

**MasterScope
SystemManager Ver. 6.3**

**Manager (Windows Version)
Duplication Setup Guide
(For WSFC)**

June 2016

Revision History

Ver.	Date Revised	Page Revised	Details
1st Edition	2014.03		New document

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1. Preface

This document describes the procedure for using Windows Server Failover Clustering (hereafter referred to as WSFC) to set up a cluster configuration that has two nodes (for duplication). WSFC is a Microsoft 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.

1.1 Supplemental information

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.

1.2 Application range

This document applies to WSFC of Windows Server 2012 and Windows Server 2012 R2.

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2. Configuration Procedure

This chapter describes a procedure for configuring a MasterScope SystemManager (hereafter referred to as SystemManager) cluster environment.

2.1 Setting up WSFC

Install WSFC and set up the cluster environment in advance.

2.2 Setting up SystemManager

Install the SystemManager manager on the Windows computers to be used as active and standby nodes.

For details about the installation, see the “MasterScope Media Release Notes”.

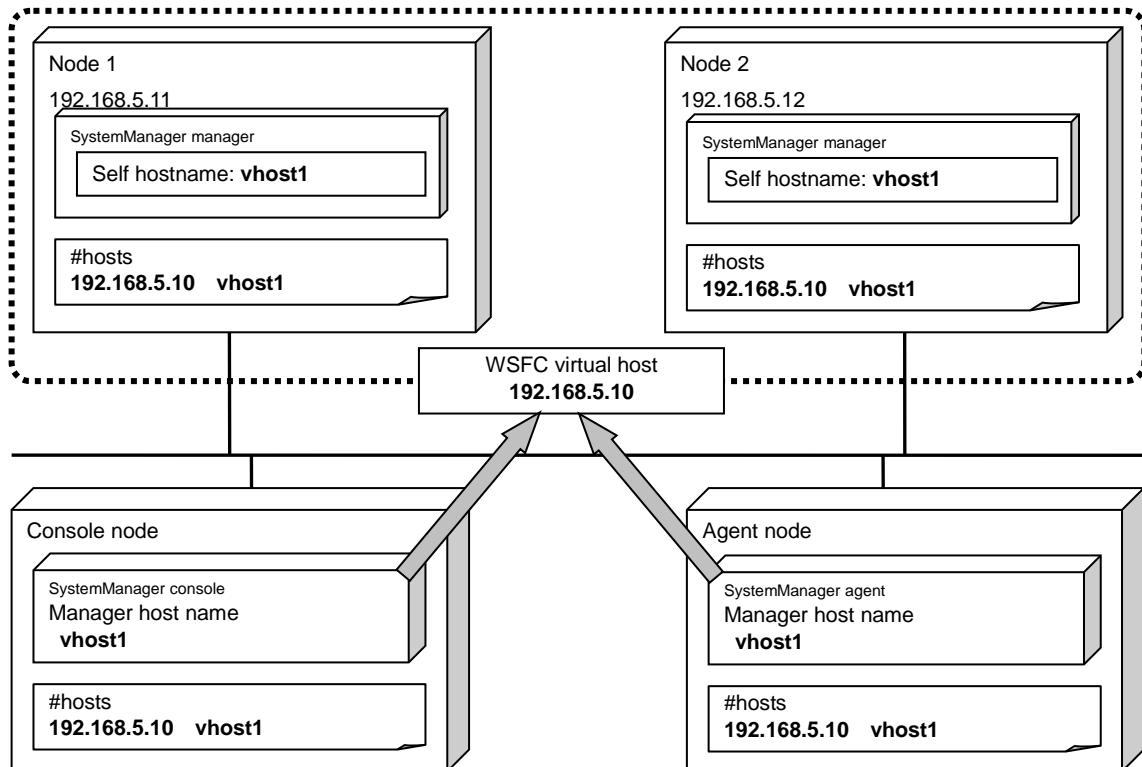
Notes:

- ✓ Install SystemManager on the active node first, and then on the standby node.
- ✓ The shared disks must be referenceable when installing the manager on an active server node. The shared disks need not be referenceable by the standby server node.
- ✓ Use the same drive and folder names as the installation destination for SystemManager on both active and standby nodes.
- ✓ Replace the virtual host names and shared disks according to each environment.

The following shared resources are assumed:

- Virtual host name: vhost1
- Shared disk: X drive

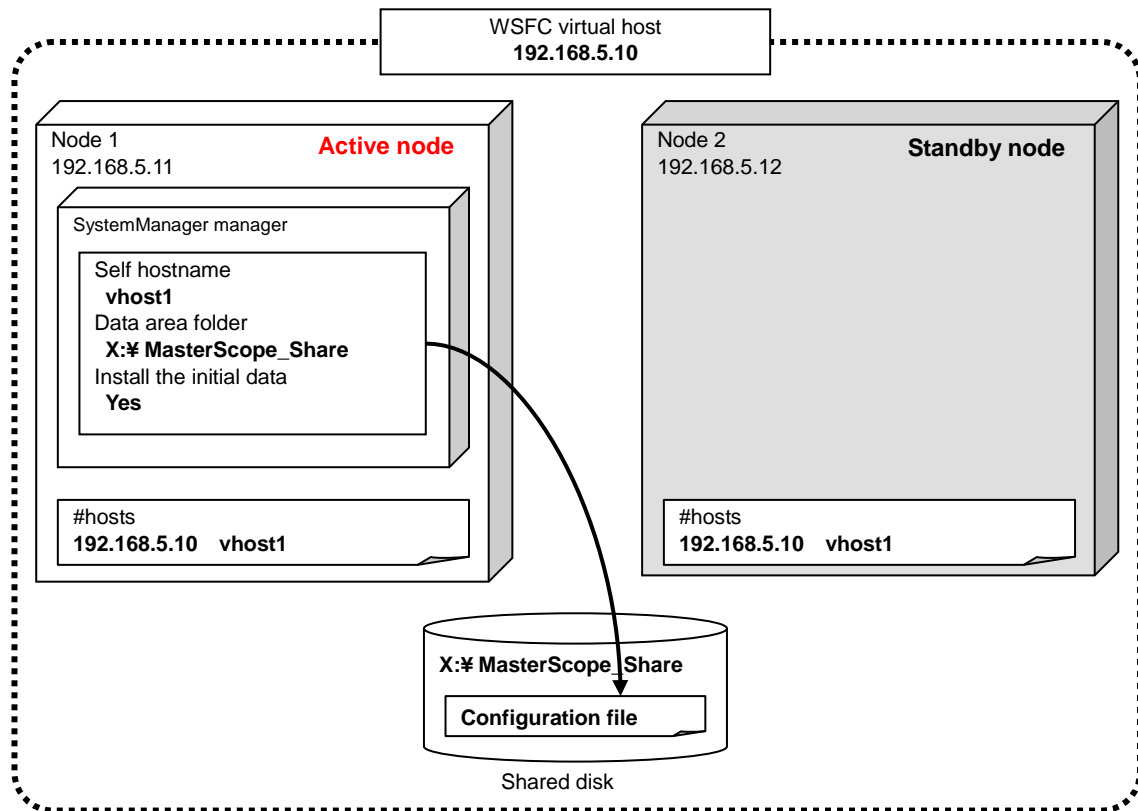
The image of the manager duplication configuration is shown below.



The agent and console are assumed to be connected to the virtual host.

The following describes the procedure for installing the SystemManager manager functions.

First, install the SystemManager manager on the active server node.
The image of installation on the active server node is shown below.



Specify each item in the Product Installation Settings dialog box for the SystemManager manager on the active server node as described below.

- Specify any values for Install directory path, Agent port and Viewer port. For details about the setting values for each item, see the “MasterScope Media Release Notes”.
- Specify the virtual host name for Self hostname and any folder on the shared disk for Data Directory.
- Select Yes for Change Data Directory and Store initial setting data .

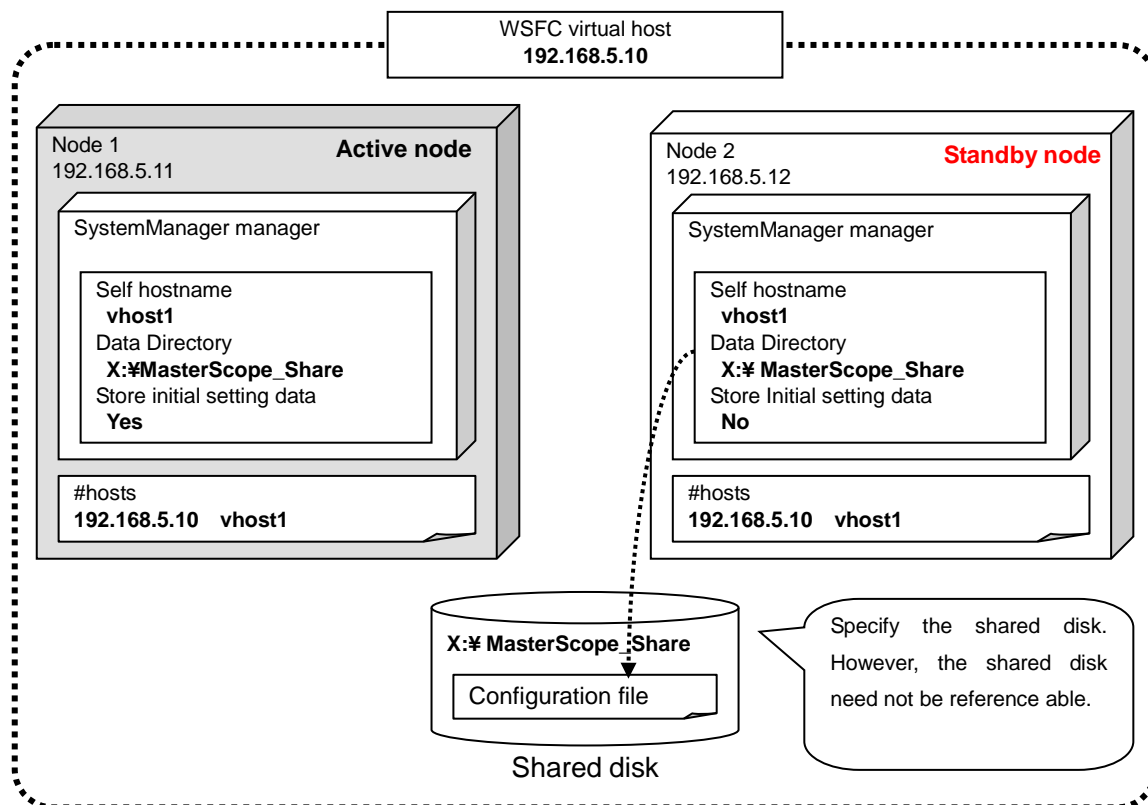
A setting example is shown below.

Setting item name	Setting value	Remarks
Install directory path	C:\Program Files\NEC\UMF\Operations	Local disk path
Self hostname (optional)	vhost1	Virtual host name
Agent port	12520	(Any value)
Viewer port	12521	(Any value)
Change Data Directory	Yes	(Fixed)
Data Directory	X:\MasterScope_Share	Shared disk path
Store initial setting data	Yes	(Fixed)

¥Manager¥sg” is automatically added to the data area folder, and the setting information that must be shared is stored here.

After the installation is completed, confirm that “¥Manager¥sg” has been created in the data area folder.

Then, install the SystemManager manager on the standby server node.
The image of installation on the standby server node is shown below.



Specify each item in the Product Installation Settings dialog box for the SystemManager manager on the standby server node as described below.

- Specify the same values as for the active node except for the Store initial setting data setting item.
- Select No (only on the standby server in the cluster) for Store initial setting data.

A setting example is shown below.

Setting item name	Setting value	Remarks
Install directory path	C:\Program Files\NEC\UMF\Operations	Local disk path
Self hostname (optional)	vhost1	Virtual host name
Agent port	12520	(Any value)
Viewer port	12521	(Any value)
Change Data Directory	Yes	(Fixed)
Data Directory	X:\MasterScope_Share	Shared disk path
Store initial setting data	No (only on the standby server in the cluster)	(Fixed)

After the installation is completed, change the service startup type on both the active and standby nodes.

In the Start window displayed by pressing the Windows key, click Administrative Tools and then Services, then, stop the MasterScope UMF Operations Manager_ N service (For “N”, see “4.1.1.3. Default values for each product” in the “MasterScope Media Release Notes”), and then change the Startup type in the properties from Automatic to Manual. “MasterScope UMF Operations

Manger_1” is used in the example below.

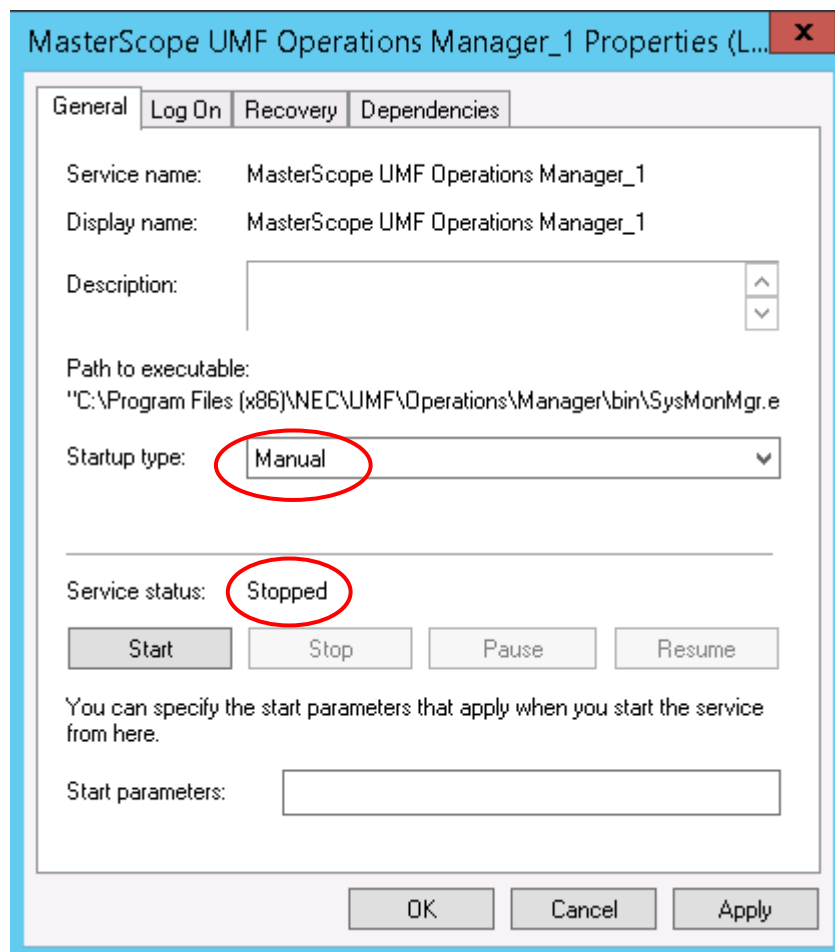


Figure 2-1 Service Properties

* If using the bundled DB, change the [Startup type] for the bundled DB service to [Manual] in the same way.

2.3 Setting up SystemManager service monitoring resources

Add the service monitoring resources to WSFC in order to monitor SystemManager service abnormalities.

In the Start window displayed by pressing the Windows key, click Administrative Tools and then Failover Cluster Manager, then create resources using one of the following methods.

- To create resources by creating a new service:
See "2.3.1 Creating resources by creating a new service" Normally, this method is used to perform setup.
- To create resources using the high availability wizard:
See "2.3.2 Creating resources using the high availability wizard" A floating IP address other than the cluster floating IP address is required.

2.3.1 Creating resources by creating a new service

(1) Creating resources

Right-click Role from the tree in the left pane, and then select Create Empty Role from the displayed pop-up menu.

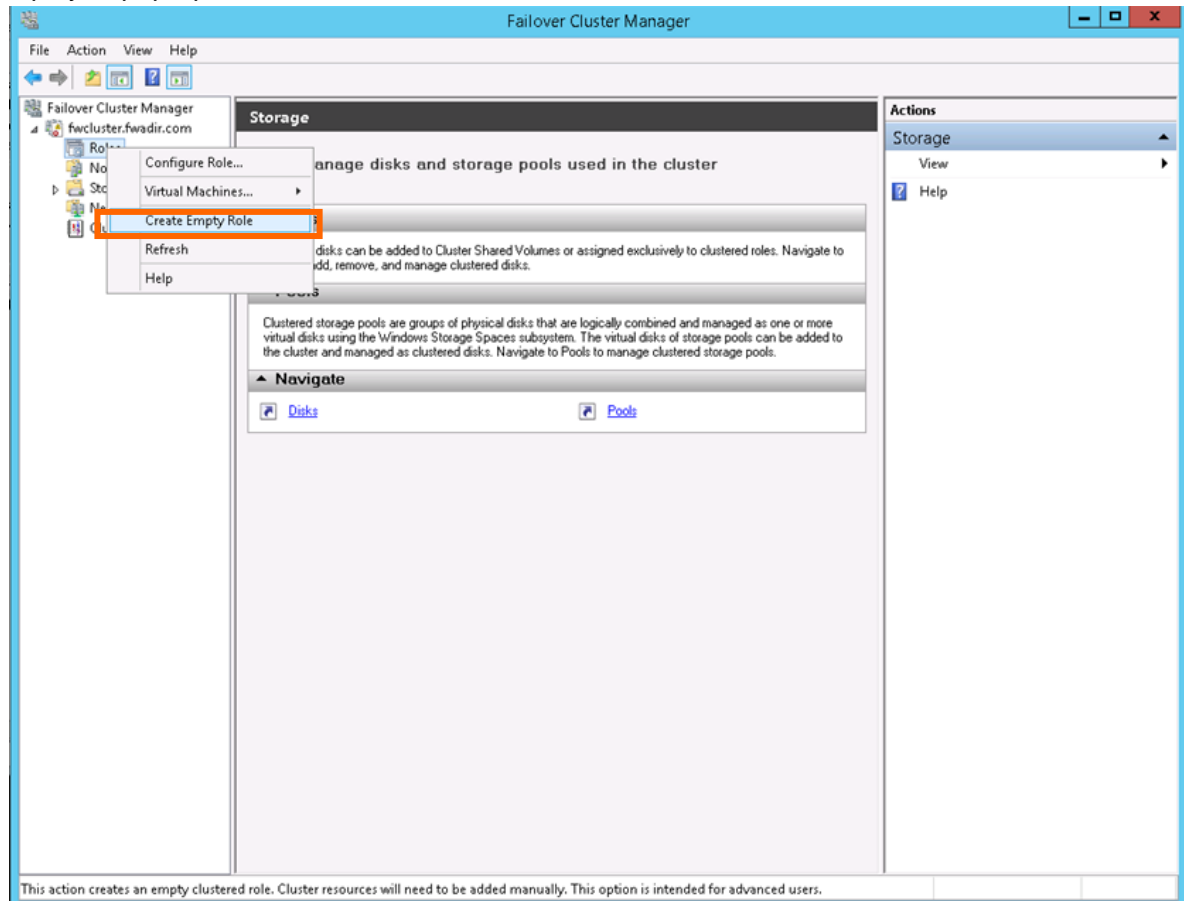
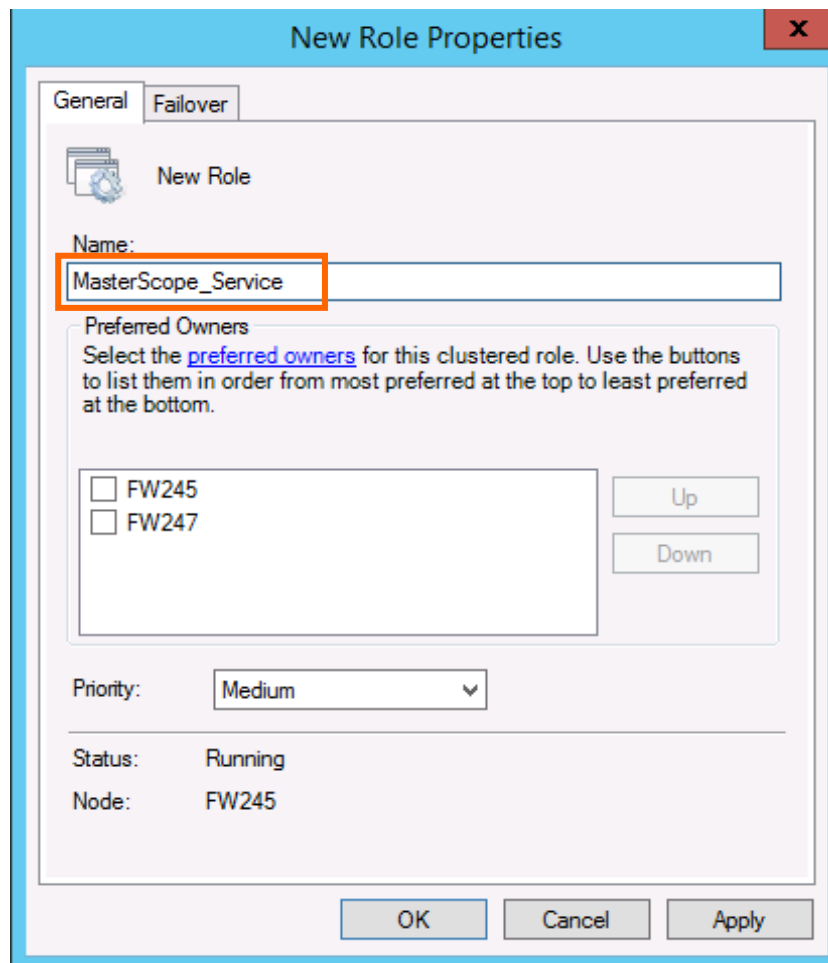


Figure 2-2 Creating an Empty Role

The New Role node is created. Right-click this node and change the name to any name in the Property dialog box. “MasterScope_Service” is used in the example below.



The image shows a 'New Role Properties' dialog box with a blue title bar and a red close button. It has two tabs: 'General' and 'Failover'. The 'General' tab is active. Inside the dialog, there is a 'New Role' icon and a 'Name:' label. The text 'MasterScope_Service' is entered in the name field and is highlighted with an orange rectangle. Below the name field is a section titled 'Preferred Owners' with instructions: 'Select the preferred owners for this clustered role. Use the buttons to list them in order from most preferred at the top to least preferred at the bottom.' There is a list box containing 'FW245' and 'FW247', each with an unchecked checkbox. To the right of the list box are 'Up' and 'Down' buttons. Below the list box is a 'Priority:' label and a dropdown menu set to 'Medium'. At the bottom, there are 'Status:' and 'Node:' labels. The status is 'Running' and the node is 'FW245'. At the very bottom are 'OK', 'Cancel', and 'Apply' buttons.

Property	Value
Name	MasterScope_Service
Preferred Owners	FW245, FW247
Priority	Medium
Status	Running
Node	FW245

Figure 2-3 Property Setting for Role

Right-click the MasterScope_Service node and select Add Storage.

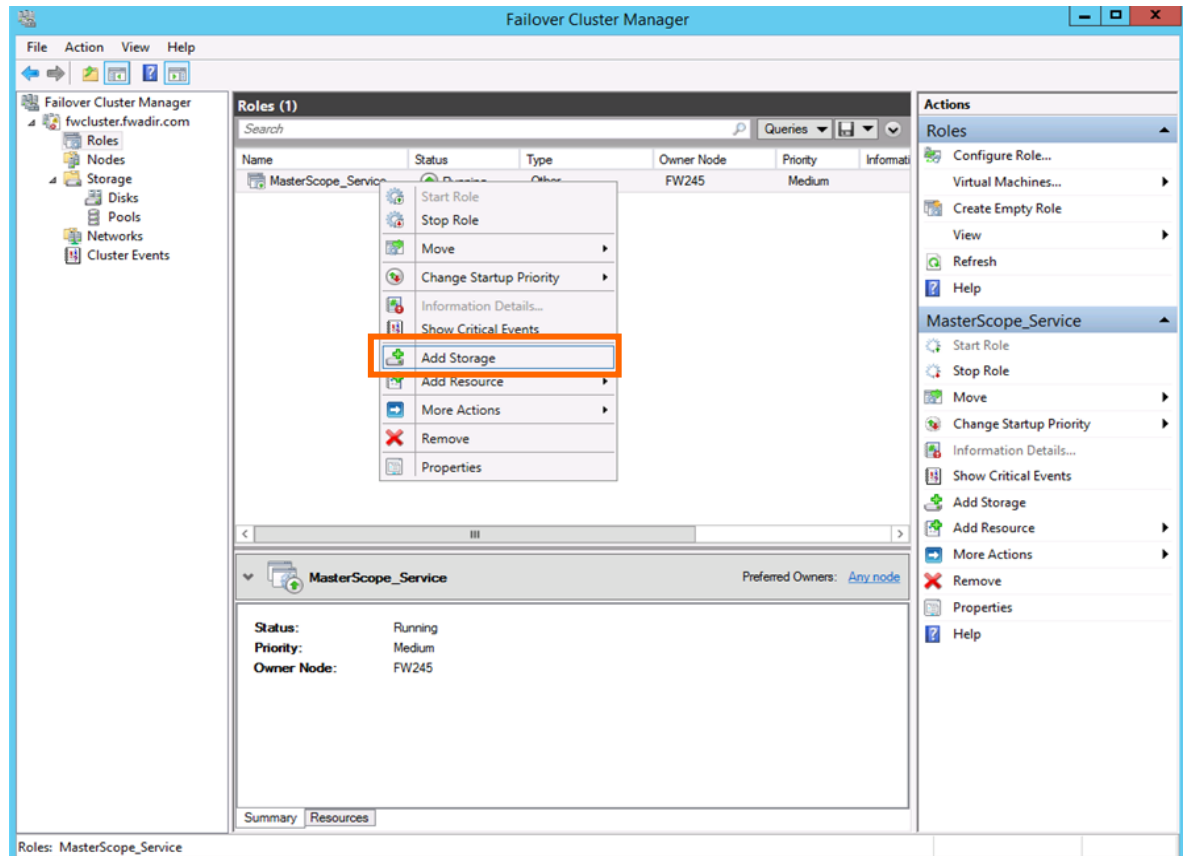


Figure 2-4 Adding Storage

Select the check box for the disk in the Add Storage dialog box, and then click the OK button.

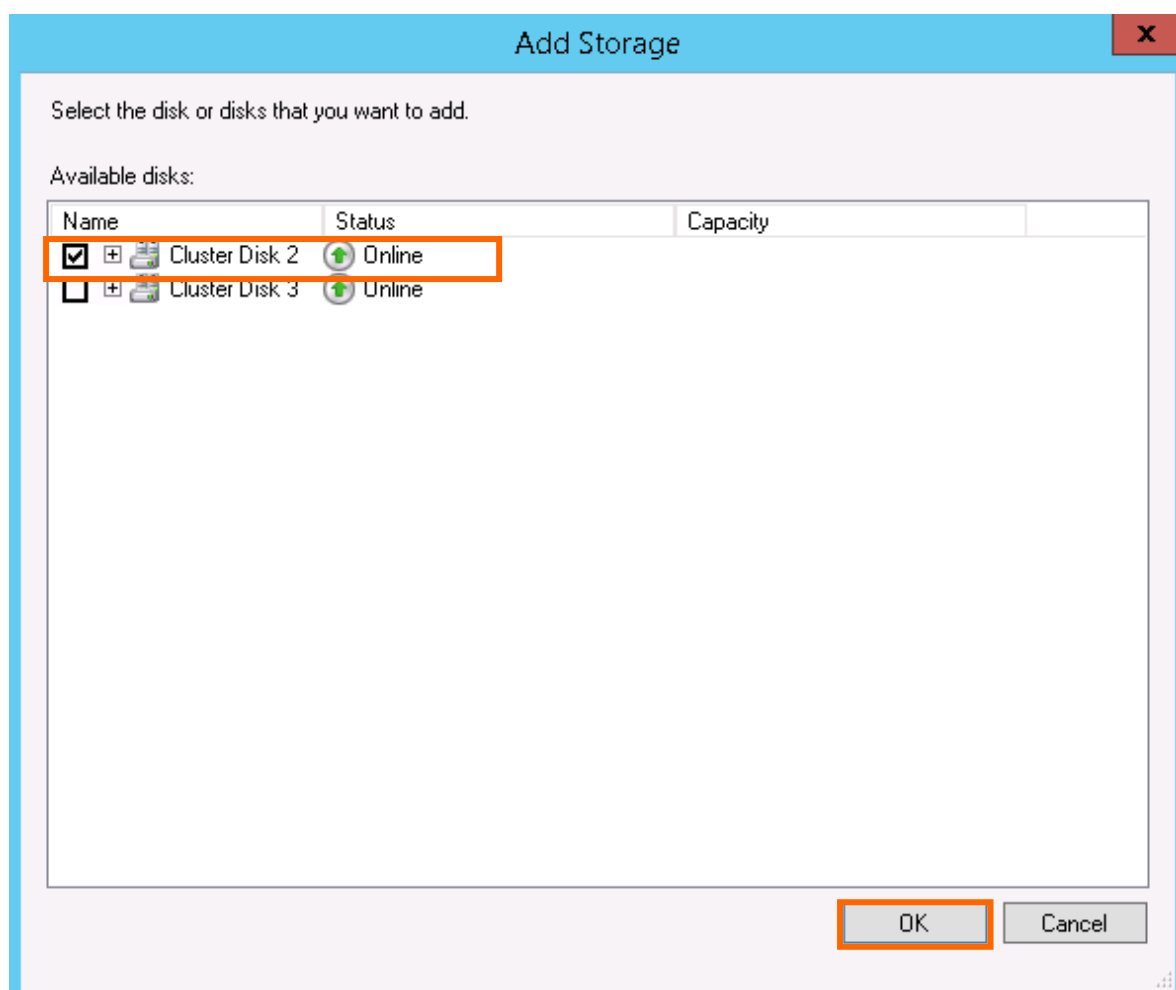


Figure 2-5 Add Storage Dialog Box

Next, right-click the MasterScope_Service node, select Add Resource and then Generic Service.

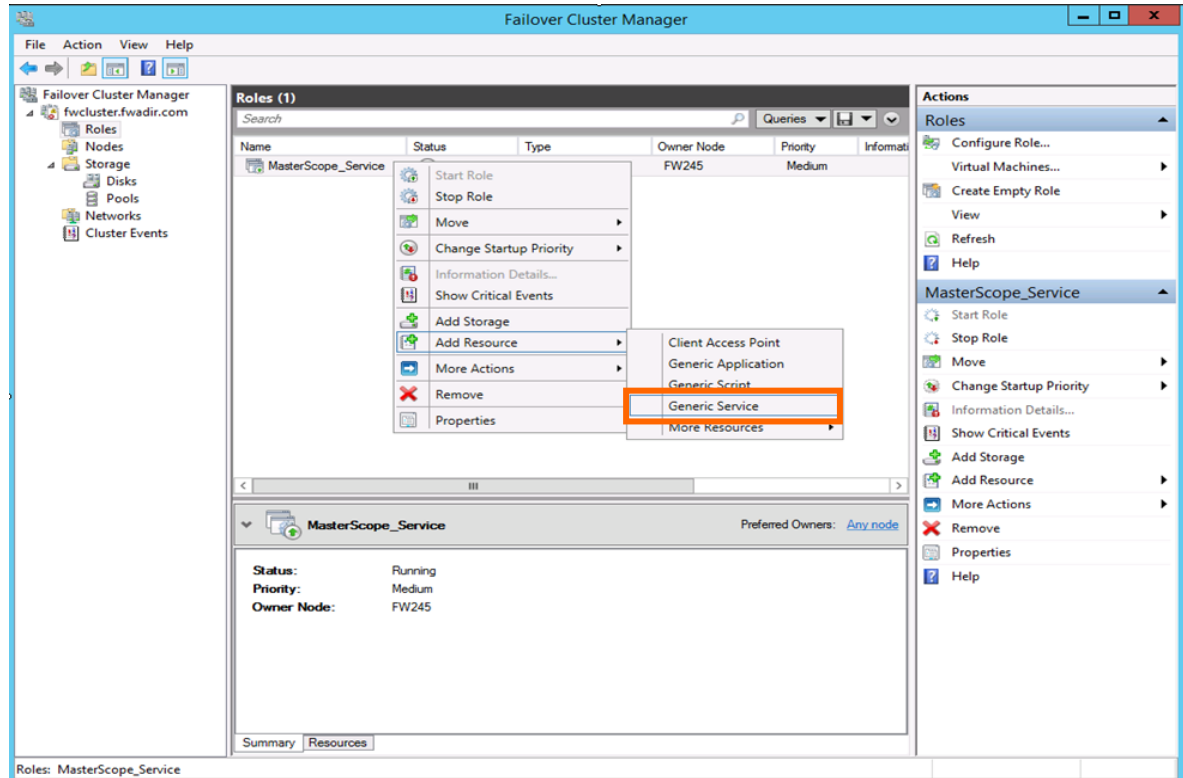


Figure 2-6 Adding Resources

The Select Service dialog box is displayed. Specify MasterScope UMF Operations Manager_1 (For “n”, see 4.1.1.3. Default values for each product” in the “MasterScope Media Release Notes”), and then click the Next button. “MasterScope UMF Operations Manager_1” is specified in the example below.

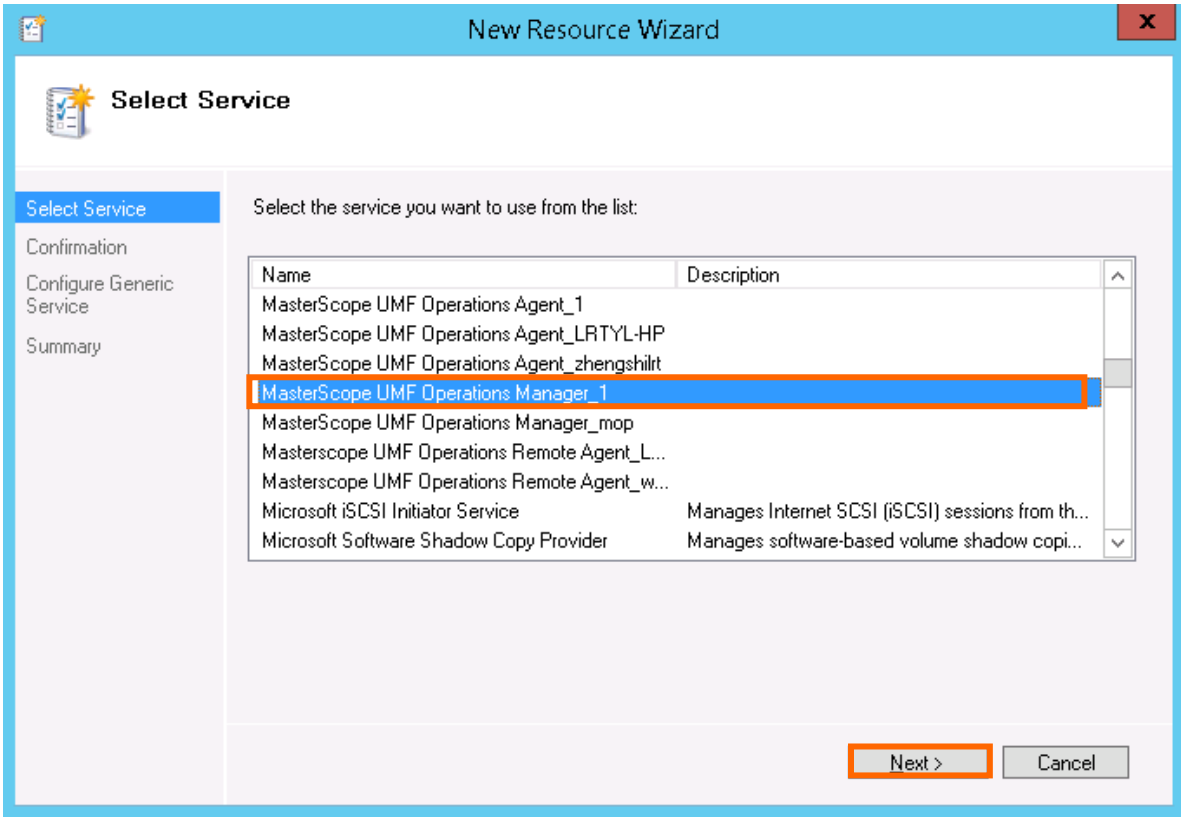


Figure 2-7 Select Service Dialog Box

Click the Next button in the Confirmation dialog box.

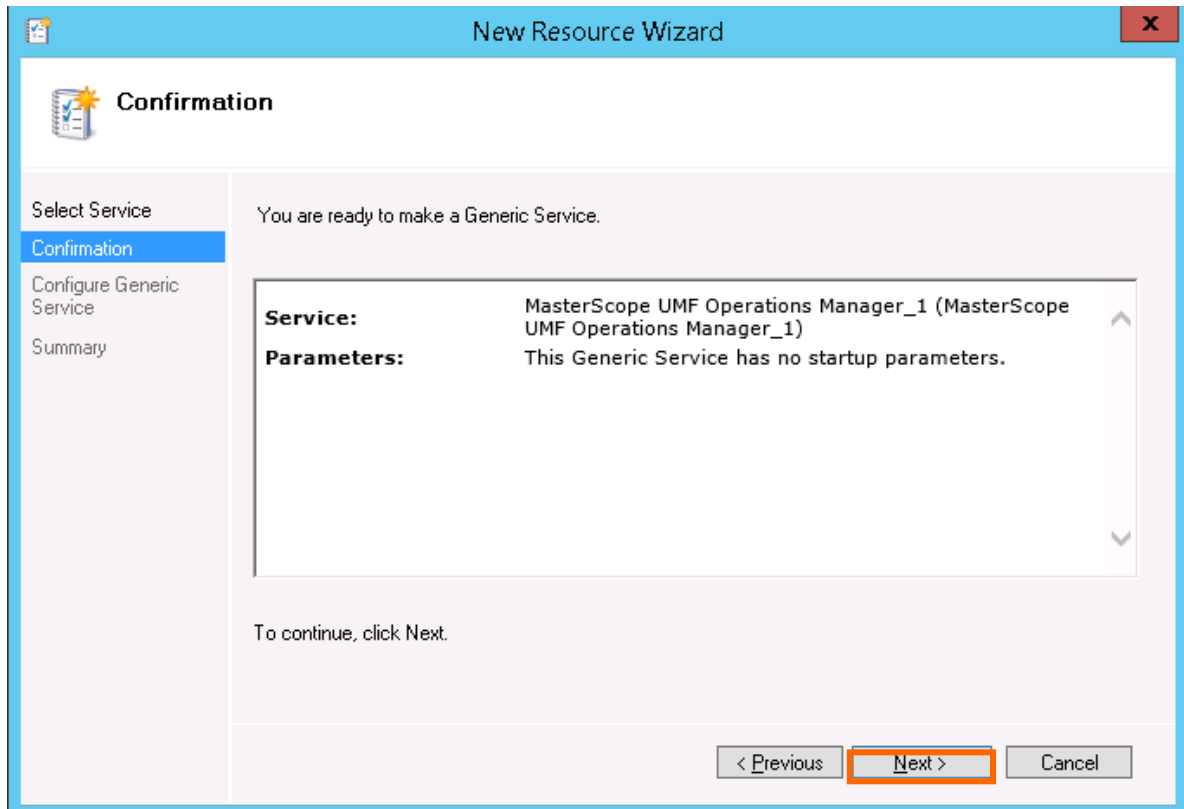


Figure 2-8 Confirmation Dialog Box

Click the Finish button in the Summary dialog box.

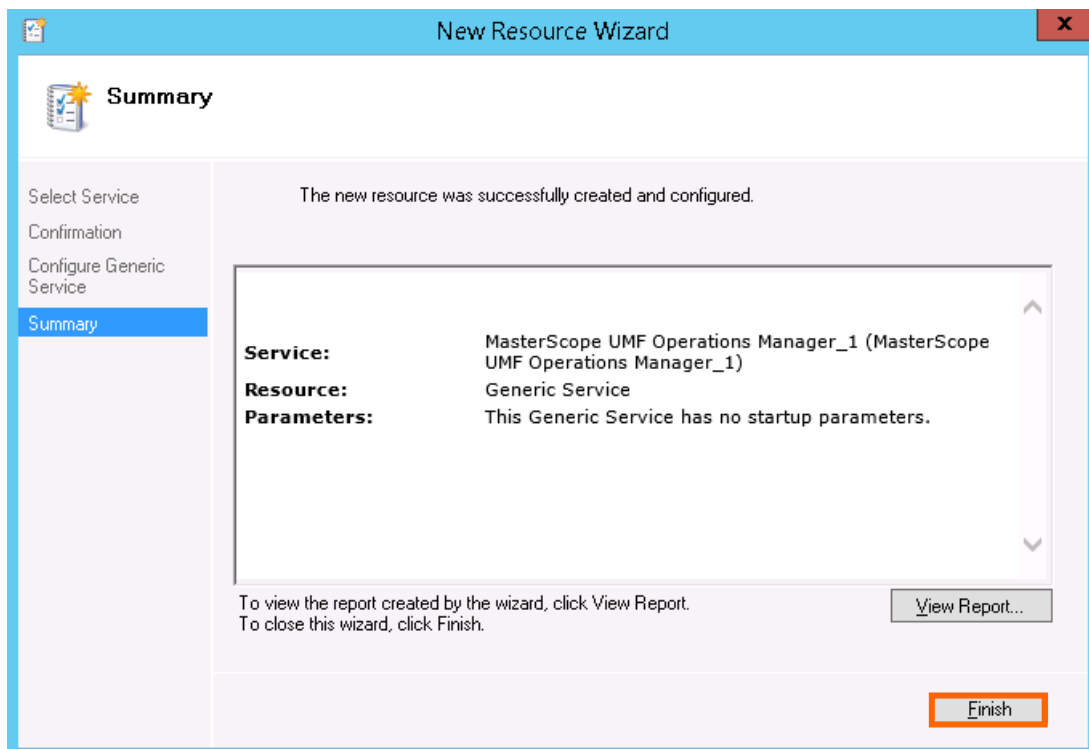


Figure 2-9 Summary Dialog Box

* If using the bundled DB, add the resource for the bundled DB service in the same way. Set up the resource dependencies so that the bundled DB is dependent on SystemManager.
Service name is [fdb_wfdbn].
n indicates a service number of 1 or higher.
(The value is set during installation of MasterScope products.)

(2) Starting resources

If the service is not started automatically, start the service by performing the following procedure.

1. In the Failover Cluster Manager dialog box, right-click the icon of the created resource (MasterScope_Service in this example).
2. Select Start Role from the displayed pop-up menu to start the service.

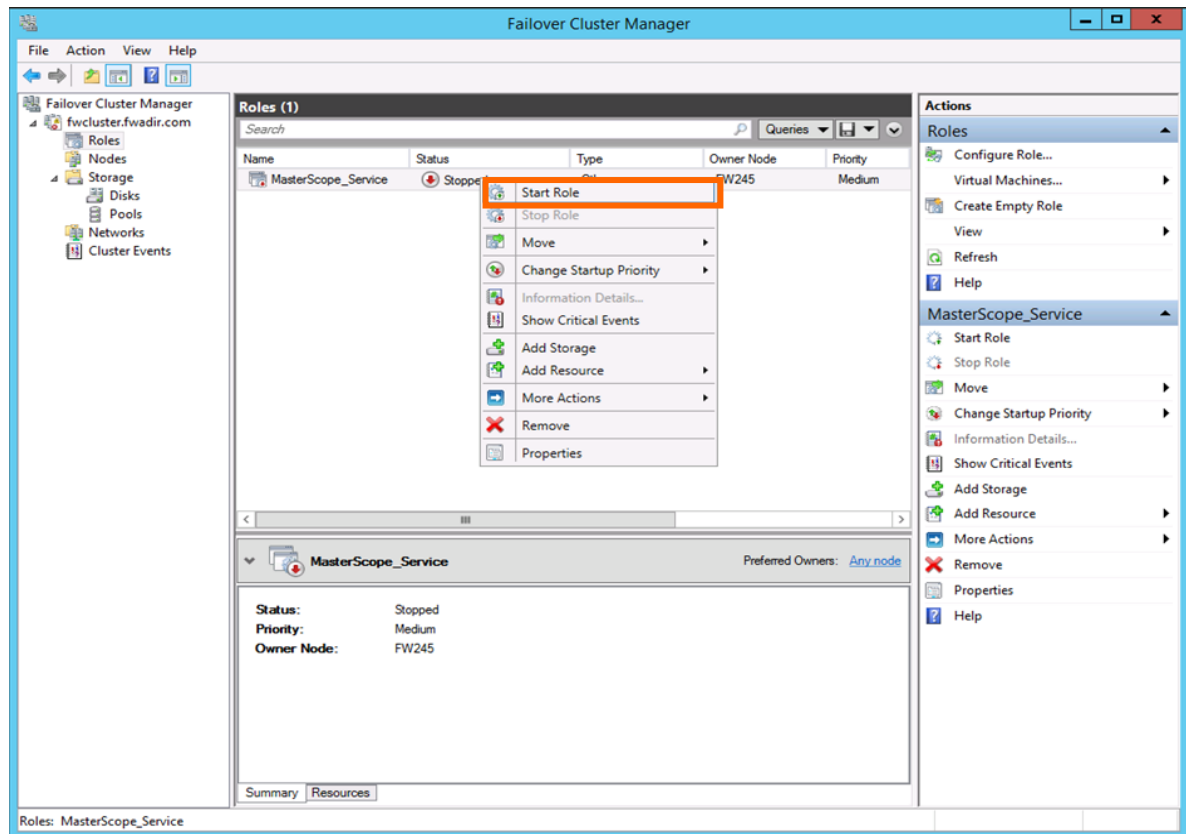


Figure 2-10 Making Resources Available Online

In addition, if the service has been started on the standby node, start the service on the active node by performing the following procedure.

1. In the Failover Cluster Manager dialog box, right-click the icon of the role (MasterScope_Service in this example).
2. Select Select Node... from the displayed pop-up menu.
3. In the Move Clunstered Role dialog box, select the destination node to move the standard services.

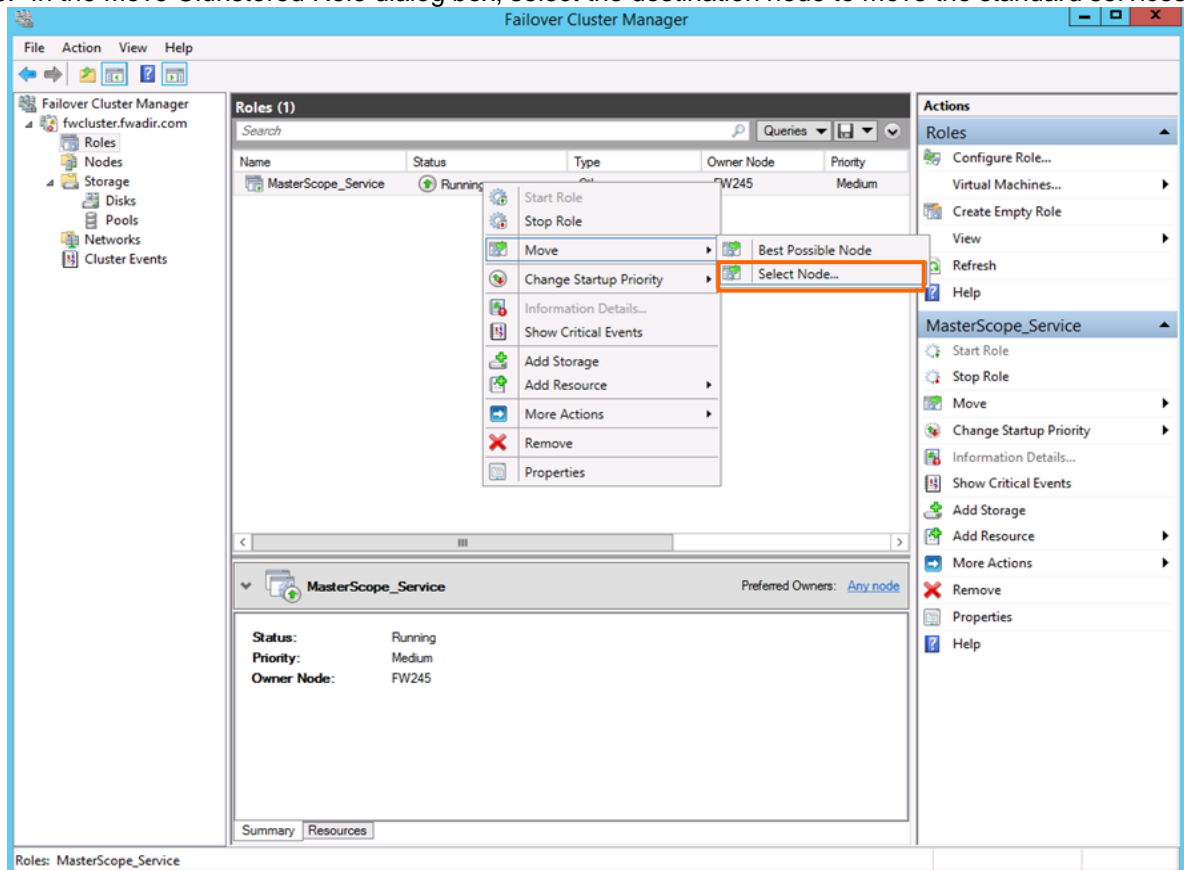


Figure 2-11 Moving Resources

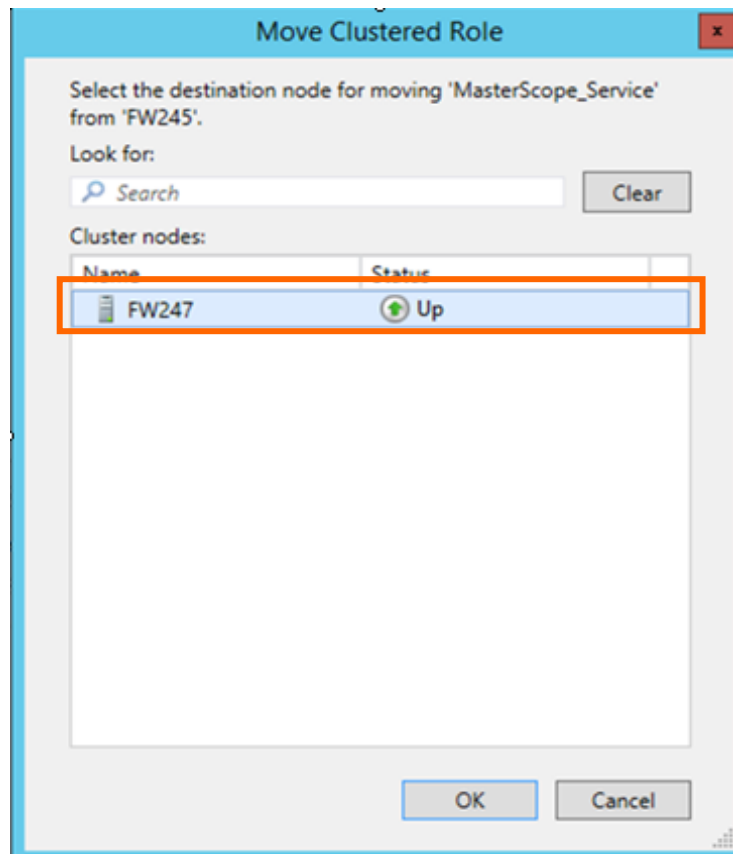


Figure 2-12 Selecting Node to Move

This concludes the WSFC setup.

2.3.2 Creating resources using the high availability wizard

(1) Creating resources

To create resources using the high availability wizard, the floating IP address setting is required. This IP address must be different from the cluster IP address.

The value described in “_

” is assumed for the WSFC shared disk and the following value is assumed for the floating IP address.

- Shared disk: P drive
- IP address: 172.28.160.251

Note

※ Replace the shared disk and IP address according to each environment.

Right-click Role from the tree in the left pane, and then select Configure Role... from the displayed pop-up menu.

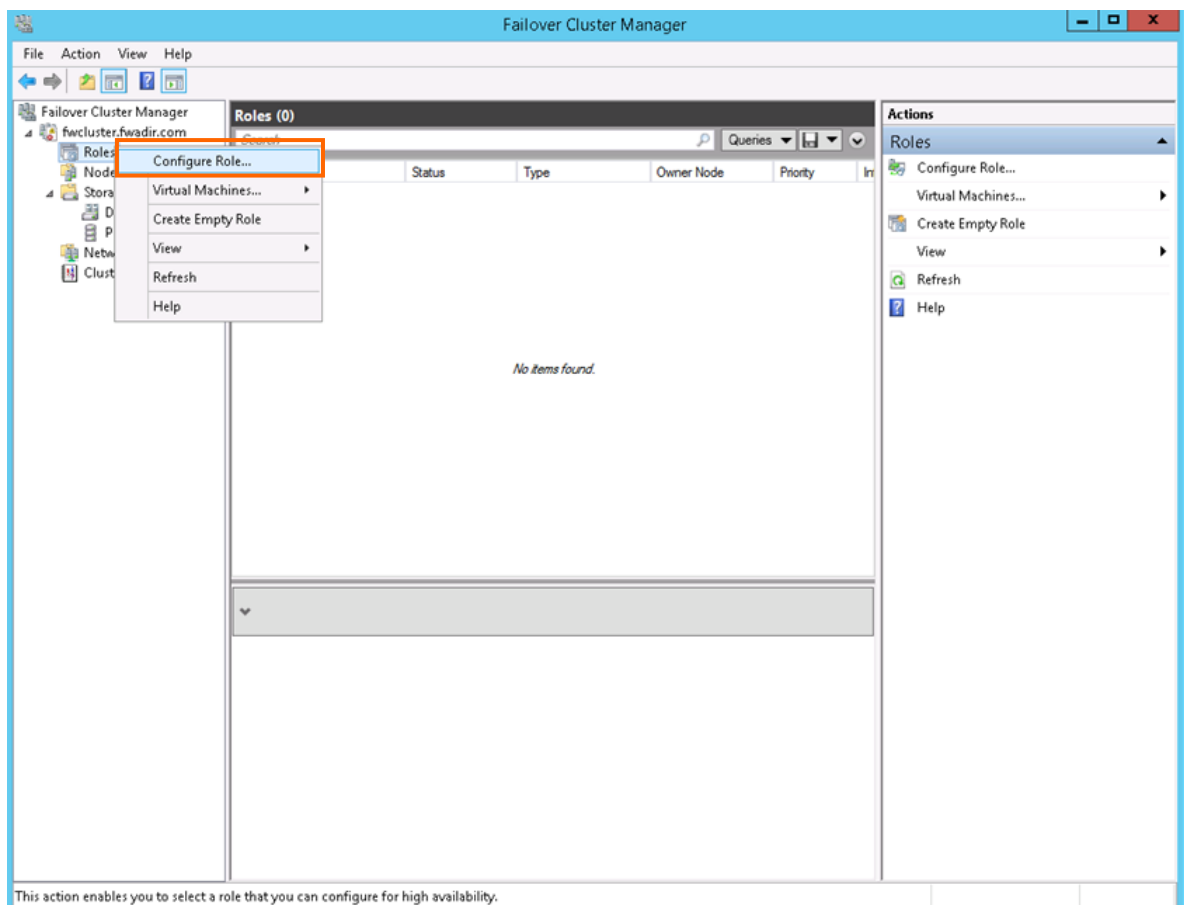


Figure 2-13 Creating Resources

A wizard dialog box to configure the role is displayed. Click the Next button.

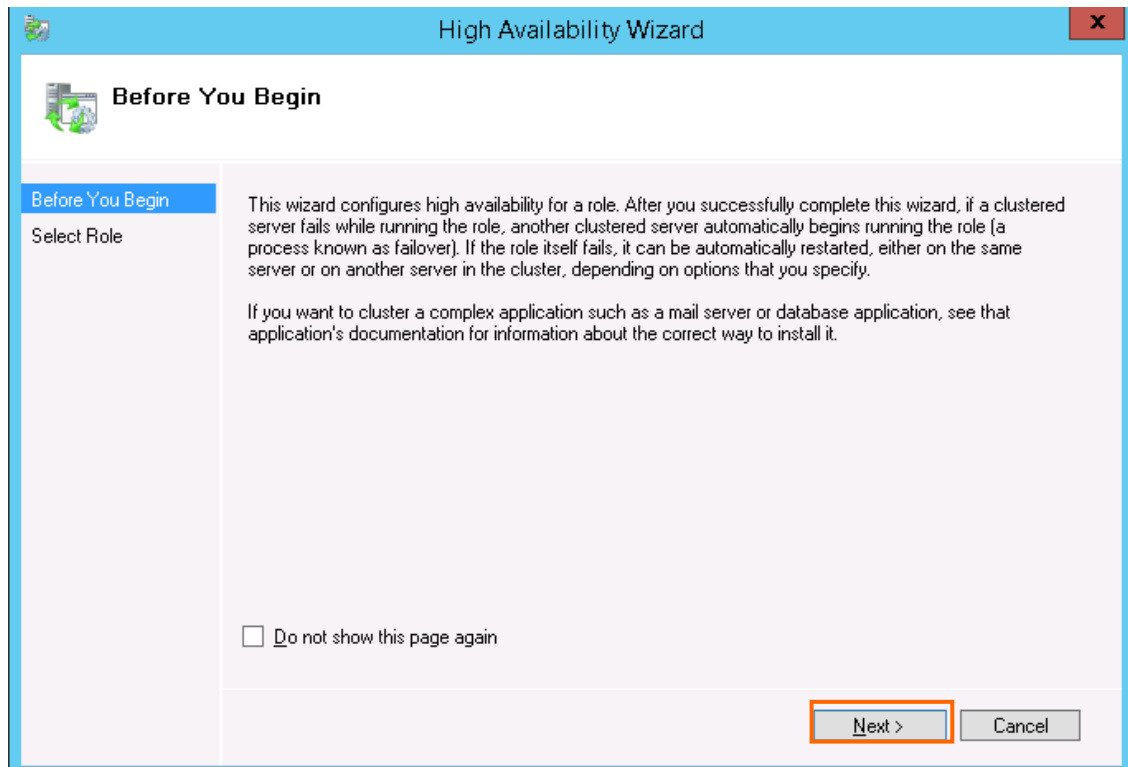


Figure 2-14 High Availability Wizard

The Select Role dialog box is displayed. Select Generic Service, and then click the Next button.

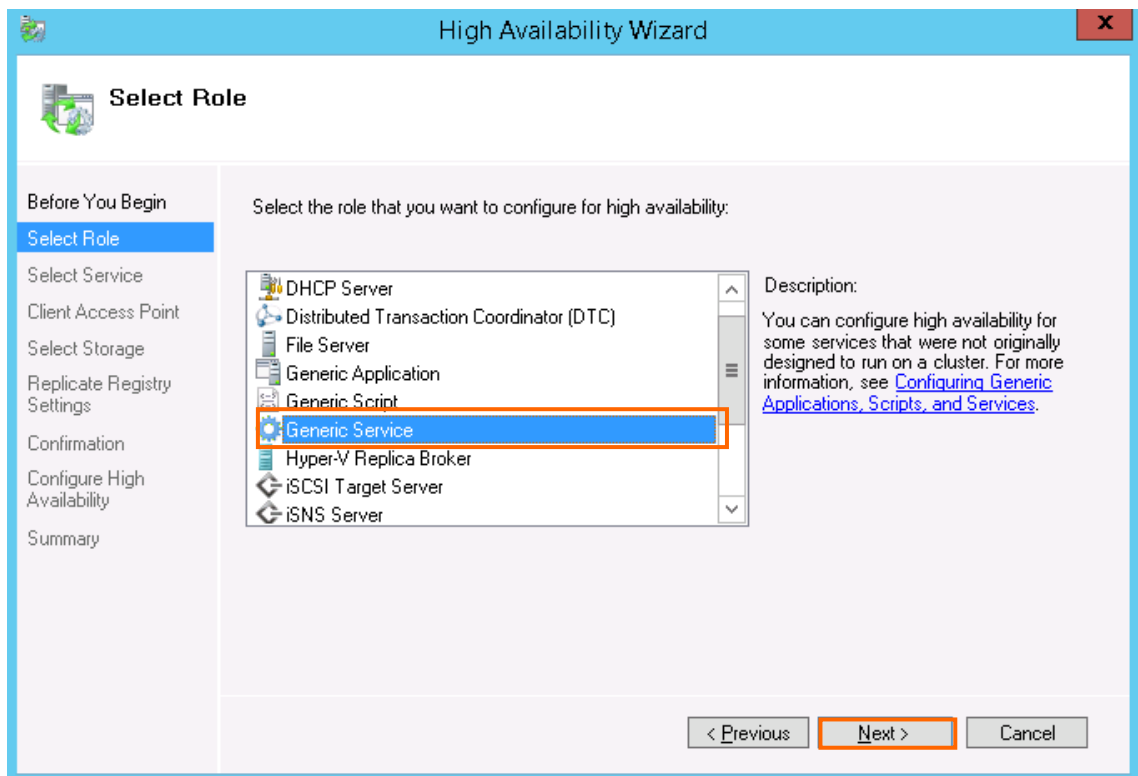


Figure 2-15 Selecting Service or Application

The Select Service dialog box is displayed. Specify MasterScope UMF Operations Manager_N (For “N”, see 4.1.1.3. Default values for each product” in the “MasterScope Media Release Notes”), and then click the Next button. “MasterScope UMF Operations Manager_1” is specified in the example below.

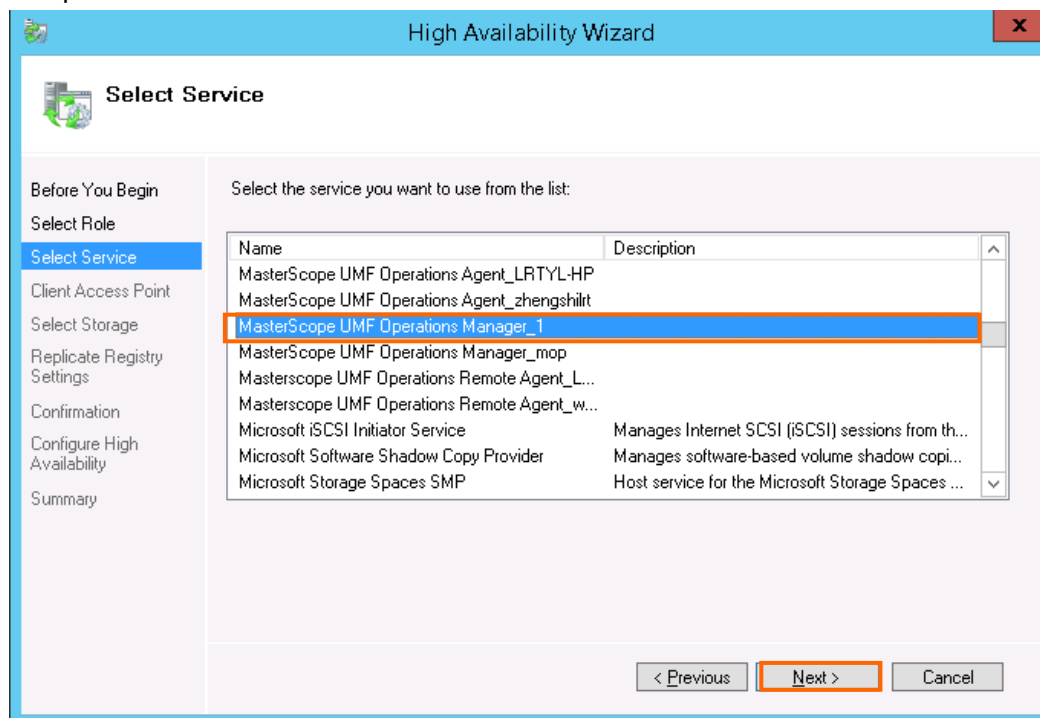


Figure 2-16 Selecting Service

The Client Access Point dialog box is displayed. Specify the virtual host name for the name used by the client (MasterScope_Sv in this example) and the floating IP for the IP address (172.28.160.251 in this example), and then click the Next button.

High Availability Wizard

Client Access Point

Before You Begin

Select Role

Select Service

Client Access Point

Select Storage

Replicate Registry Settings

Confirmation

Configure High Availability

Summary

Type the name that clients will use when accessing this clustered role:

Name:

The NetBIOS name is limited to 15 characters. One or more IPv4 addresses could not be configured automatically. For each network to be used, make sure the network is selected, and then type an address.

	Networks	Address
<input checked="" type="checkbox"/>	172.28.160.128/25	172.28.160.251
<input type="checkbox"/>	172.28.160.0/24	Click here to type an address

< Previous

Next >

Cancel

Figure 2-17 Client Access Point

The Add Storage dialog box is displayed. Select the check box of the cluster disk containing the shared disk (P drive in this example) specified in “2.2 Setting up SystemManager”, and then click the Next button.

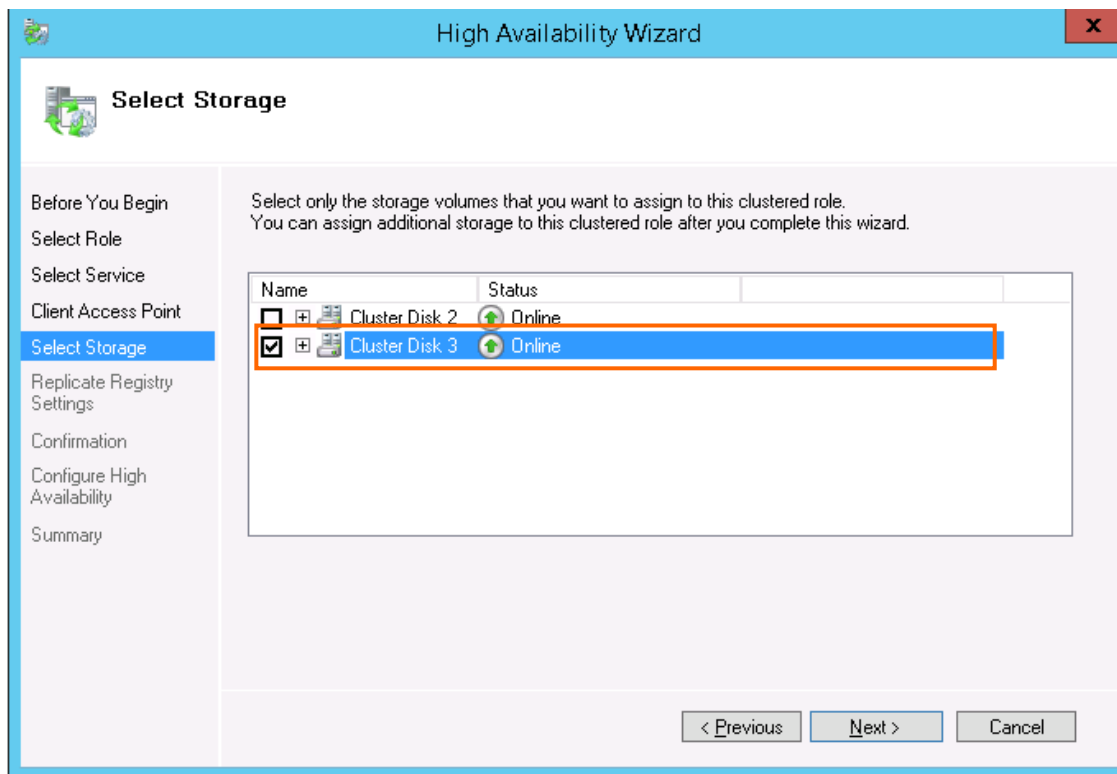


Figure 2-18 Selecting Memory Area

The Replicate Registry Settings dialog box is displayed. Click the Next button without specifying anything.

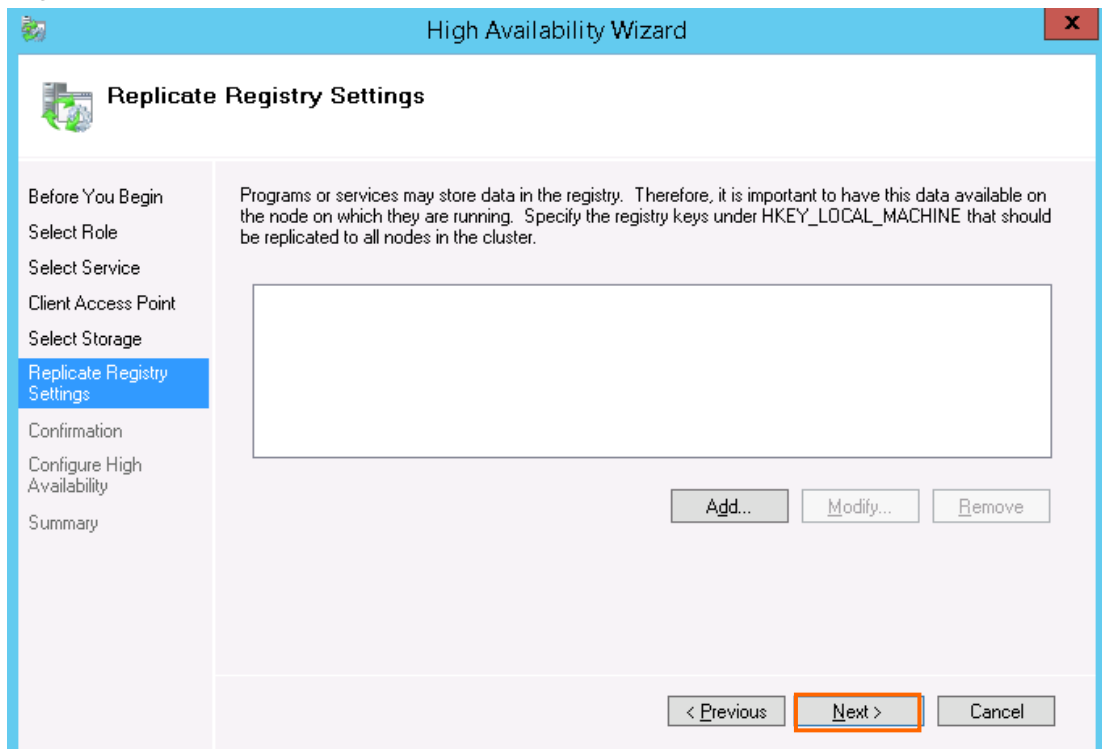


Figure 2-19 Replicating Registry Settings

The Confirmation dialog box for the standard service configuration is displayed. Check the settings, and then click the Next button.

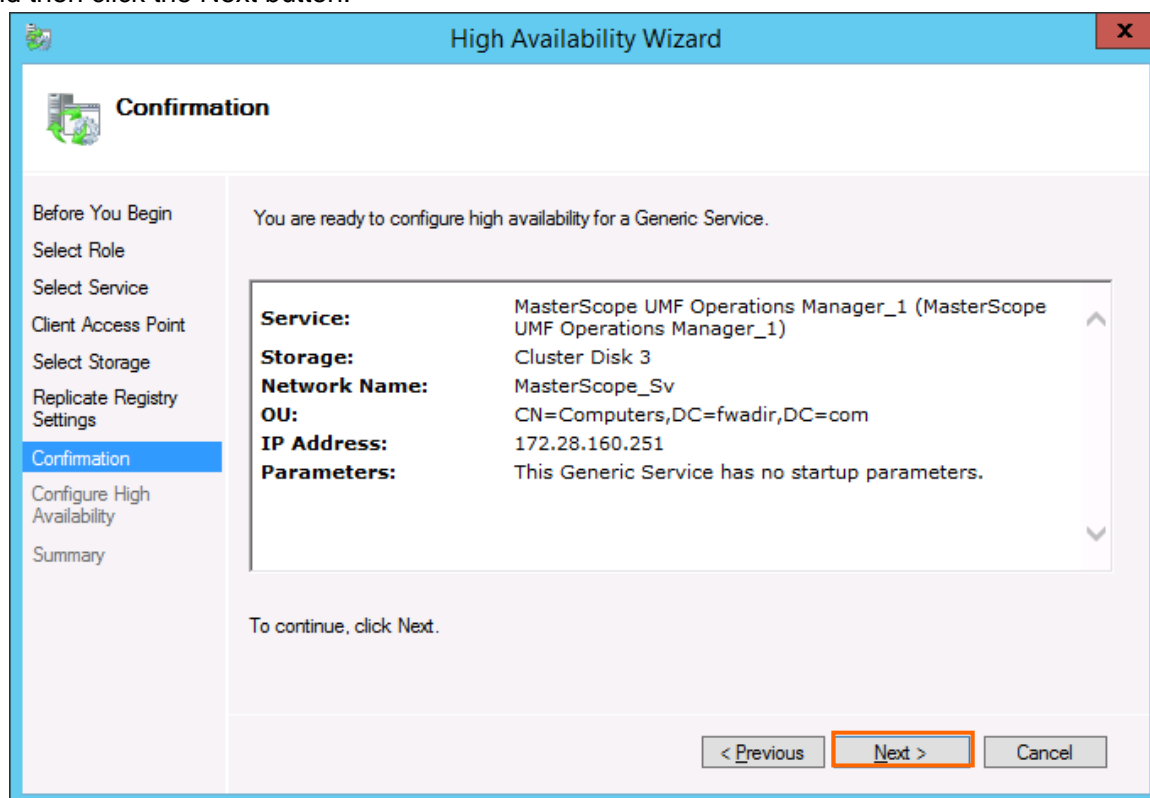


Figure 2-20 Confirming Standard Service Configuration

When the Summary dialog box is displayed, click the Finish button.

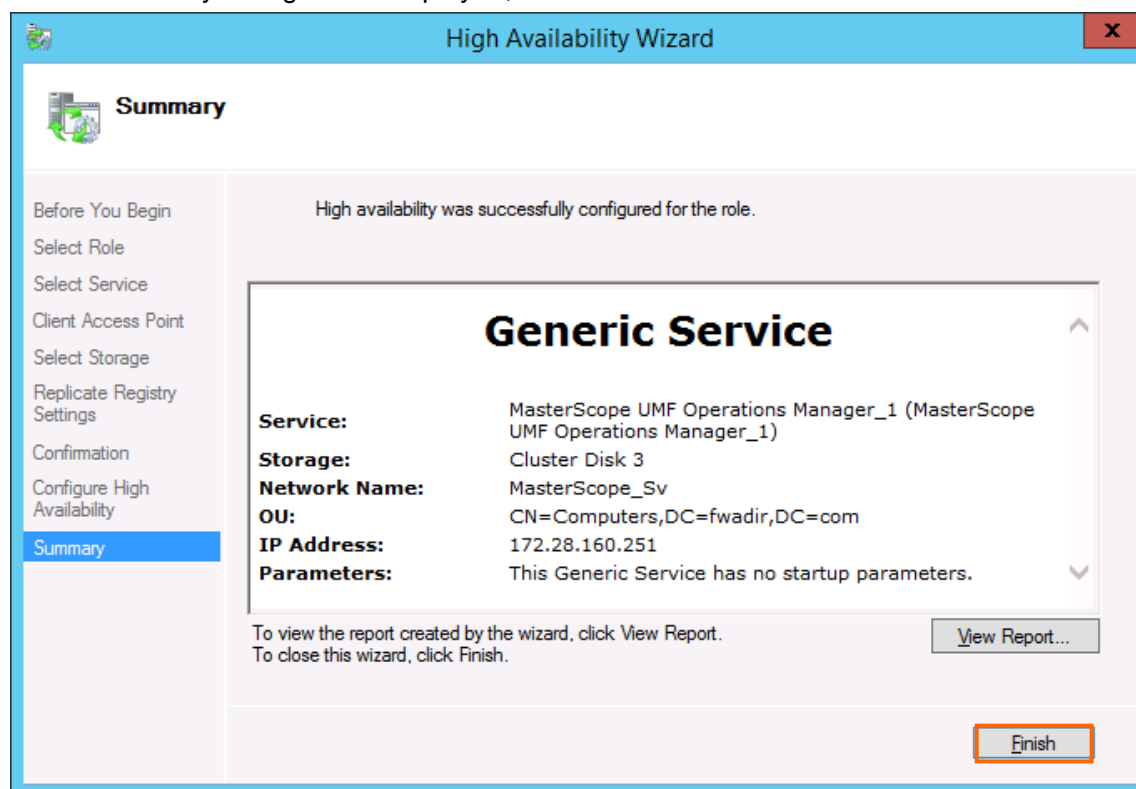


Figure 2-21 Completion of Resource Creation

After the creation is completed, confirm that the standard service resources have been created in the Role window displayed by clicking the Role node in the Failover Cluster Manager dialog box.

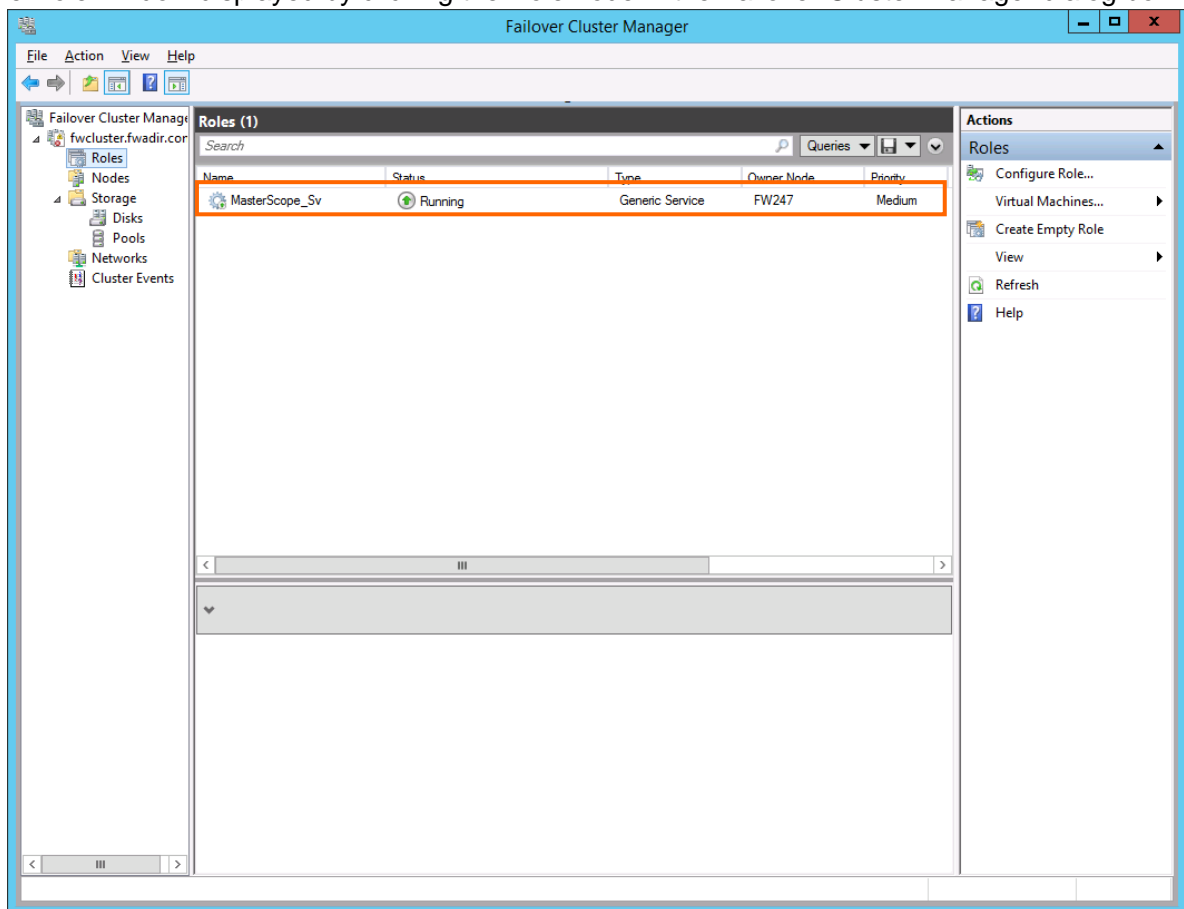


Figure 2-22 Failover Cluster Manager Dialog Box (After the resources are created)

* If using the bundled DB, add the resource for the bundled DB service in the same way. Set up the resource dependencies so that the bundled DB is dependent on SystemManager. Service name is [fdb_wfdbn].
 n indicates a service number of 1 or higher.
 (The value is set during installation of MasterScope products.)

(2) Starting resources

If the standard services are not started automatically, start them by performing the following procedure.

1. In the Failover Cluster Manager dialog box, right-click the icon of the created resource (MasterScope_Sv in this example).
2. Select Start Role from the displayed pop-up menu to start the standard services.

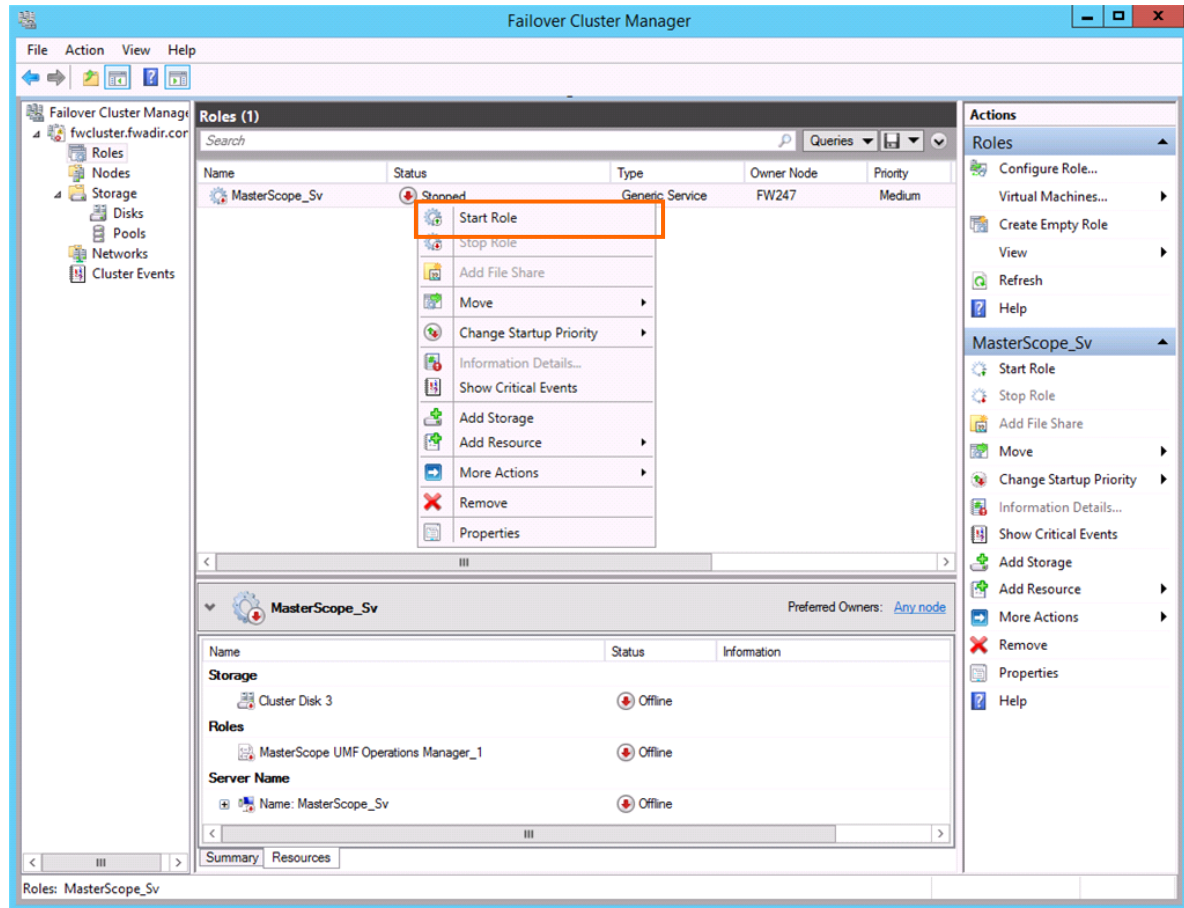


Figure 2-23 Making Resources Available Online

In addition, if the service has been started on the standby node, start the service on the active node by performing the following procedure.

1. In the Failover Cluster Manager dialog box, right-click the icon of the created resource (MasterScope_Sv in this example).
2. Select Select Node from the displayed pop-up menu.
3. In the Move Clusterd Role dialog box, select the destination node to move the standard services.

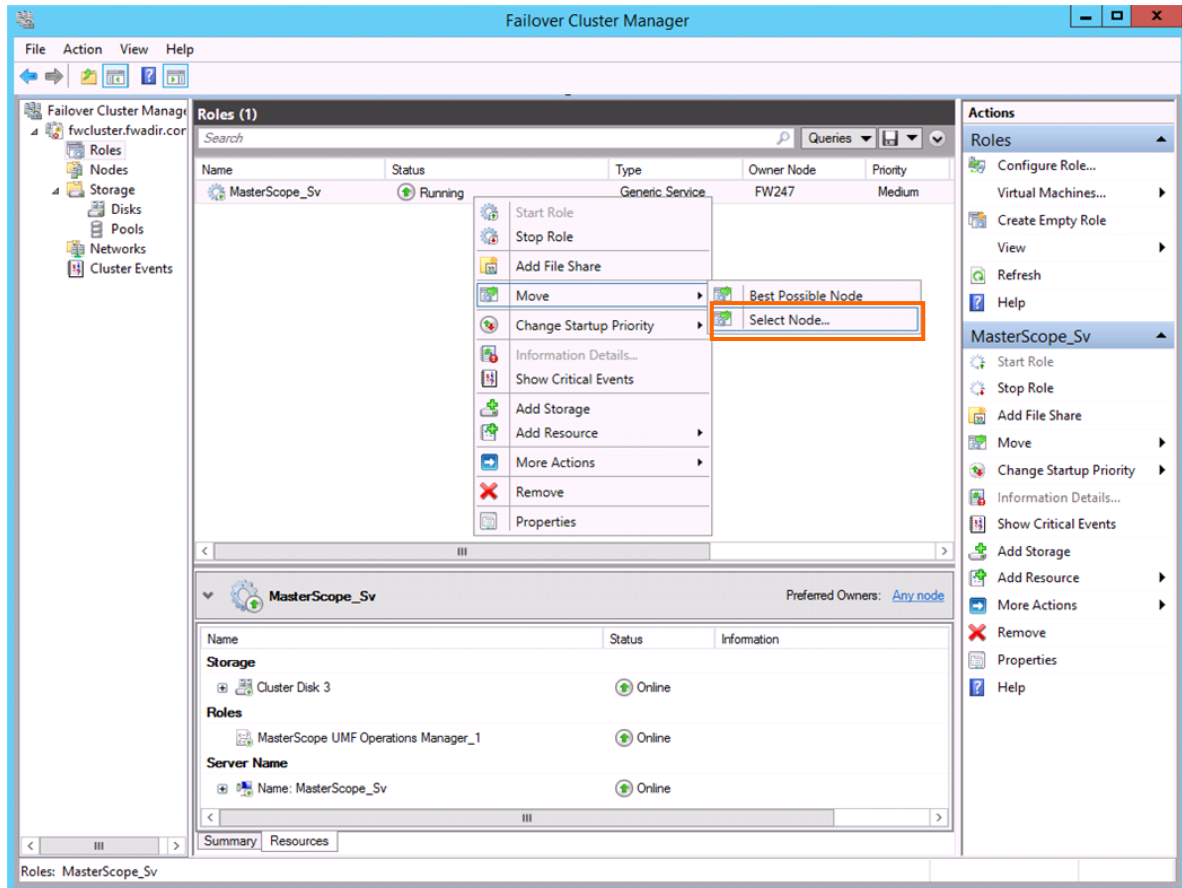


Figure 2-24 Moving Resources

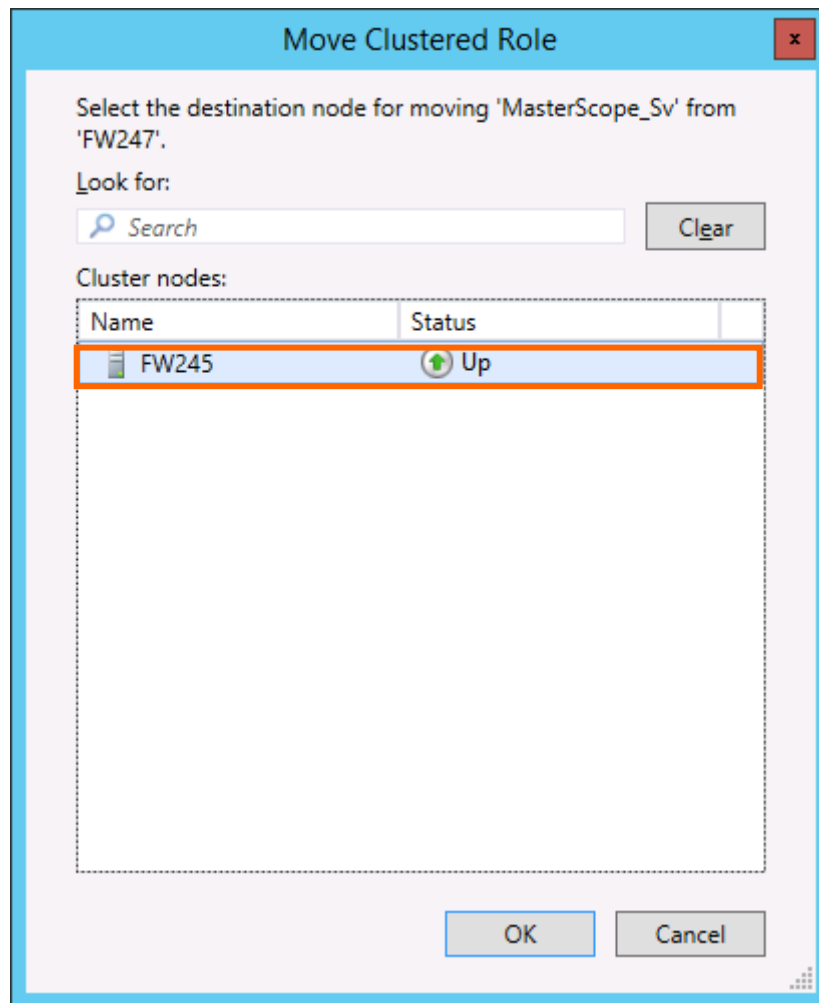


Figure 2-25 Selecting Node to Move

This concludes the WSFC setup.

3. Uninstalling SystemManager

3.1 Deleting WSFC resource settings

Delete the resources created in “2.3 Setting up SystemManager service monitoring resources”. Be sure to stop the target resources (standard services) by selecting Stop Role in the Failover Cluster Manager dialog box before deleting resources.

3.2 Uninstalling SystemManager

Uninstall SystemManager by performing the procedure described in the SystemManager Release Memo.

3.3 Deleting files

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

4. Other Notes

4.1 Registering licenses

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