

MasterScope SystemManager G Version 8.0
Manager (Windows Version)
Duplication Setup Guide
(ExpressCluster X Edition)

July 2018

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Chapter 1 Preface

This document provides an example procedure for using ExpressCluster X to set up a cluster configuration that has two nodes (for duplication). ExpressCluster X is an NEC product that can be used to switch running processes between nodes in a duplicated system.

In this document, a host system included in a cluster is referred to as a node.

Supplemental information

Upgrading an OS

If the incorrect procedure is used to upgrade the OS on a cluster server, failovers might occur at unexpected times. In the worst case, this might damage the system.

Only upgrade the OS in accordance with the procedure on the setup card.

This also applies when applying a service pack.

Application range

This document describes ExpressCluster X 1.0 for Windows.

Chapter 2 Configuration Procedure

This chapter provides a procedure for configuring a MasterScope SystemManager G cluster environment.

2.1 Setting up ExpressCluster X

Perform installation and create cluster configuration information in accordance with "Section II Installing and configuring EXPRESSCLUSTER X" of "EXPRESSCLUSTER X Installation and Configuration Guide," and then start the cluster.

The additional settings and points to note for SystemManager G regarding the creation of cluster configuration information are as follows.

Notes

* When the cluster is to be built in a shared disk environment under Windows, perform filtering on shared disks before the installation of EXPRESSCLUSTER.

- Creating failover groups
- After the completion of the setup and registration of the failover groups, start the cluster in accordance with "Saving the cluster configuration data" and "Creating a cluster" in Chapter 5 of Section II of "EXPRESSCLUSTER X Installation and Configuration Guide".

After the cluster has been started, confirm from the "operation mode" or "reference mode" that the failover groups have started. The start is successful when the status of each resource is [Normal].

In the following, Figure 1 shows the state in which failover groups have started normally while two resources, namely, a "floating IP resource (fip)" and a "disk resource (sd)", have successfully started.

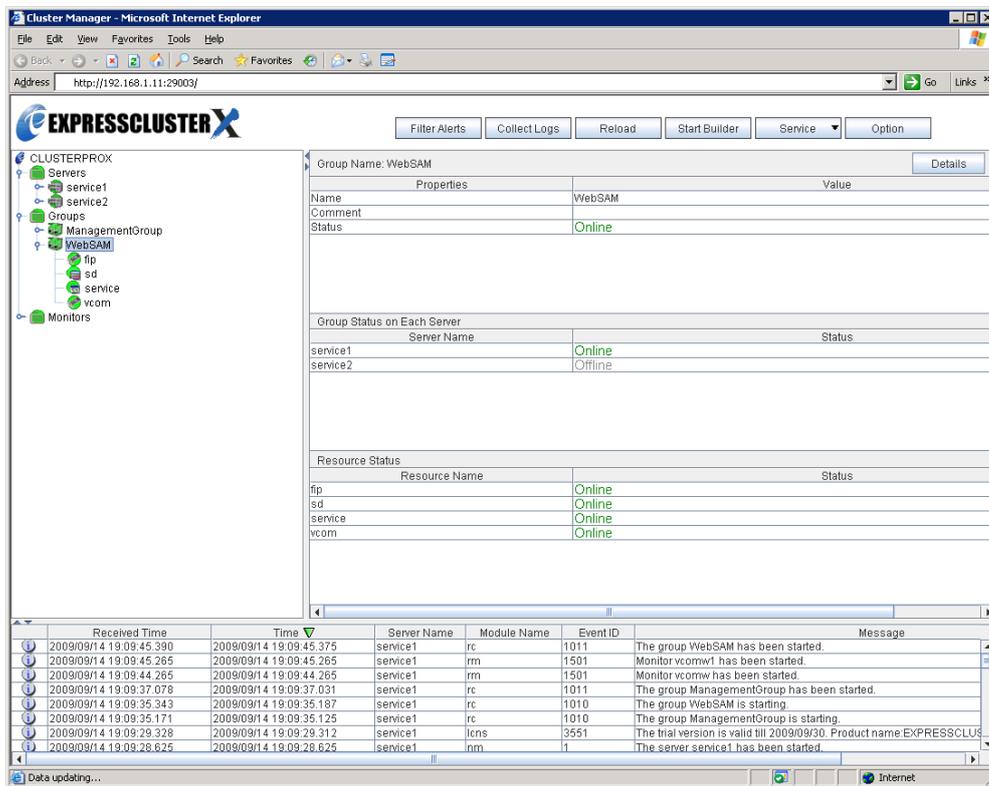


Figure 2-1 Cluster Manager

2.2 Installing MasterScope SystemManager G

Install the MasterScope SystemManager G manager on the Windows computers that configure the cluster.

For details about how to do so, see the *Release Notes* supplied with the product.

The following describes notes for installing MasterScope SystemManager G on a cluster environment.

Notes

- * Install MasterScope SystemManager G on the active server first, and then on the standby server.
- * It must be possible to reference the shared disk when installing the active server manager.
- * Use the same drive and folder as the installation destination for MasterScope SystemManager G manager on the active and standby servers.
- * Virtual host name(vhost1) is a host name that can be resolved to a floating IP address (192.168.1.10).
- * For notes on setting up the CDO message reporting API, see 10.1 Notes on Duplicated Environment in MasterScope SystemManager G Release Memo - CDO Message API Edition -.

The following describes the procedure for installing the MasterScope SystemManager G manager.

1. First, start up the cluster from the active node, and then install MasterScope SystemManager G manager on the active node.

In the installation settings window, specify the following settings.

Enter the same value for "Service number" on the active node and the standby node.

Setting	Value	Remark
Installation folder	C:\Program Files\NEC\UMF\Operations	Local disk path
Local host name (optional)	vhost1	Virtual host name
Port for communication with agents	12520	
Port for communication with the monitoring terminal	12521	

Make the data area separate	Yes	
Data area folder	Y:\MasterScope_Share\MCO	Shared disk path
Install initial data	Yes	

\Manager\sg is automatically added to the data area folder, and settings that must be shared are stored here.

After installation finishes, confirm that \Manager\sg has been created in the data area folder.

Next, set up the MasterScope SystemManager G manager on the standby node.

2. In the installation settings window, specify the following settings.

Enter the same value for "Service number" on the active node and the standby node.

Setting	Value	Remark
Installation folder	C:\Program Files\NEC\UMF\Operations	Local disk path
Local host name (optional)	vhost1	Virtual host name
Port for communication with agents	12520	
Port for communication with the monitoring terminal	12521	
Make the data area separate	Yes	
Data area folder	Y:\MasterScope_Share\MCO	Shared disk path
Install initial data	No (only on the standby server in the cluster)	

After installation finishes, change the service startup attributes on both the active and standby nodes.

3. In the [Start] menu, click [Administrative Tools] and then [Services]. Next, stop the [MasterScope UMF Operations Manager_1] service, and then change the [Startup type] in the properties from [Automatic] to [Manual].

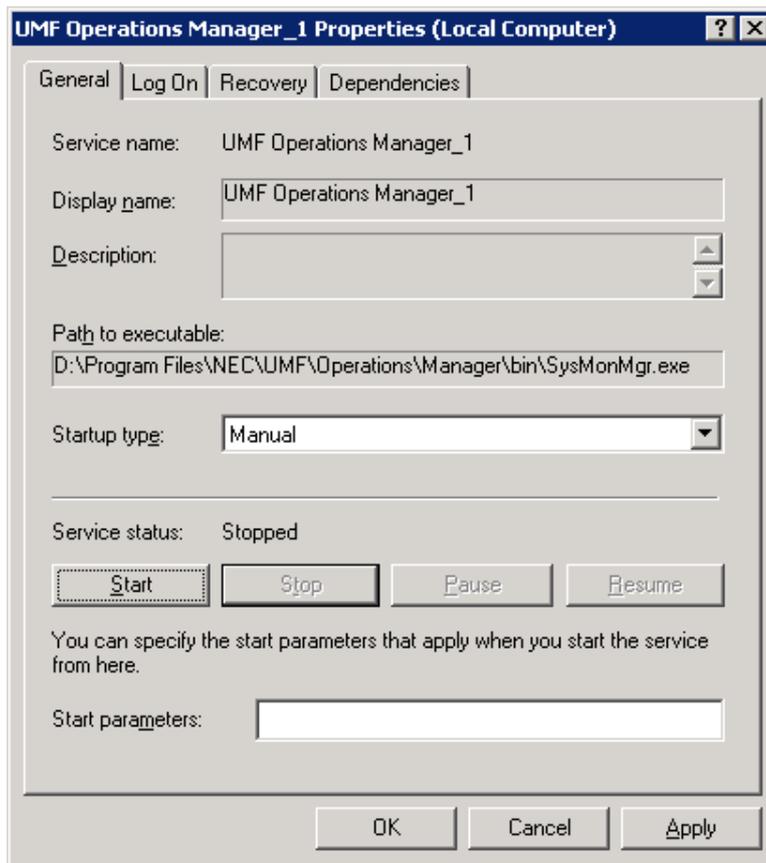


Figure 2-2 Service Properties

- * If using the bundled DB, change the [Startup type] for the bundled DB service(Wfdb_wfdbn) to [Manual] in the same way. n indicates a service number of 1 or higher. (The value is set during installation of MasterScope products.)

- * If using the CDO message API, change the [Startup type] for the MasterScope MISSION CRITICAL OPERATIONS CDO service to [Manual] in the same way.
 - * If using the ACOS linkage, change the [Startup type] for the MasterScope MISSION CRITICAL RPC Control service in the same way.
4. The following describes how to switch the server active/standby on a cluster environment.

- Switch by Command prompt

Open the command prompt window, and enter the command as below.

```
> clpgrp -m [group name]
```

- * In installing ExpressCluster, the path to executable file is added to environment variables "PATH".
- Switch by Cluster Manager Window
Right click the icon of group name in tree at left pane, and select [Moving failover group] in menu.

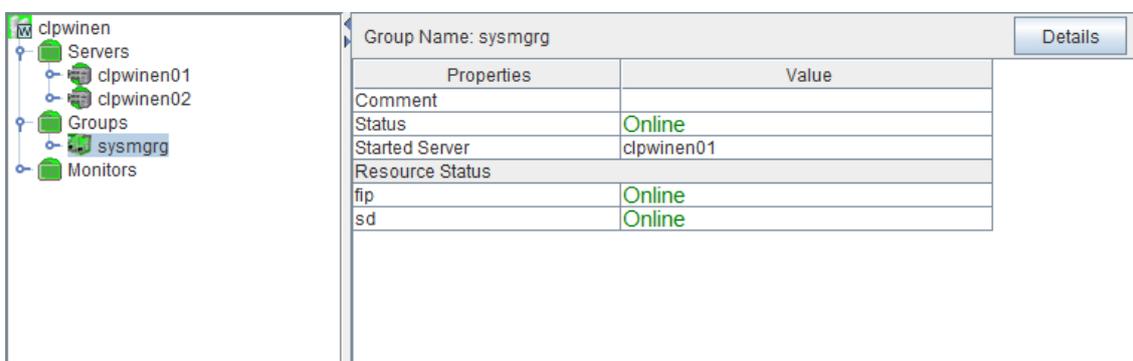


Figure 2-3 Switch server

2.3 Installing MasterScope SystemManager G WebConsole Option

To use WebConsole Option, install the WebConsole Option components in the active and standby nodes, similarly to the SystemManager G manager. The following are cautions to note regarding the installation of WebConsole Option in the cluster system.

Notes

- * Install this product on the active node first, and then on the standby node.
- * It must be possible to reference the shared disk when installing the active and standby server manager.

- * Use the same drive and folder as the installation destination for WebConsole Option on the active and standby servers.
- * The virtual host name (vhost2) is a host name that can be resolved to a floating IP address (192.168.1.20).

The following describes the procedure for installing the MasterScope SystemManager G WebConsole Option.

1. Start up the cluster from the active node, and then install WebConsole Option on the active node. In the installation window, specify the following settings.

Item	Value	Remark
Installation folder	C:\Program Files\NEC\pflop\manager	Local disk path
Data Directory	Y:\WebSAM_Share\SYSMGRG\WebConsole	Shared disk path
Hostname/IPAddress	vhost2	Virtual host name

(When the database is to be installed in a separate server as part of a custom installation)

2. In the detail window for the msc component common settings, make the following specifications for the active node. The detail window for the msc component common settings can be opened by using the [Detail] button of the msc component common settings window.

Item	Value	Remark
Database		
Hostname/IPAddress	localhost	Virtual host name
Port	5432	
Admin password	postgres	

3. In the PostgreSQL installation window that is displayed during the installation of WebConsole Option, make the following specifications.

Item	Value	Remark
installation directory	C:\Program Files\PostgreSQL\9.6	Local disk path

data directory	Y:\WebSAM_Share\data	Shared disk path
----------------	----------------------	------------------

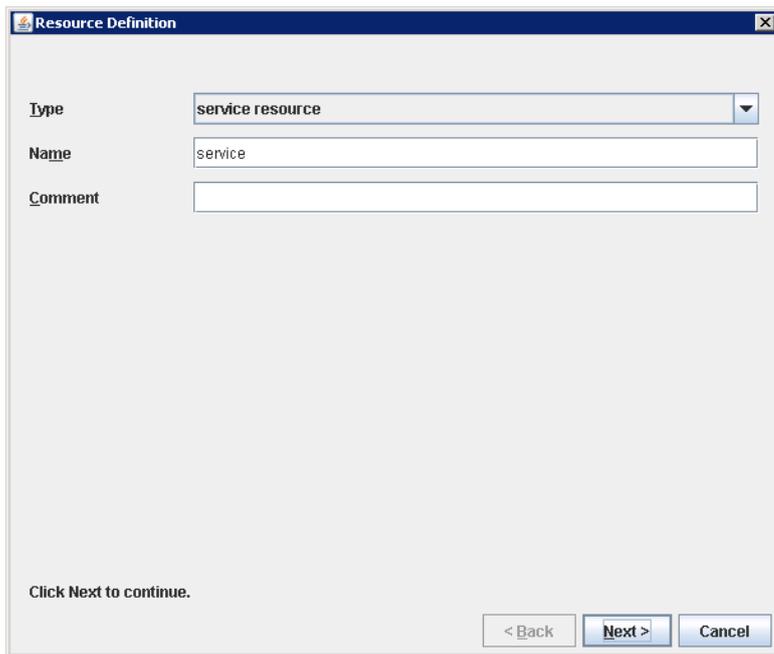
4. Start up the cluster from the standby node, and then install WebConsole Option.
In accordance with 1 to 3, specify the same values as those for the active node in the installation window of WebConsole Option/PostgreSQL and install the component in the standby node.

5. After installation finishes, change the service startup attributes from [Auto] to [Manual] on both the active and standby nodes. The service names of the services subject to the change are listed below.
 - Apache Tomcat 8.5 ServiceGovernor
 - SystemManager G API Gateway Service
 - SystemManager G Authorization Service
 - SystemManager G BusinessView Service
 - SystemManager G ExternalLink Service
 - SystemManager G MessageStore Service
 - SystemManager G Performance DataStore Service
 - SystemManager G Report Service
 - SystemManager G Status Service
 - PostgreSQL Service (when WebConsole Option is installed first: postgresql-x64-9.6)

2.4 **Setting Up the SystemManager G Manager Resource and Monitor Resources.**

Add a service resource and a monitor resource to the failover groups that were created as described in "Section II Installing and configuring EXPRESSCLUSTER X" of "EXPRESSCLUSTER X Installation and Configuration Guide for Windows".

1. Display [Operation Mode] in the Cluster Manager window and stop the cluster.
2. After that, display [Config Mode]. Then, start [Add Resource] through the right-click menu of the relevant failover group, select [service resource] from [Type], and then enter a group name in the [Name] box.



The image shows a dialog box titled "Resource Definition" with a close button (X) in the top right corner. The dialog contains three input fields: "Type" with a dropdown menu showing "service resource", "Name" with a text box containing "service", and "Comment" with an empty text box. At the bottom left, it says "Click Next to continue." At the bottom right, there are three buttons: "< Back", "Next >" (highlighted in blue), and "Cancel".

Type	service resource
Name	service
Comment	

Click Next to continue.

< Back Next > Cancel

Figure 2-4 Definition of a resource (Service)

3. To set up the dependencies, clear the [Follow the default dependence] check box, and then add resources that depend on the floating IP address and shared disk.

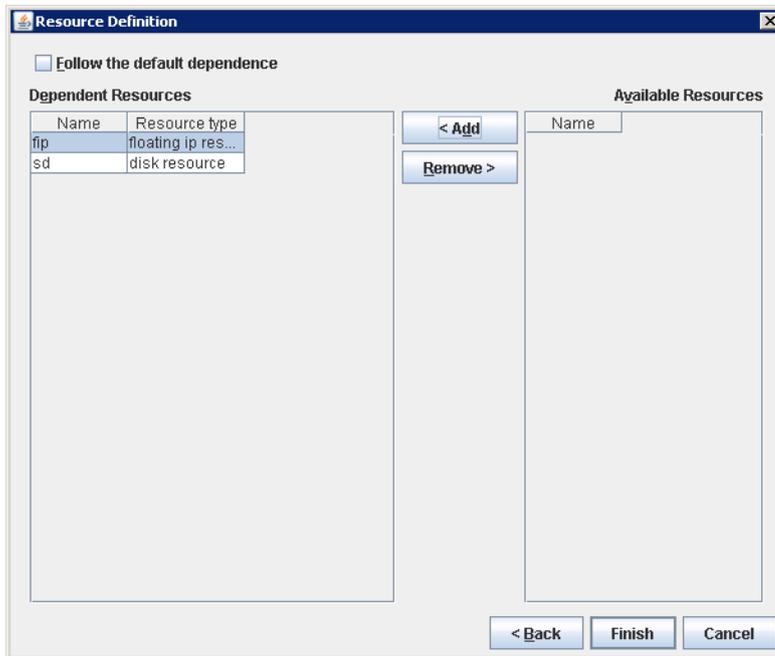


Figure 2-5 Dependency Specification

Notes

- * (When the supplied DB is to be used) Add resources to the "Wfdb_wfdb<n>" service of the supplied DB in the same manner, and then set the service resources for the supplied DB as dependent resources of the SystemManager G Manager service resources.
n indicates a service number of 1 or higher. (The value is set during installation of

MasterScope products.)

4. [Recovery Operation at Activity Failure Detection] and [Recovery Operation at Deactivity Failure Detection] are displayed. Click the [Next] button.
5. Click the [Connect] button in the service name selection window. From the list box, select the service name of the service to be started.

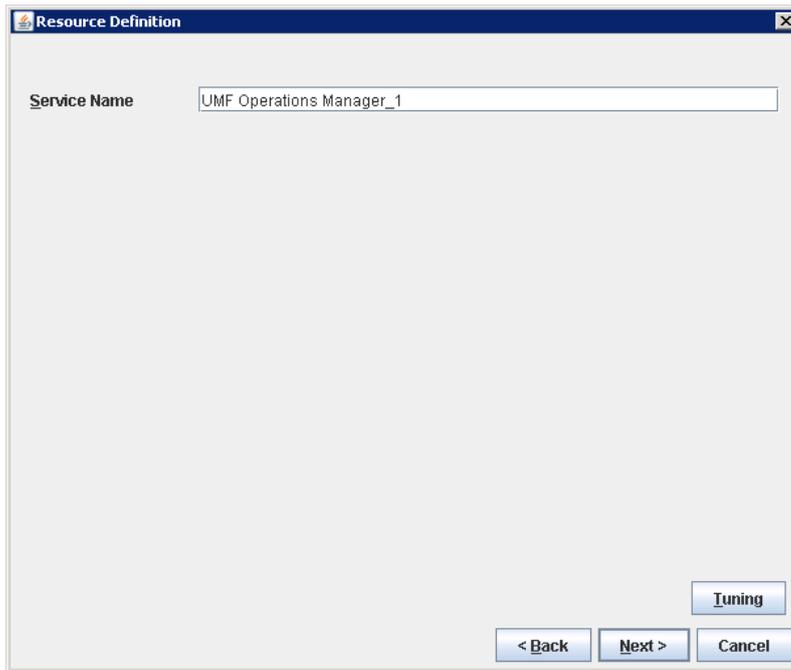


Figure 2-6 Service Name Specification

The service name varies depending on the node, so select the following service name.

Node	Service Name
Manager	MasterScope UMF Operations Manager_serial-number

- * serial-number represents a number. Check the actual value in the Windows [Administrative Tools].
6. After performing the setup, return to the failover group properties, and confirm that the resource settings have been applied, and that the properties of the monitor resources have automatically been added. Then, apply the settings. After that, display [Operation Mode] in the Cluster Manager window and start the cluster.

Notes

- * If using the CDO message API, add the resource for the MasterScope MISSION CRITICAL CDO service in the same way.
In parallel, set the service resources for SystemManager G Manager as dependent resources of the MasterScope MISSION CRITICAL CDO service resources.
- * If using the ACOS linkage, add the resources for the MasterScope MISSION CRITICAL RPC Control service in the same way.
In parallel, set service resources for SystemManager G Manager as dependent resources of the MasterScope MISSION CRITICAL RPC Control service resources.

2.5 Setting Up the WebConsole Option Resources and Monitor Resources

Add a service resource and a monitor resource to the failover groups that were created as described in "Section II Installing and configuring EXPRESSCLUSTER X" of "EXPRESSCLUSTER X for Windows Installation and Configuration Guide ". Perform this operation on the following services provided by WebConsole Option.

- Apache Tomcat 8.5 ServiceGovernor
- SystemManager G API Gateway Service
- SystemManager G Authorization Service
- SystemManager G BusinessView Service
- SystemManager G ExternalLink Service
- SystemManager G MessageStore Service
- SystemManager G Performance DataStore Service
- SystemManager G Report Service
- SystemManager G Status Service
- PostgreSQL Service (when WebConsole Option is installed first: postgresql-x64-9.6)

1. Display [Operation Mode] in the Cluster Manager window and stop the cluster.
2. After that, display [Config Mode]. Then, start [Add Resource] through the right-click menu of the relevant failover group, select [service resource] from [Type], and enter a resource name in the [Name] box.
3. To set up the dependencies, place a check against [Follow the default dependence] and then proceed to the next step.

Notes

- * When service resources for "Apache Tomcat 8.5 ServiceGovernor" are to be set up, set the service resources for PostgreSQL to use, as dependent resources. When PostgreSQL is running on another server, it is not necessary to make the settings for the dependence.
4. [Recovery Operation at Activity Failure Detection] and [Recovery Operation at Deactivity Failure Detection] are displayed. Click the [Next] button.
 5. Click the [Connect] button in the service name selection window. From the list box, select the service name of the service to start.
 6. After performing the setup, return to the failover group properties, and confirm that the resource settings have been applied, and that the properties of the monitor resources have automatically been added. Then, apply the settings. After that, display [Operation Mode] in the Cluster Manager window and start the cluster.

This concludes the ExpressCluster X setup.

Chapter 3 Uninstalling SystemManager G

3.1 Uninstalling SystemManager G

To uninstall SystemManager G manager/WebConsole Option, perform the procedure described in the SystemManager G Release Memo (relememo.pdf).

Note If using the CDO message API, uninstall the API by performing the procedure described in the CDO Release Memo (CDO_relememo.pdf).

3.2 Deleting Files

After uninstalling SystemManager G, files and directories remain on the shared disk. Manually delete directories on the shared disk specified during installation.

Chapter 4 Other Notes

4.1 Registering Licenses

Register licenses for a cluster environment on both the active and standby nodes.