this product during uninstallation.
- The Software indicated on "4.7.1 Items to Be Checked" is needed to perform the installer of this media. Refer to the documents of each product regarding to other system requirements.

- If SystemManager G or MISSION CRITICAL OPERATIONS has been installed on the server to uninstall and you're using CDO message API, stop the following daemon before the uninstallation and then start them after the uninstallation as necessary.

<<Linux>>

/etc/rc.d/init.d/UMFMCOperationsCDO stop

<<HP-UX(IPF)>>

/sbin/init.d/UMFMCOperationsCDO stop

<<Solaris>>

/etc/init.d/UMFMCOperationsCDO stop

- When uninstalling a product, the target machine does not check whether it has sufficient free disk capacity required to execute the process. Confirm whether the installation machine has sufficient free disk capacity before starting the uninstallation. As the uninstallation process makes a backup of existing files, the machine needs to have the same amount of free disk space as that under the installation directory.
- About 200MB free capacity is required at the /tmp directory at uninstallation time.
- If the /tmp directory does not have sufficient capacity, specify the path to an appropriate directory in the environmental variable FW_TEMP to use it as the temporary directory for the /temp directory when uninstalling the product. Note that the notes when using the environmental variable FW_TEMP are as follows:
 - As the directory specified in the environmental variable FW_TEMP must have been created before, it is advisable to specify an existing directory for it.
 - For the directory you want to specify in FW_TEMP, specify the absolute path to it.
-
- The following explanation assumes that the DVD-ROM drive is mounted to /SD_CDROM. If you assign a different drive name to your DVD-ROM drive, reread the explanation where appropriate.
- Set the character code set of the terminal console to UTF-8.

5.10. Starting Uninstallation

Run `/[DVD-ROM] root path]/[OS type]/Setup`.

When the installer is started, the following screen appears. If there is any product which can be uninstalled from this installer, `[2. uninstall]` is displayed in the menu.

If the screen is improperly displayed, restart the installer after setting the environment variable `TERM` to `vt100`.

(Example) B shell, or POSIX shell : `export TERM=vt100`
C shell : `setenv TERM vt100`

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

This program can install/uninstall products.

1. Install
2. Uninstall

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

Put the following key and hit `[Enter]` depending on your purpose.

1 : Proceed to select a product to uninstall.
q : Quit the installer.

5.11. Selecting the Products to Uninstall

A list of Installation Configuration is displayed.

You can see more products which cannot displayed in the size by upper or down arrow key.

```
-----  
Installed products  
-----  
Agent  
  1 Service1  
    1.1 MasterScope SystemManager G Agent 8.0.0.0,  
  2 Service2  
Manager  
  3 Service1  
    3.1 MasterScope SystemManager G Manager 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):
```

Put the following key and hit [Enter] depending on your purpose.

Number : Select the number of service or product to uninstall. Two or more numbers separated by comma can be selected.

vx(Service number) : Display the specified service settings.

b : Back to the previous screen.

q : Quit the installer.

5.12. Confirmation of Uninstallation

Confirm the products to uninstall.

You can see more products which cannot displayed in the size by upper or down arrow key.

```
-----  
These products will be uninstalled  
-----  
Agent  
  2 Service  
    2.1 MasterScope SystemManager G Agent 8.0.0.0  
  
-----  
Is it OK to start uninstallation?  
(y:yes n:no q:quit program):
```

Put the following key and hit [Enter] depending on your purpose.

- y : Start the uninstallation.
- n : Back to the product selection.
- q : Quit the installer.

You cannot cancel the uninstallation after it has been started.

5.13. Uninstallation Completed Screen

The uninstallation status of the selected products is displayed.

```
MasterScope MasterScope SystemManager G Agent 8.0.0.0 Preparing for Uninstallation (1/1)
MasterScope MasterScope SystemManager G Agent 8.0.0.0 Uninstallation in progress (1/1)
***** Uninstall begins. *****

      : (skip)

***** Uninstall was ended.*****
MasterScope SystemManager G Agent 8.0.0.0 was successfully uninstalled (1/1)

-----
Uninstallation result
-----
1 MasterScope SystemManager G Agent 8.0.0.0 (Success)
-----

Success:1, Failure:0
```

Here, the uninstallation has been completed.

6. Version Upgrade

6.1. How to Version-Upgrade a Product

This chapter explains the version upgrade process using MasterScope Media.

Version-upgrading MasterScope Media products are achieved through overwrite installation. The overwrite installation steps are exactly the same as those for normal installation. For details, refer to “4 Installation”

When version-upgrading a product, the section where you select the product you will install (Windows: “4.2 Installation of Products (Windows)” and UNIX: “4.7 Installation of Products (UNIX)”) displays in the installation status the versions of products that have been installed at the point in time

When upgrading, be sure to upgrade the manager and console.

The system cannot be used when only the agent is upgraded. The previous version of the agent can be managed by the new version of the manager, however, the available functions are limited to the previous version. It is recommended to upgrade the agent as well.

6.2. Cautions when using Configuration Management Database (CMDB)

After updating this product, be sure to update the database. For the database update procedure, refer to “Configuration Management Database (CMDB) Release Notes”.

The system might not operate normally if the database is not updated.

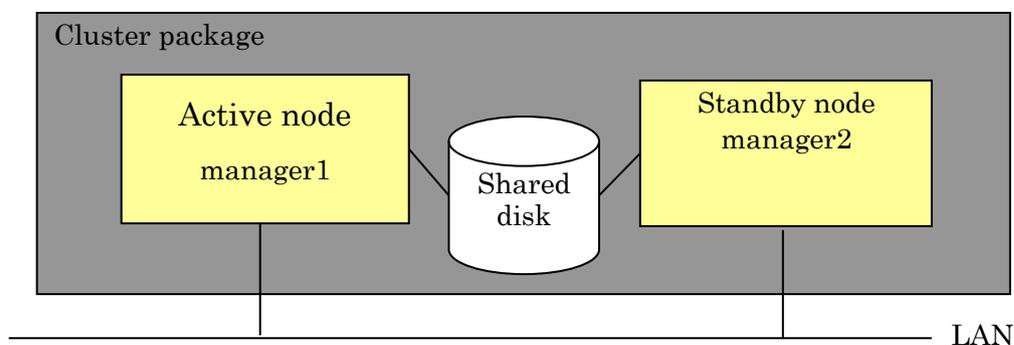
7. Rolling Update

7.1. Rolling Update

This section describes rolling update.

Rolling update is a method of upgrading the cluster configuration. The standby node is upgraded while the cluster package is working. The cluster package is moved to the standby node after the completion of the upgrade. The shared disk is updated at service startup in the original standby node that has switched to the active node.

Automation of the shared disk update allows upgrade with the minimum stop of the cluster package.



When performing rolling update, select only the products supporting rolling update as the targets of upgrade. The [Update the Data Directory at startup] setting is enabled only if all the products to be upgraded simultaneously support rolling update.

[Update the Data Directory at startup] cannot be specified if there are some products other than the products supporting rolling update. Normal upgrade is performed, and rolling update of the data area of the shared disk cannot be performed.

The products supporting rolling update are as follows.

Other products included in MasterScope Media are to be added in the future.

- MasterScope SystemManager G Manager

If it can access the shared disk, it is regarded as the active node and normal upgrade is performed. The [Update the Data Directory at startup] setting is enabled only in the standby node.

7.2. Preparation before Rolling Update

Downtime can be shortened by updating the database before rolling update. For the database update procedure, see "Configuration Management Database (CMDB) Release Memo".

7.3. Rolling Update Procedure

The procedure for rolling update is as shown below.

	Active node (manager1)	Standby node (manager2)
	Package in operation	
1.	↓	Local data backup (*3) ↓
2.	↓	Upgrade installation ([Update the Data Directory at startup] setting) ↓
3.	Shared disk (before upgrade) backup (*2) ↓	↓
4.	Package stopped ↓	↓
5.	↓	Package started ↓
	↓	(Upgrade of the data area of the shared disk)
6.	Local data backup (*3) ↓	↓
7.	Upgrade installation ↓	↓
8.	↓	Shared disk (after upgrade) backup (*2) ↓
9.	↓	Package stopped ↓
10.	Package started ↓	↓
	Upgrade completed	Upgrade completed

(*1) Cells with gray background indicate that the node is stopped.

(*2) To back up the shared disk of the operating manager, the backup command must be executed.

Execute the following command:

When executing the command in the UNIX environment, add <Install Directory of the Manager Function> to the environment variable LD_LIBRARY_PATH in advance.

Windows:

<Install Directory of the Manager Function>\bin\SysMonMgr.exe -backup -S

UNIX:

<Install Directory of the Manager Function>/bin/SysMonMgr -backup -S

(*3) To back up the local data of the stopped manager, manual backup is required. Copy the following directory to any location.

<Install Directory of the Manager Function>\sg

7.3.1. Installation setting (Windows)

In an environment where rolling update is allowed, the [Update the Data Directory at startup] item can be edited on the "Product Installation Settings" screen.

Step 2. Select [Yes] for upgrade installation of the standby node.

Step 7. Select [No] for upgrade installation of the active node.

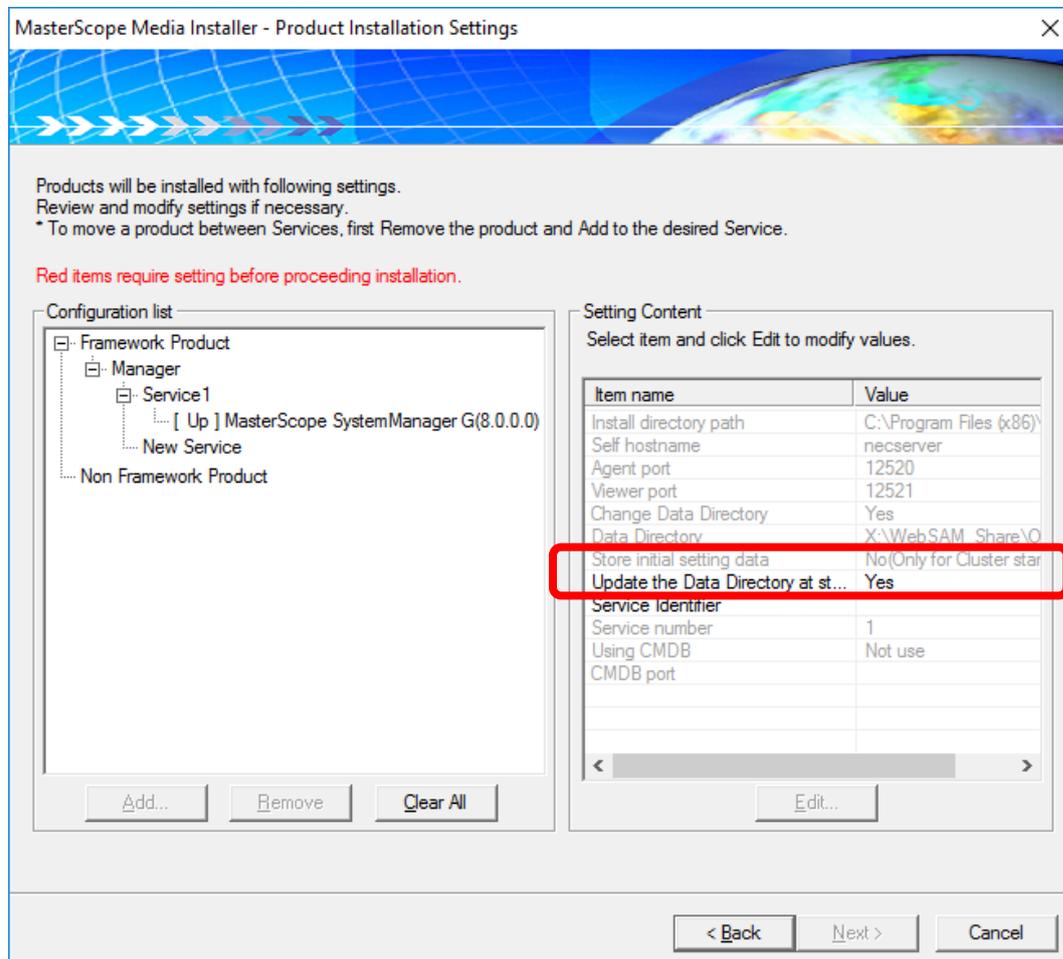


Figure 7-1 [Product Installation Settings] screen (rolling update)

7.3.2. Installation setting (UNIX)

In an environment where rolling update is allowed, the setting screen for the [Update the Data Directory at startup] item is displayed.

Step 2. Select [Yes] for upgrade installation of the standby node.

Step 7. Select [No] for upgrade installation of the active node.

```

-----
Installation settings
-----
Update the Data Directory at startup

(default:y y:yes n:no b:back q:quit program): y

```

When all the setting items have been input, the settings are displayed.

```

-----
Confirmation
-----
Install directory path: /opt/UMF/Operations
Self hostname: necmanager
Agent port: 12520
Viewer port: 12521
Change Data Directory: Yes
Data Directory: /WebSAM_Share/Operations
Store initial setting data: No
Update the Data Directory at startup: Yes
Service Identifier:
Service number: 1
Using CMDB: Use bundled DB
CMDB port: 12630

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

```

7.4. Recovery Procedure in Case of Failure of Rolling Update

7.4.1. If operation after upgrade of the standby system fails

If the service cannot be started in "Step 6. Starting the package of the standby node", restore both nodes to the original states by the appropriate method according to the end code of the shared disk update command.

[Checking the return value of the shared disk update command]

The value of ExitCode at the end of the log file of the shared disk update command (RupInstCmd) indicates the end code. The path of the shared disk update command log file is as follows.

- <Manager Installation Path>/Manager/log/RupInstCmd.log

■ End code of 1 to 127

The shared disk update command terminated abnormally and the recovery process succeeded. Restart the monitoring operation in the active node (manager1).

1. Restarting the monitoring operation in the active system

Start the cluster package in the active node (manager1) to start the monitoring operation before the upgrade.

■ Other end code

An end code of 128 or higher indicates that the shared disk update command terminated abnormally and the subsequent recovery process failed. The end code of 0 indicates that the new version cannot start after the update of the shared disk. Restore the shared disk, start the cluster package in the active node (manager1), and start the monitoring operation before the upgrade.

1. Restoring the shared disk

Check that the shared disk is connected, and restore the data of the shared disk that was saved in "Step 4. Shared disk (before upgrade) backup".

To restore the shared disk, execute the following command.

When executing the command in the UNIX environment, add <Install Directory of the Manager Function> to the environment variable LD_LIBRARY_PATH in advance.

Windows:

```
<Install Directory of the Manager Function>\bin\SysMonMgr.exe -restore -S -latest
```

UNIX:

```
<Install Directory of the Manager Function>/bin/SysMonMgr -restore -S -latest
```

If the products in the same core use the database, the database must be restored. For the database restore procedure, see "Configuration Management Database (CMDB) Release Memo".

If the packaged internal database is used, no additional process is required because the data area of the shared disk contains the data of the database.

2. Restarting the monitoring operation in the active system

Start the cluster package in the active node (manager1) to start the monitoring operation before the upgrade.

3. Restoring the standby system

Restore the standby node (manager2) to the state before the upgrade.

Isolate the shared disk, and restore the data saved in "Step 1. Backing up local data" to the following directory.

```
<Install Directory of the Manager Function>\sg
```

8. Troubleshooting

8.1. Debug Information Collecting Tool

To assist maintenance of MasterScope Media products, you collect primary information necessary for failure analysis. Copy the following tool in the MasterScope Media and use it with referring to the release notes. Change the DVD-ROM drive or mount point according to your environment.

- Windows (DVD-ROM drive is referred as E drive)
E:\tools\dawebsaminfo\Windows\dawebsaminfo.bat
- UNIX (DVD-ROM mount point is referred as /SD_CDRROM)
/SD_CDRROM/tools/dawebsaminfo/UNIX/dawebsaminfo.sh

8.2. The Installer of this Media

8.2.1. Uninstallation

- 1) Method of recovery after performing an uninstallation by **rpm**, **pkgm** or **swremove** command
- 2) You need to uninstall the products by the installer of this media or **fwuninstall** command. If package information registered to OS is removed by **rpm**, **pkgm** or **swremove** command, perform the following procedure to delete installed files.

- a) Move to the following directory.

```
# cd /etc/FW_Registry/HKEY_LOCAL_MACHINE/SOFTWARE/NEC/Uninstall/<product
packagename>>
```

- b) Refer to .dt file under the directory.
The following is an example of NECUMFBASEmg when it has been installed to the default directory (/opt/UMF/FWBASE).

```
1
2 [DisplayName]
3 Type=1
4 Data=NECUMFBASEmg
5
6 [UninstallString]
7 Type=1
8 Data=/opt/UMF/FWBASE/Manager/common/Uninstall/runProductUninst.sh
SOFTWARE/NEC/Uninstall/NECUMFBASEmg
```

c) Execute the line specified by [UninstallString] tag and Data=.

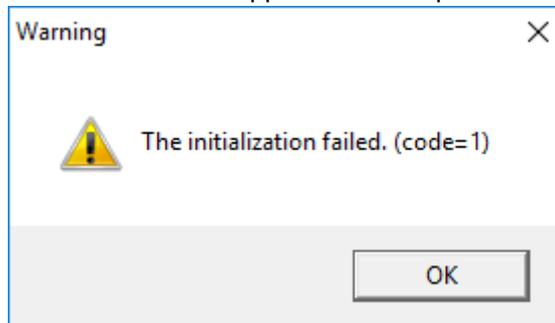
```
# /opt/UMF/FWBASE/Manager/common/Uninstall/runProductUninst. sh
SOFTWARE/NEC/Uninstall/NECUMFBASEmg
```

If the command above is successfully executed, then the file deletion has been completed.

8.2.2. FAQ

This section describes solutions for problems that occur when you are using the MasterScope Media Installer for installation/uninstallation.

(Q.1) What should I do when an error code appears at startup?



```
$ ./Setup
```

You should start the installer by "root user".

(A.1) Please follow the solutions described in the following table:

Windows

Error code	Description	Solution
1	Deletion or creation of the temporary folder for the MasterScope Media Installer failed. (*1)	Please check the status (capacity, authority, and busy) of the install directory and temporary folder (environment variable %TMP% or %TEMP%).
10	Allocation of the memory failed.	Please check the memory capacity as well as other high-loading program and try again.
14, 16	Read of the product media information failed.	Please check that the media you are using is correct.
15	Other initialization error	Please check whether or not you moved or deleted any system file of the installed MasterScope framework product by mistake.

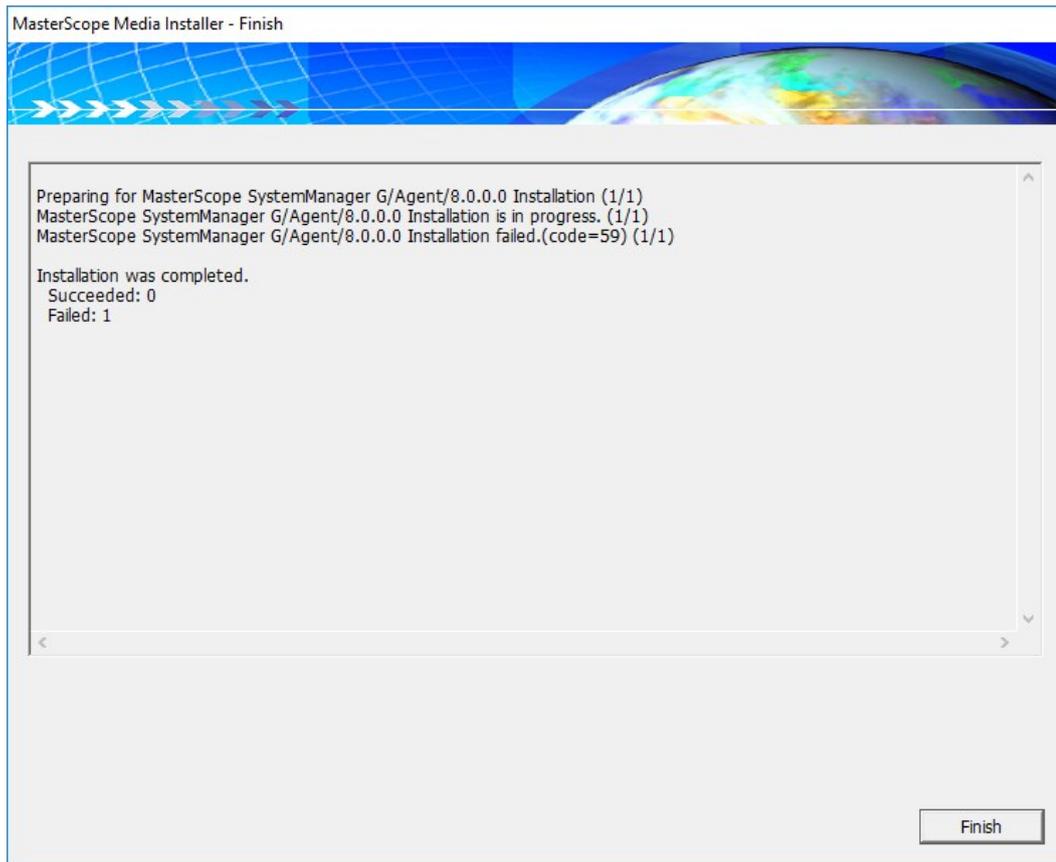
(*1) If there is no problem in the install directory or temporary directory of the product, there may be a problem in management of the registries and product services managed by the product. Contact the customer service.

UNIX

Error code or message	Description	Solution
You should start the installer by "root user".	You don't have sufficient privilege.	Execute it as root user.
Temporary File Create error. Directory EXISTS.	Cannot create temporary directory because there exists a directory of the same name as the temporary directory.	Delete the directory /tmp/WfmiDummy.txt
Temporary File Open error.	Failed to create a temporary file which the installer of this media uses.	Check the status (authority, busy) of the temporary file (/tmp/WfmiDummy.txt)
This Installer is already running.	The installer of this media is already running.	Run the installer after the current installer's process has been terminated.
1	Failed to delete or create a temporary folder for installer of this media. (*1)	Check the state (capacity, authority, and busy) of the install directory and temporary directory (/tmp or environment variable FW_TEMP) of the product.
-1	Failed to read information of the media or to allocate memory or other initialization failure.	Check whether the used media is correct or other high-loading program is not running or accidentally move/delete the system files of installed MasterScope Framework products.

(*1) If there is no problem in the install directory or temporary directory of the product, there may be a problem in the product management state. Contact the customer service.

(Q. 2) What action should I take if the following error occurs during installation?



```

MasterScope MasterScope SystemManager G Agent 8.0.0.0 Preparing for Installation (1/1)
MasterScope MasterScope SystemManager G Agent 8.0.0.0 Installation in progress (1/1)
MasterScope MasterScope SystemManager G Agent 8.0.0.0 failed to be installed. (code=57)
(1/1)

-----

Installation result

-----

1 MasterScope SystemManager G Agent 8.0.0.0 (Failure)

-----

Success:0, Failure:1

```

(A. 2) Check the error code (code=XX) displayed in the dialog box by referring to the table shown below, and then take the appropriate action.

Error code	Description	Action
50	Internal error	A fatal error occurred during installation.Contact your customer service representative.

51	No administrator authority	The user executing the operation does not have administrator authority. Execute as a user with administrator authority.
52	Double execution error	Two installers have been started. Check that another installation is not being executed.
53	Parameter error	The specified parameter is invalid. Contact your customer service representative.
54	Startup recovery failed	Recovery on startup failed. Contact your customer service representative.
55	Temporary directory access error	Cannot access the temporary directory (Windows: Environment variable %TMP% or %TEMP%, UNIX: /tmp or the environmental variable FW_TEMP). Check if the temporary directory exists and can be written.
56	Installation destination directory access error	Cannot access the installation destination directory. Check if the installation destination directory can be written.
57	File extraction failed	Extracting the file failed. Check the following items. - Temporary directory (Windows: Environment variable %TMP% or %TEMP%, UNIX: /tmp or the environmental variable FW_TEMP) has enough free space. - Required software described in "4.7.1 Confirmation items" is installed.
58	Copying VC7 runtime library failed (Windows only)	Copying the VC7 runtime library failed. Contact your customer service representative.
59	Invalid installation destination path	The installation destination path is invalid. Check if the correct drive and directory are specified.
60	No patch application target products	The patch application target product and version is not installed. Check the product installation status.
61	Product downgrade error	A newer version of this product is already installed. Check the product installation status.
63	Service stop error	Stopping the service failed. Try again later or stop the service manually as described in (A. 3) of FAQ.
64	Registering the product package failed (UNIX only)	Registering the product package failed. Check if the required software described in "4.7.1 Confirmation items" is installed.
65	Copying the file to the installation destination failed (File busy)	The file in the installation directory is in the busy status. Try again later or stop the service manually as described in (A. 3) of FAQ.
66	Copying the file to the temporary directory failed (Disk full)	The temporary directory (Windows: Environment variable %TMP% or %TEMP%, UNIX: /tmp or the environmental variable FW_TEMP) is full. Check if the temporary directory has enough free space.

67	Copying the file to the installation destination failed (Disk full)	The installation destination directory is full. Check if the installation destination directory has enough free space.
68	Copying the file to the temporary directory failed	The temporary directory (Windows: Environment variable %TMP% or %TEMP%, UNIX: /tmp or the environmental variable FW_TEMP) is full, or cannot be accessed. Check if the temporary directory exists and can be written.
69	Copying the file to the installation destination failed	The installation destination directory is full, or cannot be accessed. Check if the installation destination directory can be written.
70	The specified function type does not exist	The function type specified by the parameter does not exist. Contact your customer service representative.

(Q. 3) What I should do when the installation/uninstallation failed.

(A. 3) If you install/uninstall products during utilization of a service or initialization, an error occurs in stopping the service or copy of files and the installation/uninstallation may fail. Stop the service and try the installation/uninstallation again. For information on the related services, refer to [4.1.1.3Default Values for Each Product]”.

<<Windows>>

Manager/Agent:

Stop the service on Control Panale → Administration Tool → Services

Console:

Kill SysMonSvc.exe process on the task manager.

<<Linux>>

root>/etc/init.d/UMFxxxx__*identifier*_n stop

<<HP-UX(IPF)>>

root>/sbin/init.d/UMFxxxx__*identifier*_n stop

<<Solaris>>

root>/etc/init.d/UMFxxxx--*identifier*_n stop

<<AIX>>

root>/etc/rc.d/init.d/UMFxxxx__*identifier*_n stop

(Note1) UMFxxxx__*identifier*_n is rc script name. *_Identifier* (*-identifier* in Solaris) is added when an identifier has been defined. Adding an identifier to an existing service is not reflected to service name and rc file name.

n is a service number and a numeric value greater than or equal to 1. The service number can be specified during installation. If this item is omitted, a value to which “1” is added is specified automatically on each installation of UMF related products. Note that the same service name and file name are used when the installation destination is the same.

(Note 2) For HP-UX, the installation may fail even if the service is stopped.

In this case, execute the “ps -ef | grep iNvLogToCsvResident” command, stop the process using “kill -9 xxx:Process ID” if the iNvLogToCsvResident process exists, and then perform the installation/uninstallation again.

If the installation fails even after performing the procedures above, install and uninstall an agent function, and then perform the procedures above again.

(Q. 4) What should I do if the following message is displayed during uninstallation?

<installation folder name> is not recognized as an internal or external command, an executable program, or a batch file.
The specified path was not found.

(A. 4) If the installation destination folder name contains “&”, “^”, “(”, “.”, or “=”, the message above is displayed and uninstallation may fail. Uninstall as described in “8.2.1 Uninstallation”.

8.3. Notes

8.3.1. Executing commands on the UNIX manager

(1) To execute the commands included in the product on the UNIX manager, the following preparation is required.

- Specifying the library path
 - Add the following to the environment variable LD_LIBRARY_PATH.
 - <manager installation path>/Manager/bin
 - When the default installation path is used, the path is as follows:
 - /opt/UMF/Operations/Manager/bin
- Specifying the locale
 - Specify UTF-8 for the execution environment locale.
- Specifying the path for execution
 - The commands included in the product must be executed by using an absolute path unless otherwise instructed. The commands cannot be executed by using a relative path.

8.3.2. Cautions when using a 64-bit Windows environment

When installing the following products in a 64-bit Windows environment, the runtime components of the Visual C++ 2010 library need to be installed in advance.

Product name	Function name
MasterScope SystemManager G	Manager function (*1)
	IA external engine function
MasterScope Invariant Analyzer	Manager function
	External engine function

(*1) Only required when the performance analysis function of the MasterScope SystemManager G Invariant Analyzer Option (sold separately) is used.

Obtain and install the “Microsoft Visual C++ 2010 Redistributable Package (x64)” from the Microsoft website or from the following location on the MasterScope Media DVD-ROM.

(When the DVD-ROM drive is E drive)

E:\tools\Microsoft\2010\vc_redist_x64\vc_redist_x64.exe

8.3.3. Cautions when specifying the installation of the bundled DB

When installing MasterScope Media by specifying [Use bundled DB], the installation destination of the included DB is the same as the folder specified for [Install directory path] of the product.

When [Change Data Directory] is specified, the data area for the included DB is also the same as the folder specified for [Data Directory]

For notes based on each environment, see below.

8.3.3.1. Cautions when using the bundled DB on the Windows

When installing MasterScope Media by specifying [Use bundled DB], the runtime components of the Visual C++ 2005 library need to be installed on the operating system of the installation destination.

The license agreement dialog box for the runtime components of the Visual C++ 2005 library is displayed during installation. Read the contents, and then click the [Yes] button to agree. The dialog boxes are displayed automatically and no further operations are required. (The dialog boxes also close automatically.)

The runtime components of the Visual C++ 2005 library will not be installed if the [No] button is clicked. Note that installation of the product may fail in this case.

When installing in a cluster environment by specifying [Use bundled DB], the user executing the installation must have full access authority for the data area and folders on the shared disk.

When using the included DB, the following messages may be displayed in the Windows event viewer.

Message examples:

A description related to the event ID (0) (in the source PostgreSQL) was not found.

The registry information or message DLL file required to display a message from a remote computer may not exist on the local computer.

The included DB operates normally even if the messages above are displayed.

To prevent the messages above from being displayed, execute the following BAT file on the manager.

<installation folder>\Manager\sql\postgres\WfdbRegPgsqlInfo.bat

The registry items for the included DB used in the event viewer are generated by executing the BAT file above.

To delete the generated registry items, execute the following BAT file on the manager.

<installation folder>\Manager\sql\postgres\WfdbUnRegPgsqlInfo.bat

If a folder that general users cannot access, such as C:\Windows\TEMP, is specified for the environment variables TEMP and TMP, the database included on the MasterScope Media cannot be installed.

In this case, create a folder that general users can access, such as C:\Work\TEMP, and then temporarily specify the created folder for the environment variables TEMP and TMP from the command prompt. Then start the installer from the command prompt to install the included database.

8.3.4. Notes when the SysMonMgr.ini was changed

When you changed the [ServiceModule] section in the SysMonMgr.ini file by following the steps described in the information such as release memos for each product in order to use the option function or for other purposes, and you install or uninstall or version-upgrade a production in the same environment, you must restore the [ServiceModule] section and perform installation or uninstallation or version upgrading, and after that you must change SysMonMgr.ini from all over again.

8.3.5. Notes when an old version of this product is installed for the same service

If an old version of this product has already been installed for the same service, the product may not operate normally after a new version is installed.

8.3.6. Notes when adding a product in cluster environment

When adding a product to the same core as a manager of a cluster configuration from later, a shared disk be in the state by which a mount isn't done by stand by system, and please install.

8.4. Restrictions

8.4.1. Restrictions on the installation path

The installation path must be specified by using single-byte alphanumeric characters of the length shown in the table below.

If a character string longer than the following values is specified, the product operation does not support.

Windows	90 characters
HP-UX(IPF)	55 characters (*1)
Solaris	59 characters
Linux	74 characters

(*1) When "DEFAULT_CMD_LIMIT_WIDTH" in /etc/default/ps file is below 80, please specify install path below [DEFAULT_CMD_LIMIT_WIDTH - 26] characters.

8.4.2. Time zone specification

A time zone listed in "3 Operating Environment", "Table 3-2 Supported timezone" must be specified as the time zone of the manager machine and console machine.

Operation is not supported if any time zone that does not exist in the list is specified. (Problems related to date/time display may occur such as no date/time displayed in the alert list of NetvisorPro V.)

Check the time zone of each machine as described below.

Windows	Right-click the date and time at the lower right corner of the desktop, and select [Adjust date/time]. Check the [Time zone] on the [Date and Time] tab on the [Date and Time] screen.
HP-UX (IPF)	Check the following file. - File name /etc/TIMEZONE - Key TZ
Linux	<p>Check the following file.</p> <ul style="list-style-type: none"> - File name /etc/sysconfig/clock - Key ZONE or TIMEZONE <p>For RHEL 7.1 or later, check the time zone by using the timedatectl command. Check the time zone displayed for Timezone: (Etc/GMT in the following command execution example).</p> <pre style="border: 1px solid black; padding: 5px;"># timedatectl status Local time: Tue 2015-09-08 04:59:35 GMT Universal time: Tue 2015-09-08 04:59:35 UTC RTC time: Tue 2015-09-08 04:59:35 Timezone: Etc/GMT (GMT, +0000) NTP enabled: yes NTP synchronized: no RTC in local TZ: no DST active: n/a</pre>

8.4.3. Failure of service startup after uninstallation of other product in the Windows environment

After a product other than included in this media is uninstalled in the Windows environment, a service that has been installed with this media may not be able to be started.

Arrange the files under the following directories in MasterScope Media, and start the service.

Replace the DVD-ROM drive and mount point accordingly.

Copy source (when the DVD-ROM drive is E drive):

E:\Windows\Product\UMF\SYSTEM

Copy destination:

32-bit OS: %SystemDrive%\Windows\System32

64-bit OS: %SystemDrive%\Windows\SysWOW64

8.4.4. Action to take when the manager or agent process is forcibly stopped in RHEL 7.1 or later

When the manager process SysMonMgr or agent process SysMonAgt is forcibly stopped (by a kill command or a program abort), the manager or agent will fail to start up next time.

If this event occurs, run the following stop scripts, and then start the service again.

Manager:

```
/etc/rc.d/init.d/UMFOperationsManager__<identifier>_n stop
```

Agent:

```
/etc/rc.d/init.d/UMFOperationsAgent__<identifier>_n stop
```

Note 1: __<identifier> is displayed if an identifier was specified. However, if an identifier was added to an existing service, the identifier is not applied to the service name and rc file name. n indicates a service number of 1 or higher. The service number (Service number) can be specified when installing this product. If omitted, a service number is automatically set each time the UMF product is installed, incremented by one each time. However, if the products are installed in the same folder, the service and file names are also the same.