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User Manual

Redundant Network Management System Industrial HiVision



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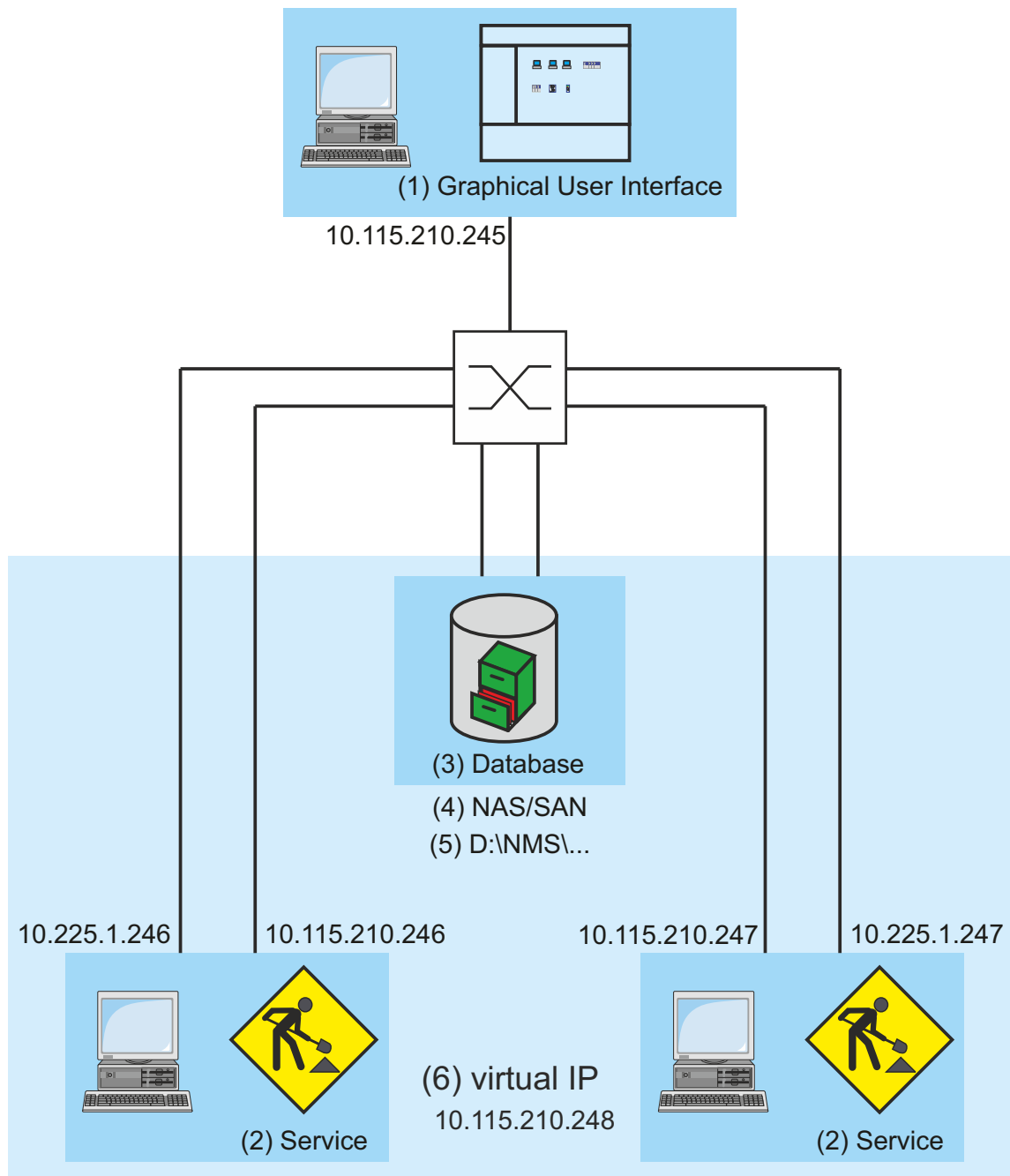
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1 Overview

For high-availability network management, the Industrial HiVision network management system enables you to install the software at 2 different locations. This provides a redundant design for:

- ▶ the network management station itself
- ▶ the connections between the 2 network management stations



(7) Network Management System (NMS) Component

(8) Cluster

Figure 1: Application for redundant Industrial HiVision installation
 (4) - NAS (Network-Attached Storage), SAN (Storage Area Network)

2 Failover Cluster

2.1 System Requirements

The system requirements for a redundant network management setup using Industrial HiVision are as follows:

- ▶ 2 Windows Servers 2019 with a shared NAS (Network-Attached Storage) or SAN (Storage Area Network)

The prerequisites are as follows:

- ▶ You have connected and configured NAS or SAN on both servers for example, over iSCSI (Internet Small Computer Systems Interface).

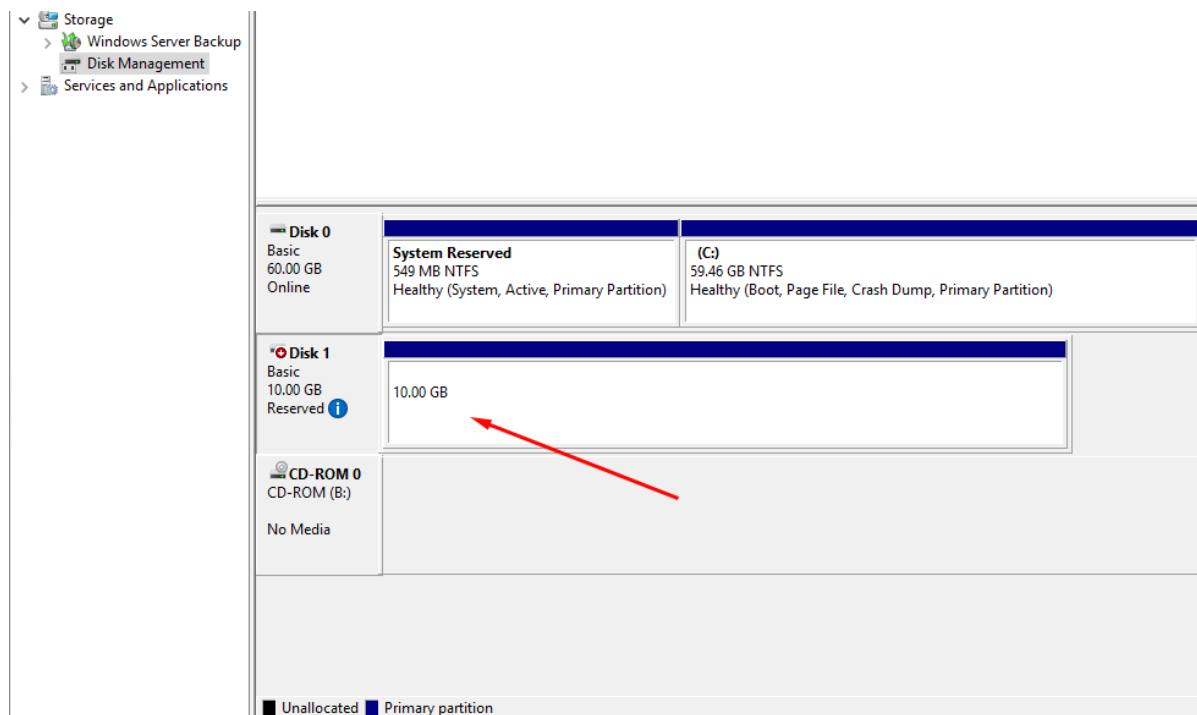
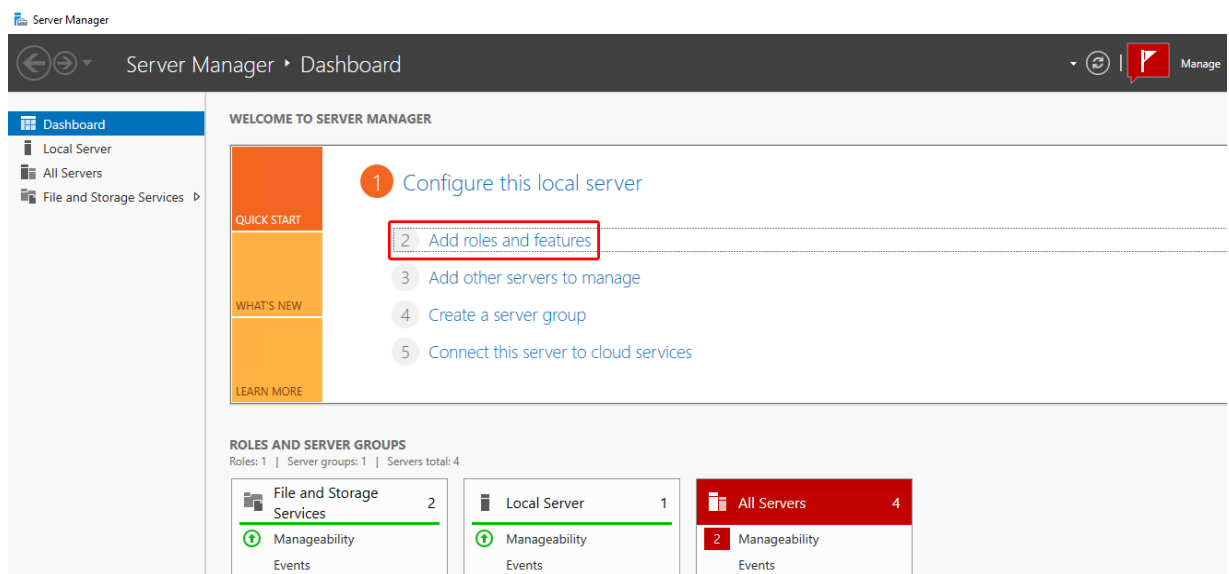


Figure 2: Using a shared NAS

2.2 Failover Clustering Installation

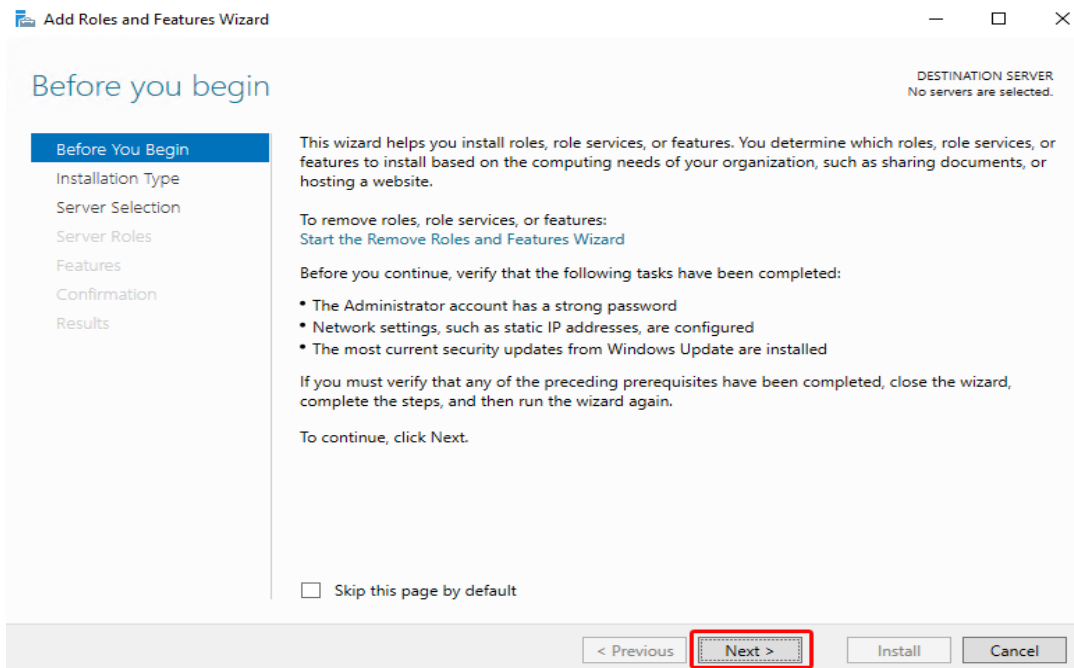
To install the Failover Clustering feature, perform the following steps for each server:

- Open the Server Manager application and click the Add roles and features option.

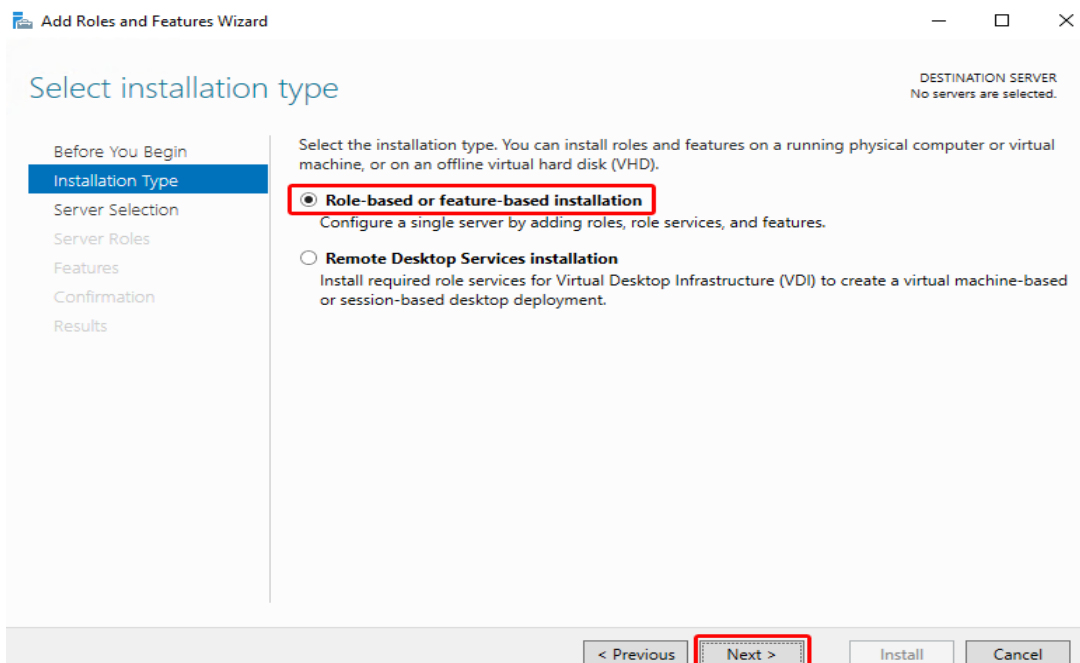


The Add Roles and Features Wizard opens.

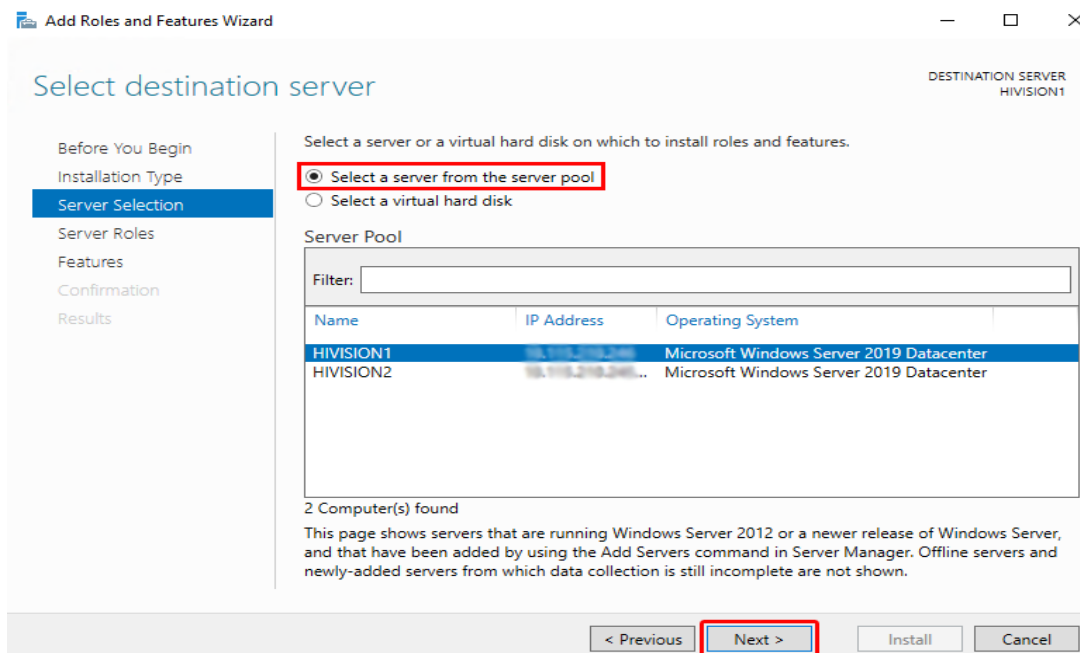
- In the Before You Begin dialog, click the Next button.



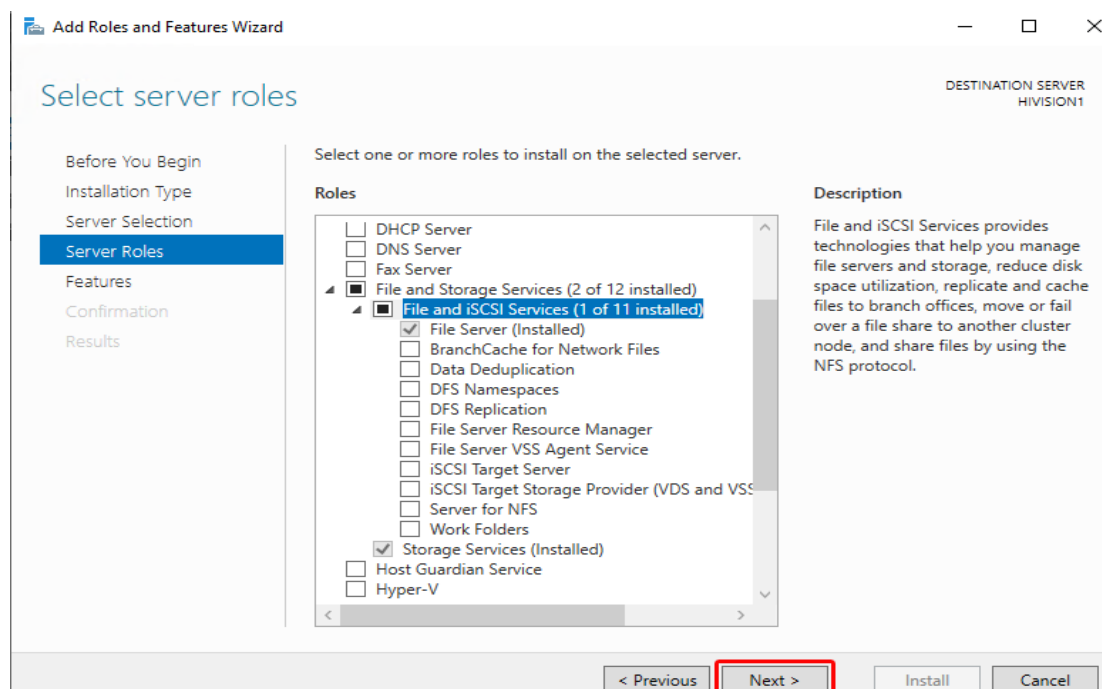
- In the Installation Type dialog, select the Role-based or feature-based installation radio button. Then click the Next button.



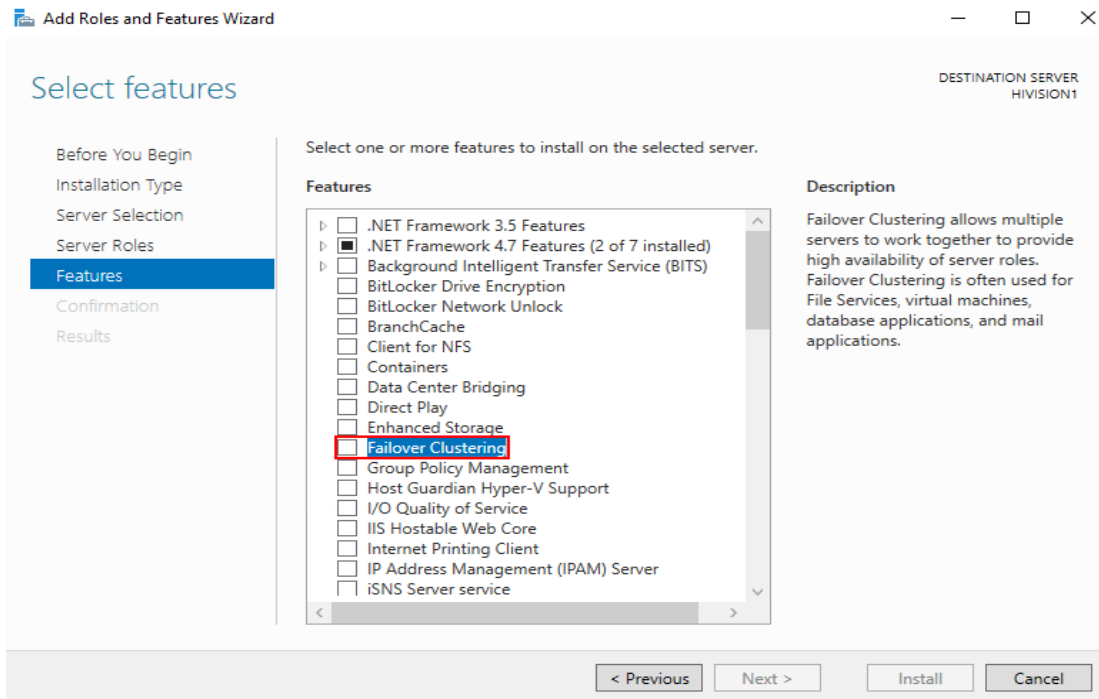
- In the Server Selection dialog, perform the following steps:
 - ▶ Select the Select a server from the server pool radio button.
 - ▶ In the Server Pool frame, select the desired destination server.
 - ▶ Click the Next button.



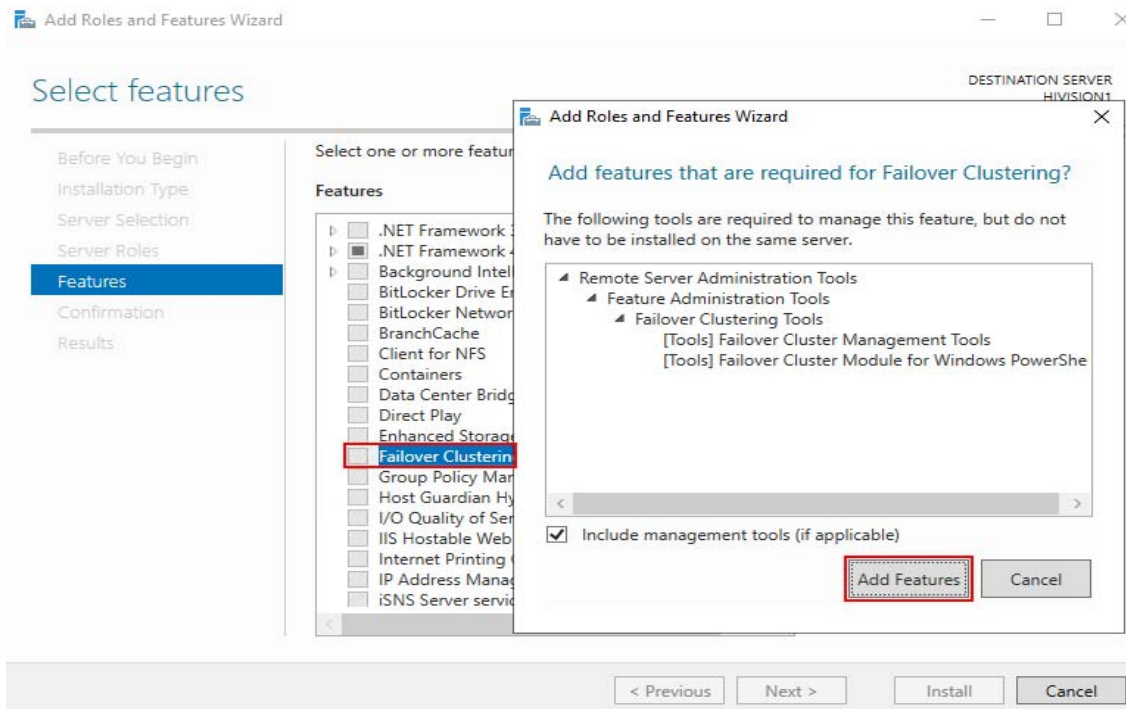
- In the Server Roles dialog, mark the File server and the Storage Services checkboxes, then click the Next button.



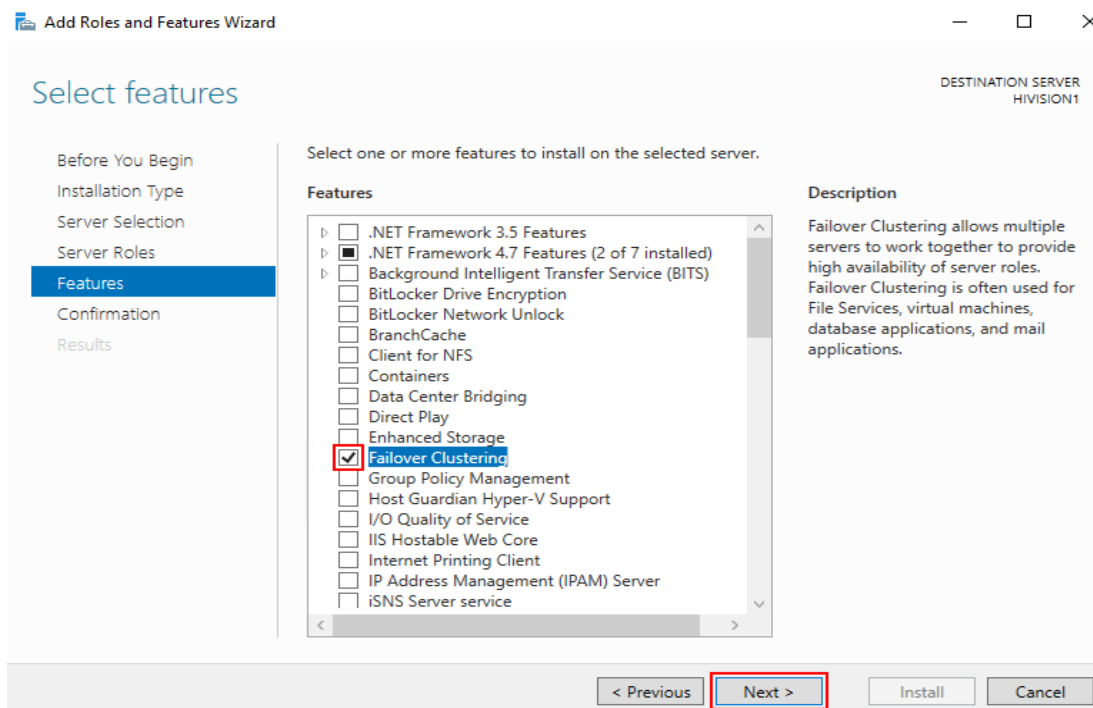
- In the Features dialog, mark the Failover Clustering checkbox.



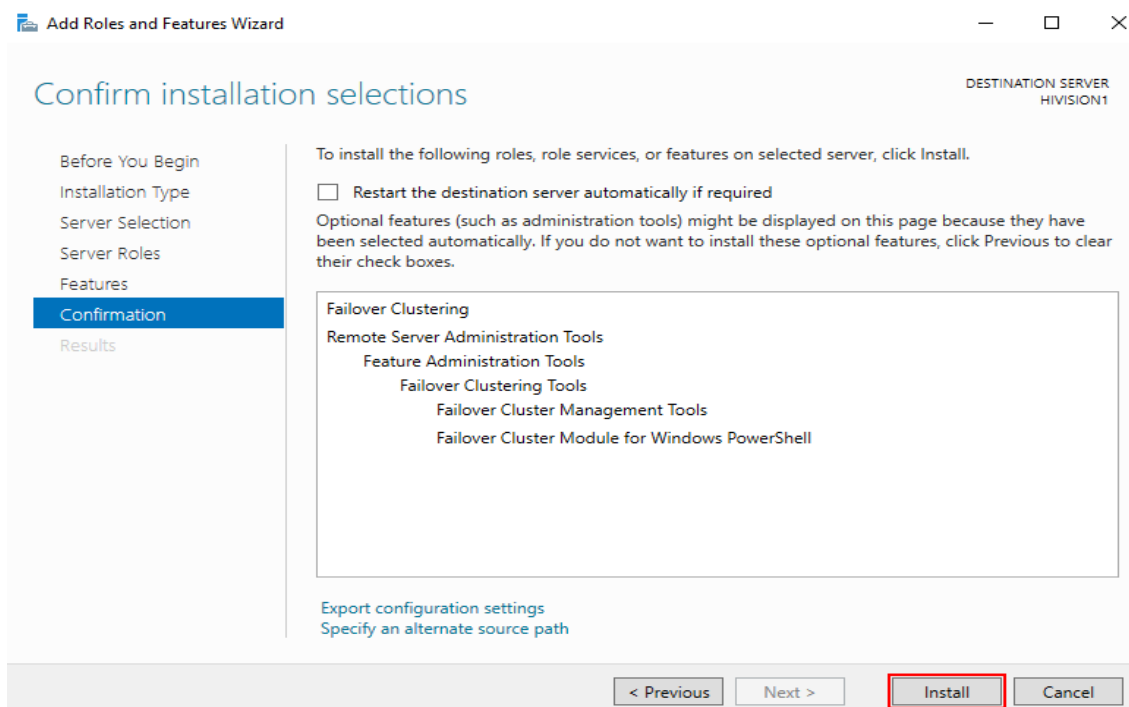
- In the Add Roles and Features Wizard popup window, click the Add Features button.



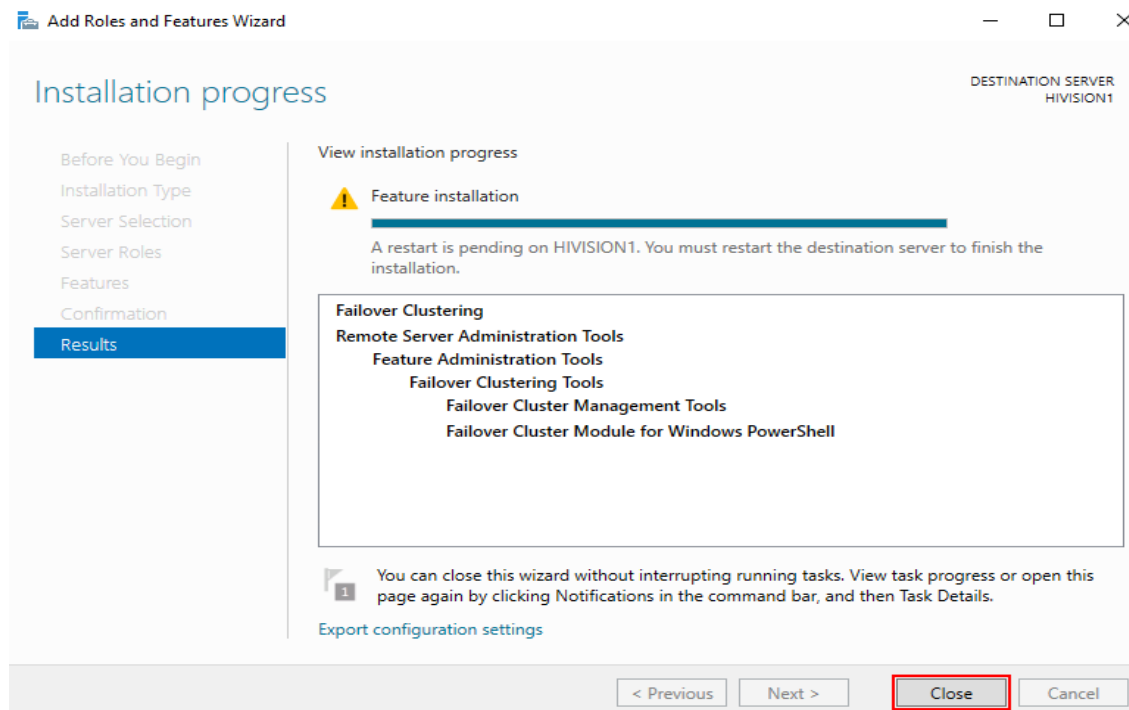
- In the Features dialog, click the Next button.



In the **Confirmation** dialog, click the **Install** button.



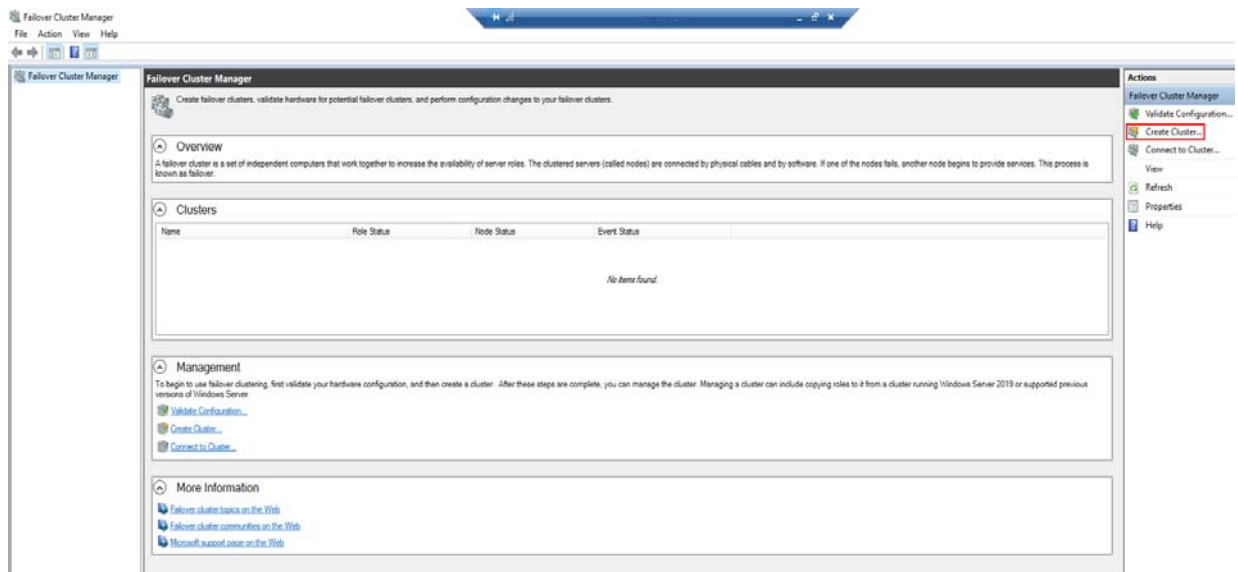
In the **Results** dialog, after the feature installation process is complete, click the **Close** button.



- To finish the installation, restart the destination server.

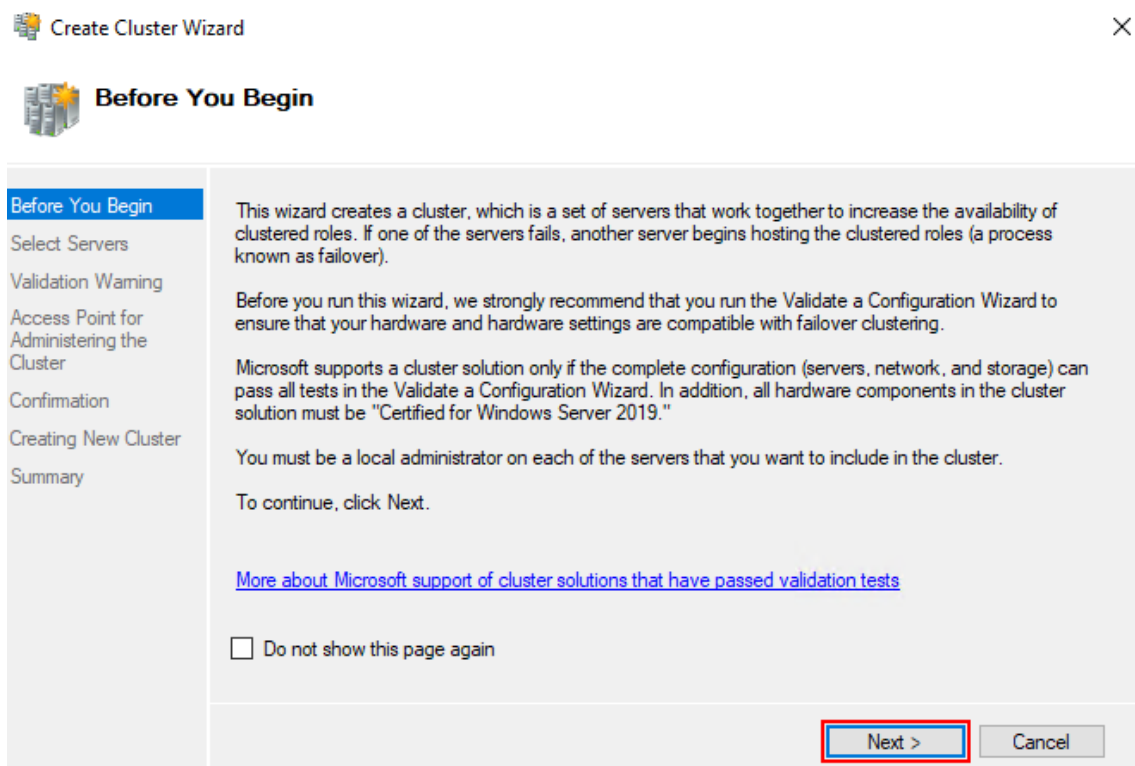
2.2.1 Creation of the cluster

- Open the Failover Cluster Manager tool.
- In the Actions frame, select the Create Cluster option.



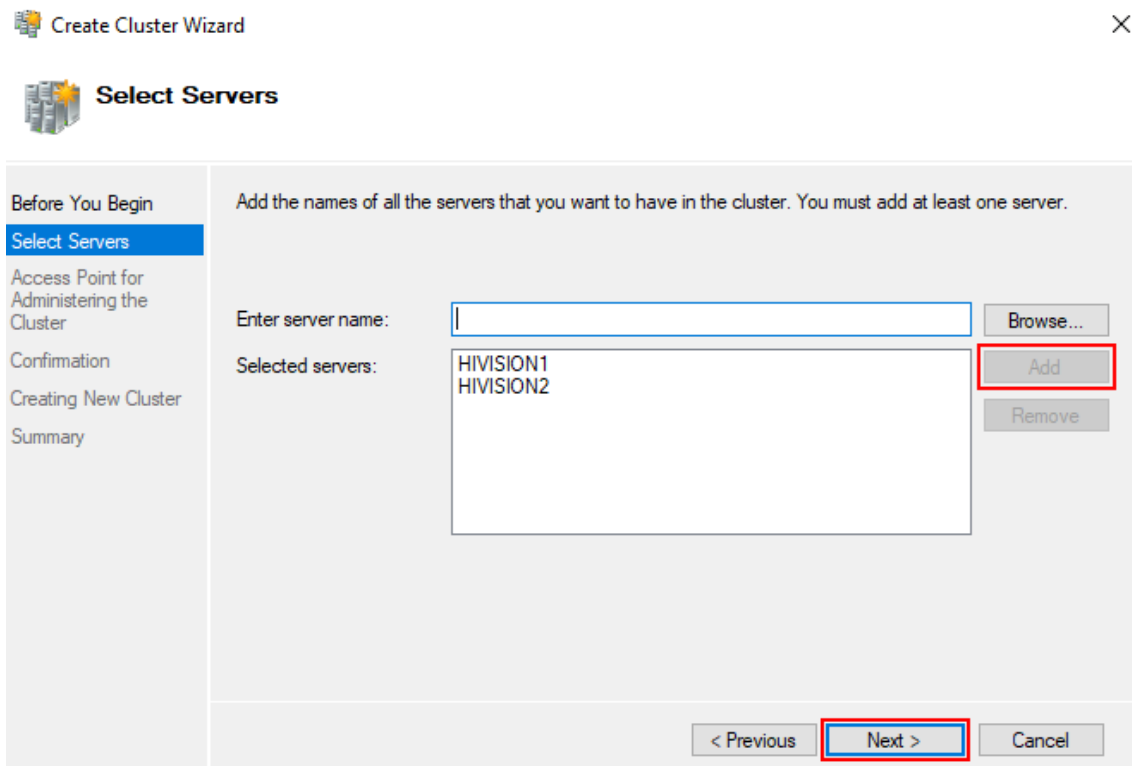
The Create Cluster Wizard opens.

- In the Before You Begin dialog, click the Next button.



- In the Select Servers dialog, perform the following steps:
 - ▶ In the Enter server name field, specify the name of the servers or their IP addresses one at a time.
 - ▶ Click the Add button for each server.
 - ▶ Click the Next button.

Note: Verify that the selected servers are not part of other clusters.



- In the `Access Point for Administering the Cluster` dialog, perform the following steps:
- ▶ In the `Cluster Name` field, specify the name of the cluster.
 - ▶ In the `Address` field, specify the IP address of the cluster.
 - ▶ Click the `Next` button.

Note: Verify that the IP address of the cluster is in the same range as the servers.

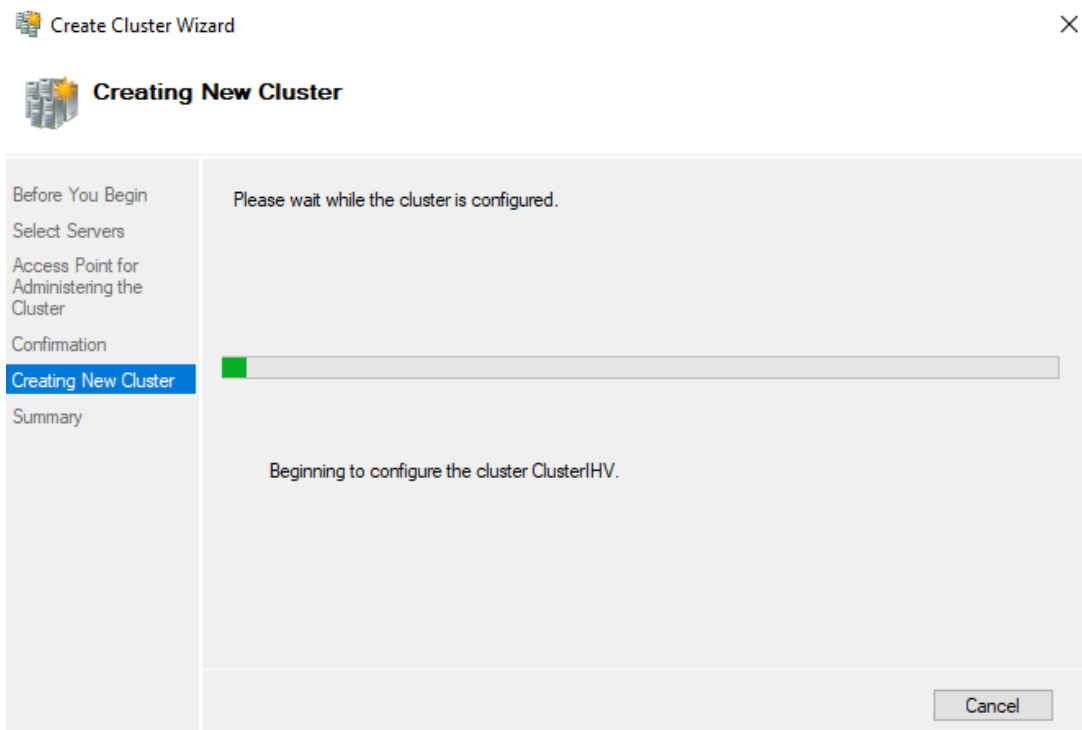
The screenshot shows the 'Access Point for Administering the Cluster' dialog box. On the left is a navigation pane with the following items: 'Before You Begin', 'Select Servers', 'Access Point for Administering the Cluster' (highlighted in blue), 'Confirmation', 'Creating New Cluster', and 'Summary'. The main area contains the text: 'Type the name you want to use when administering the cluster.' Below this is a text box for 'Cluster Name' containing 'Cluster1HV'. An information icon (i) is followed by the text: '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.' Below this is a table with two columns: 'Networks' and 'Address'. The first row has a checked checkbox in the 'Networks' column and the IP address '10.110.210.210' in the 'Address' column. At the bottom right are three buttons: '< Previous', 'Next >' (highlighted with a red box), and 'Cancel'.

	Networks	Address
<input checked="" type="checkbox"/>	10.110.210.210	10 . 110 . 210 . 210

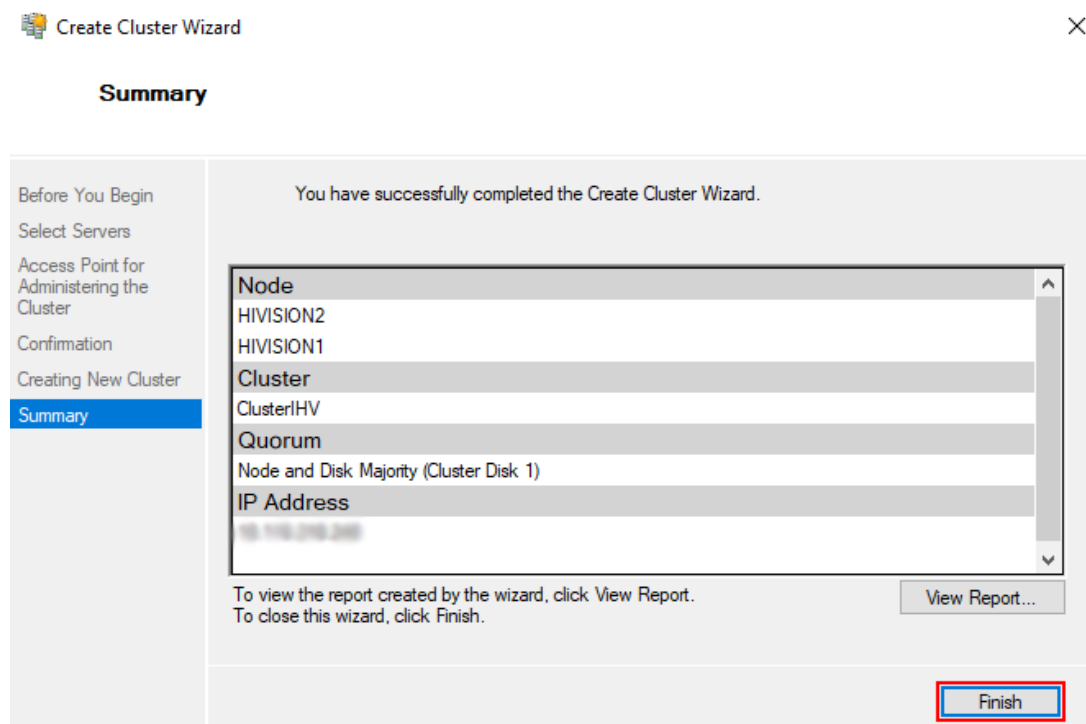
In the Confirmation dialog, click the Next button.

The screenshot shows the 'Confirmation' dialog box. On the left is a navigation pane with the following items: 'Before You Begin', 'Select Servers', 'Access Point for Administering the Cluster', 'Confirmation' (highlighted in blue), 'Creating New Cluster', and 'Summary'. The main area contains the text: 'You are ready to create a cluster. The wizard will create your cluster with the following settings:'. Below this is a list box containing the following items: 'Cluster', 'Cluster1HV', 'Node', 'HIVISION2', 'HIVISION1', 'Cluster registration', and 'DNS only'. Below the list box is a checked checkbox with the text: 'Add all eligible storage to the cluster.' Below this is the text: 'To continue, click Next.' At the bottom right are three buttons: '< Previous', 'Next >' (highlighted with a red box), and 'Cancel'.

- In the **Creating New Cluster** dialog, wait until the creation process ends.



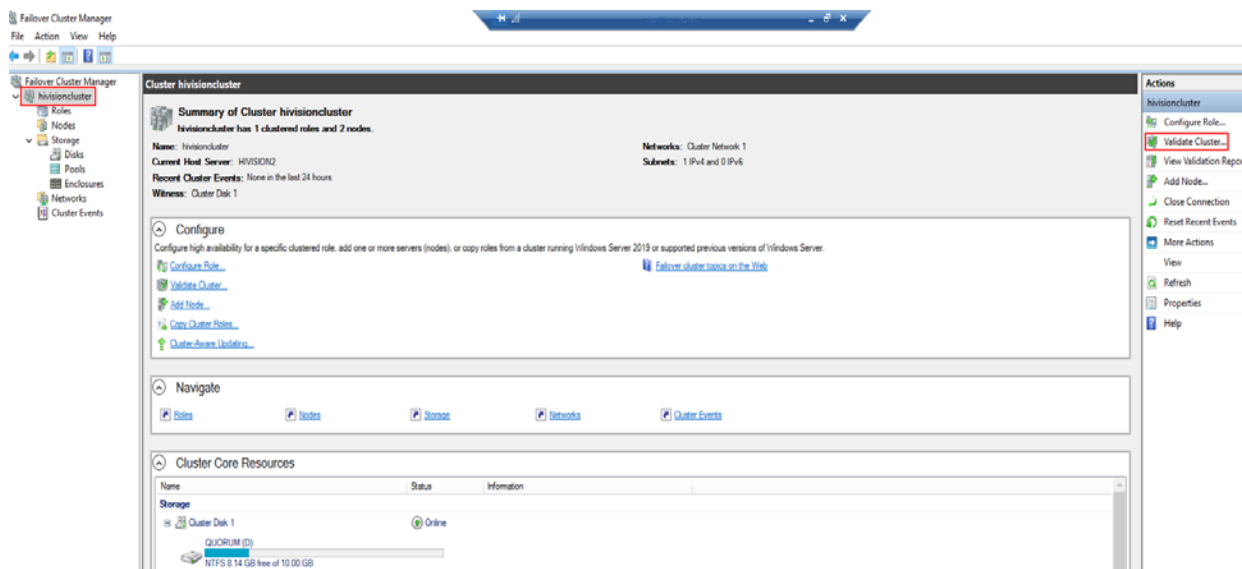
- In the **Summary** dialog, click the **Finish** button.



2.2.2 Validation of the Failover Cluster

To validate the Failover Cluster, perform the following steps:

- Open the Failover Cluster Manager tool.
- Click the name of your cluster (for example `hivisioncluster`) and select the `Validate Cluster` option in the `Actions` frame.



The `Validate a Configuration Wizard` opens.

- In the `Before You Begin` dialog, click the `Next` button.

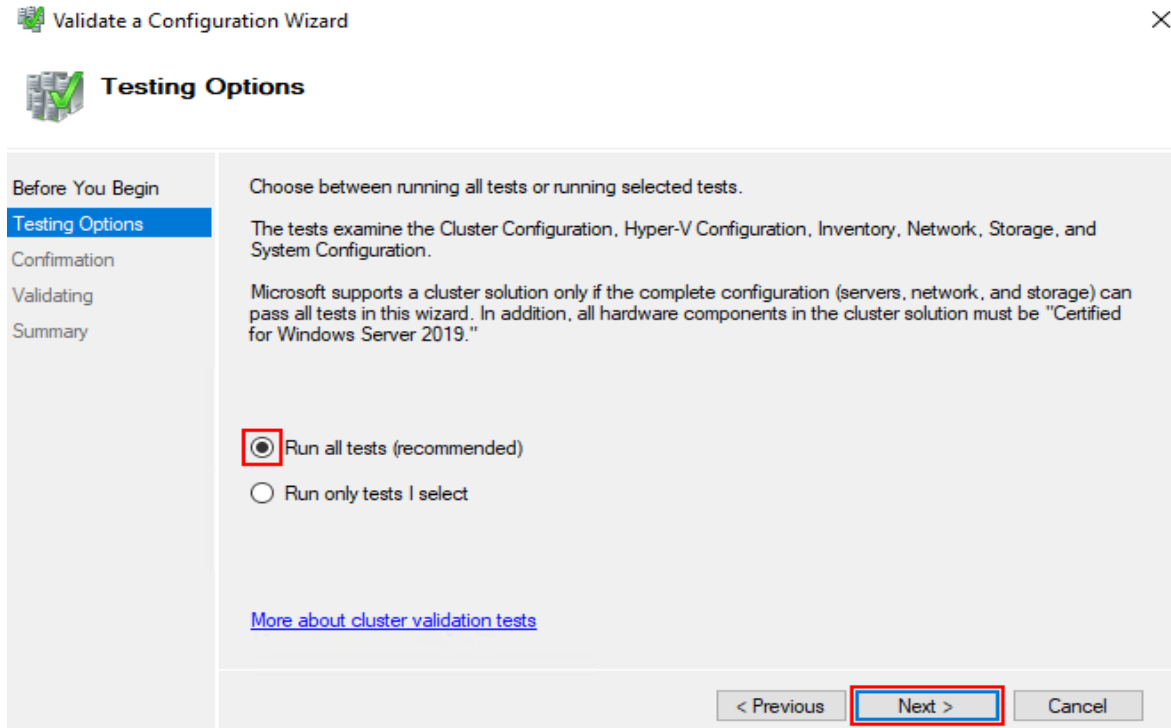
Validate a Configuration Wizard



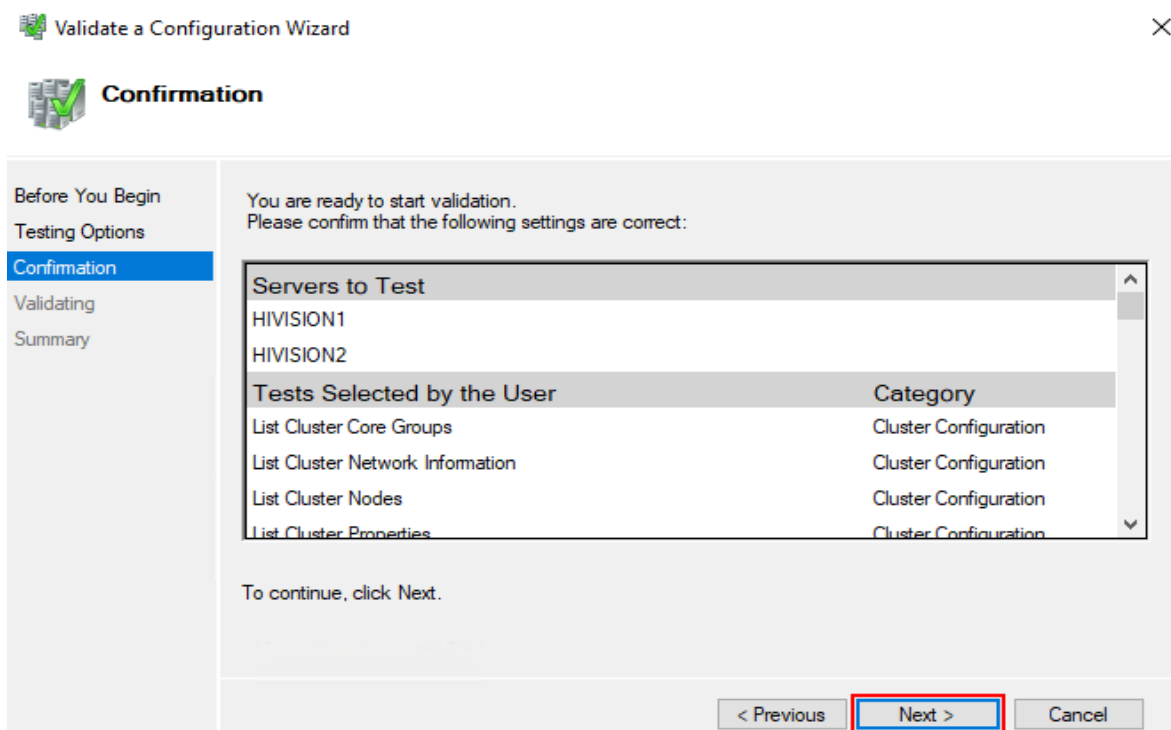
Before You Begin



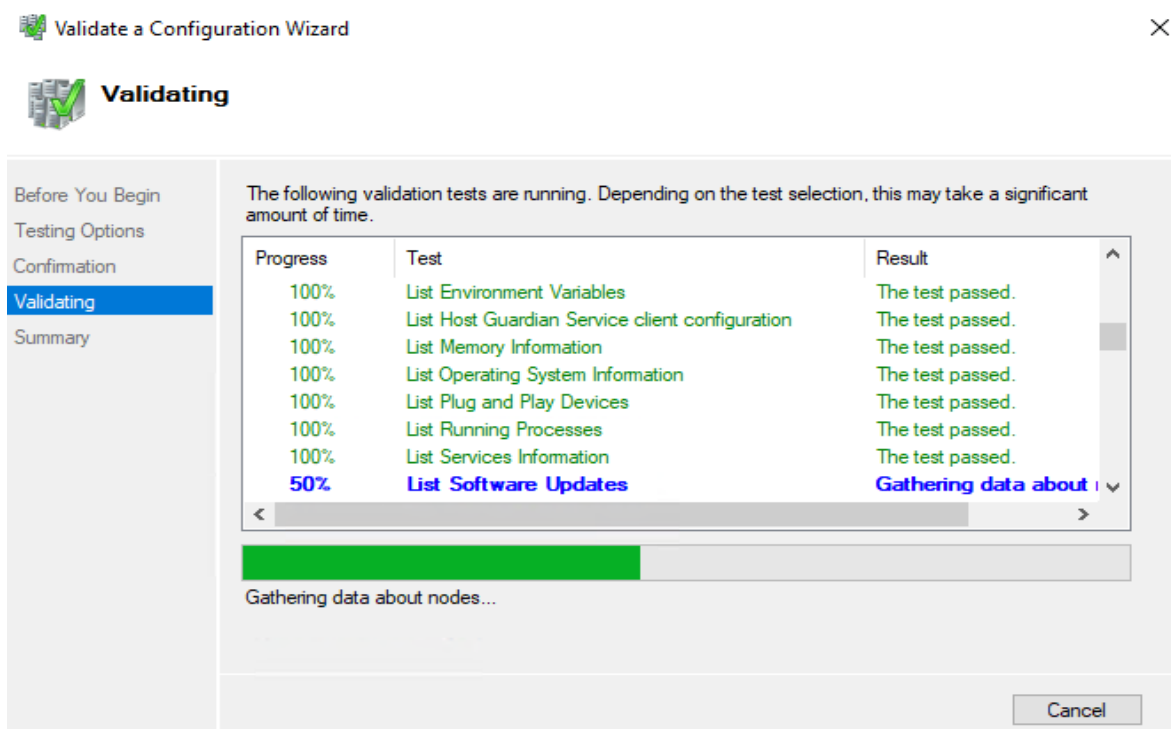
- In the `Testing Options` dialog, select the `Run all tests` radio button. Then click the `Next` button.



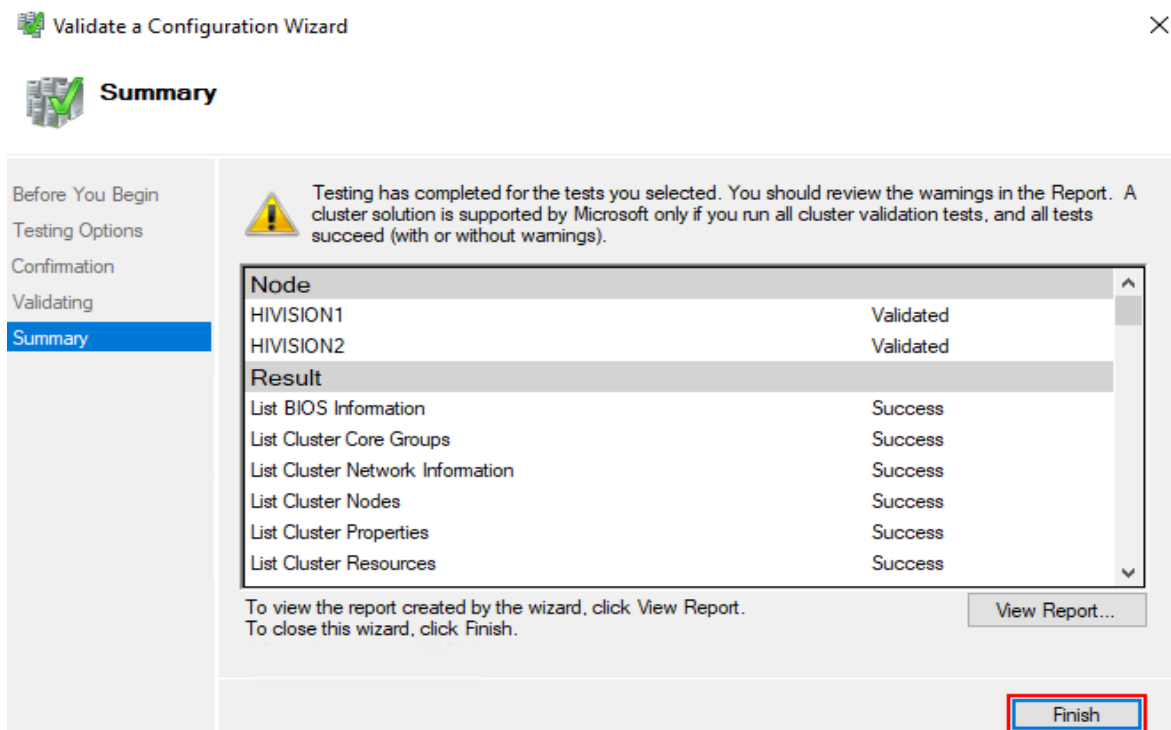
- In the `Confirmation` dialog, click the `Next` button.



- In the `Validating` dialog, wait until the validation tests end.



- In the `Summary` dialog, click the `Finish` button.



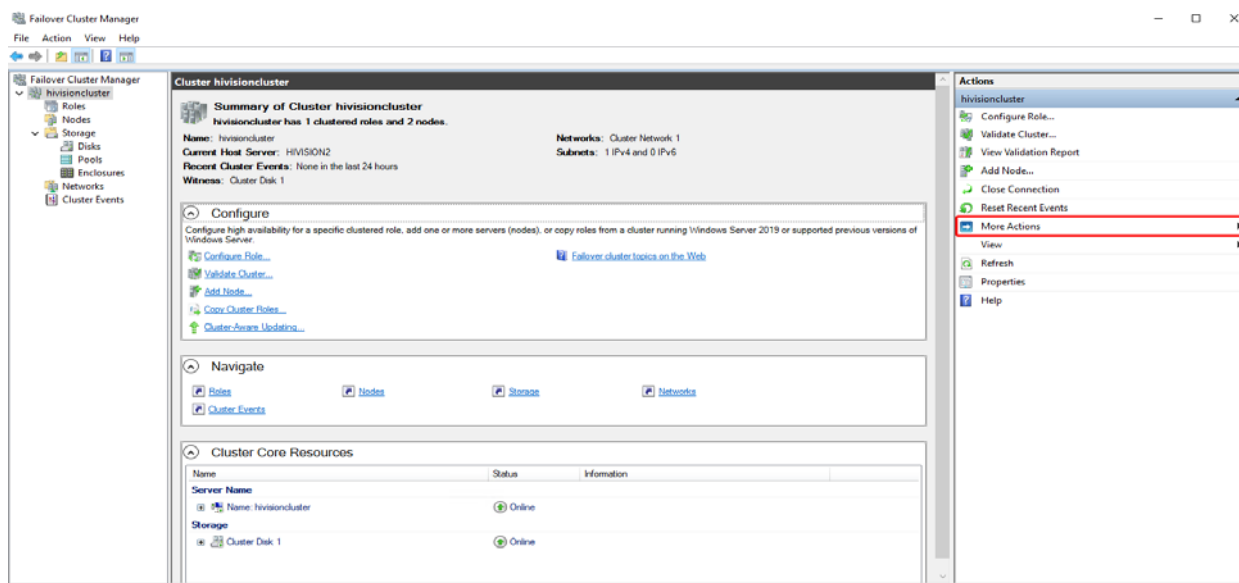
2.3 Installation of Industrial HiVision

To install the Industrial HiVision application, perform the following steps:

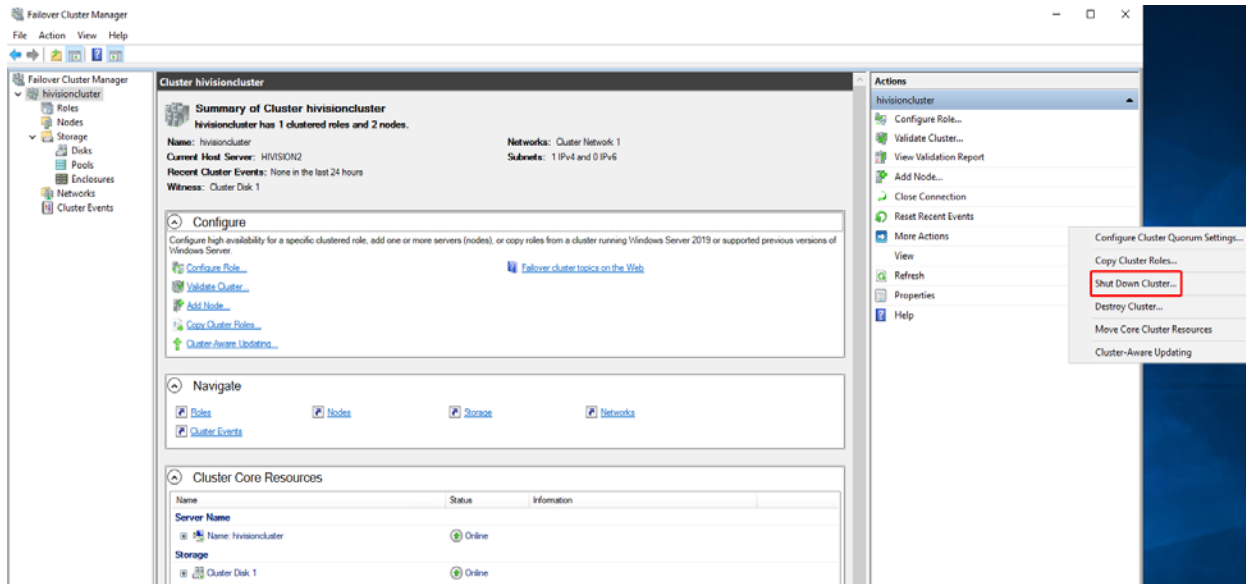
- ❑ Install the Industrial HiVision application on the first server. Use the NAS storage area as installation directory.

Note: Refer to the "Industrial HiVision (Network Management System)" user manual, "Software Overview" chapter for the installation steps.

- ❑ During the installation process, in the `Configure start of services` dialog, select the `Start services automatically at system start` option.
- ❑ To stop the cluster service, perform the following steps:
 - ▶ Open the `Failover Cluster Manager` tool.
 - ▶ Click the name of your cluster (for example `hivisioncluster`) and select the `More Actions` option in the `Actions` frame.



- ▶ In the drop-down list, click the `Shut Down Cluster` entry.



- Install the Industrial HiVision application on the second server. Use the same directory in the NAS storage area as for the installation on the first server.

Note: In this case you overwrite intentionally the previous installation.

Note: Refer to the "Industrial HiVision (Network Management System)" user manual, "Software Overview" chapter for the installation steps.

- During the installation process, in the `Configure start of services` dialog, select the `Start services automatically at system start` option.

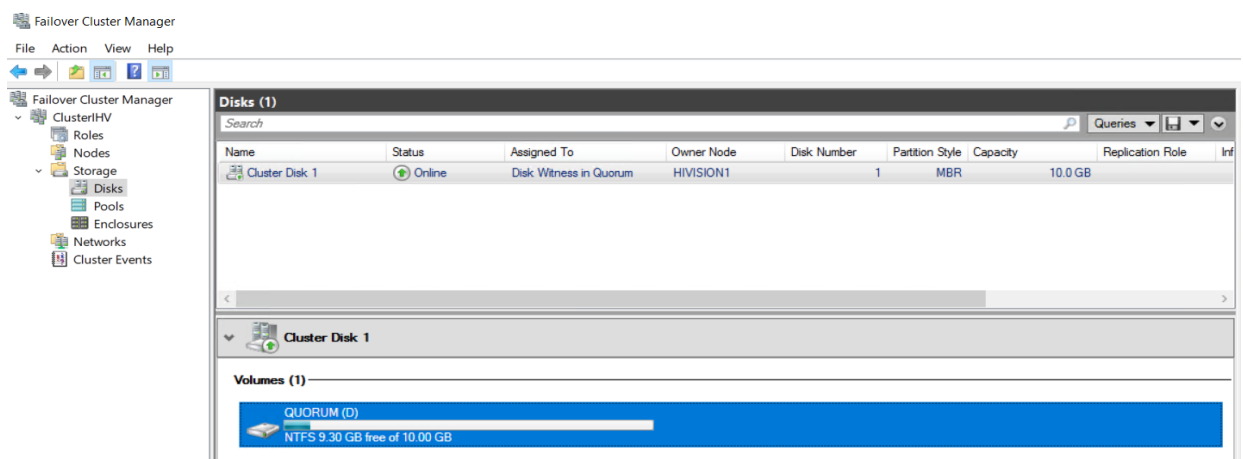
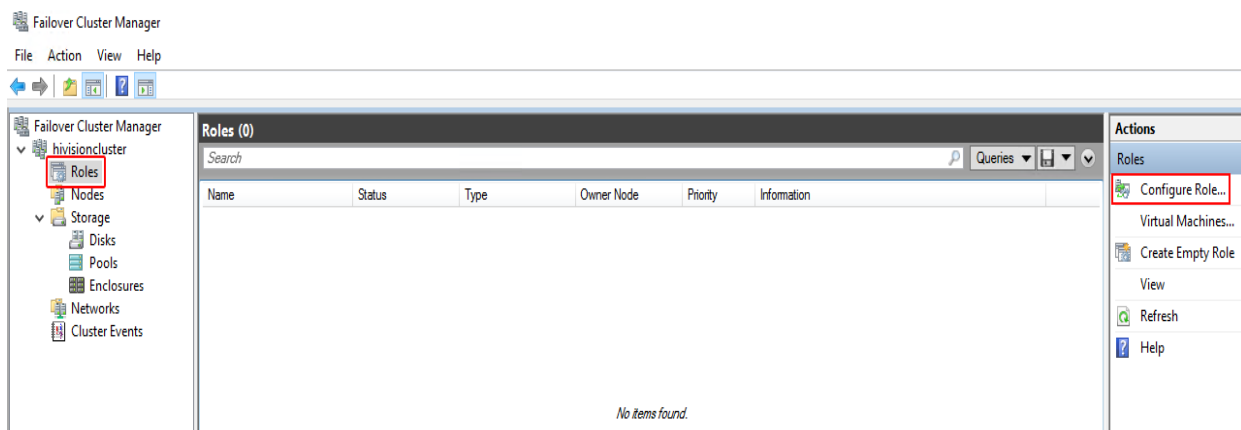


Figure 3: Summary of storage

2.3.1 Clustering of Hirschmann Industrial HiVision xx.x.xx Service

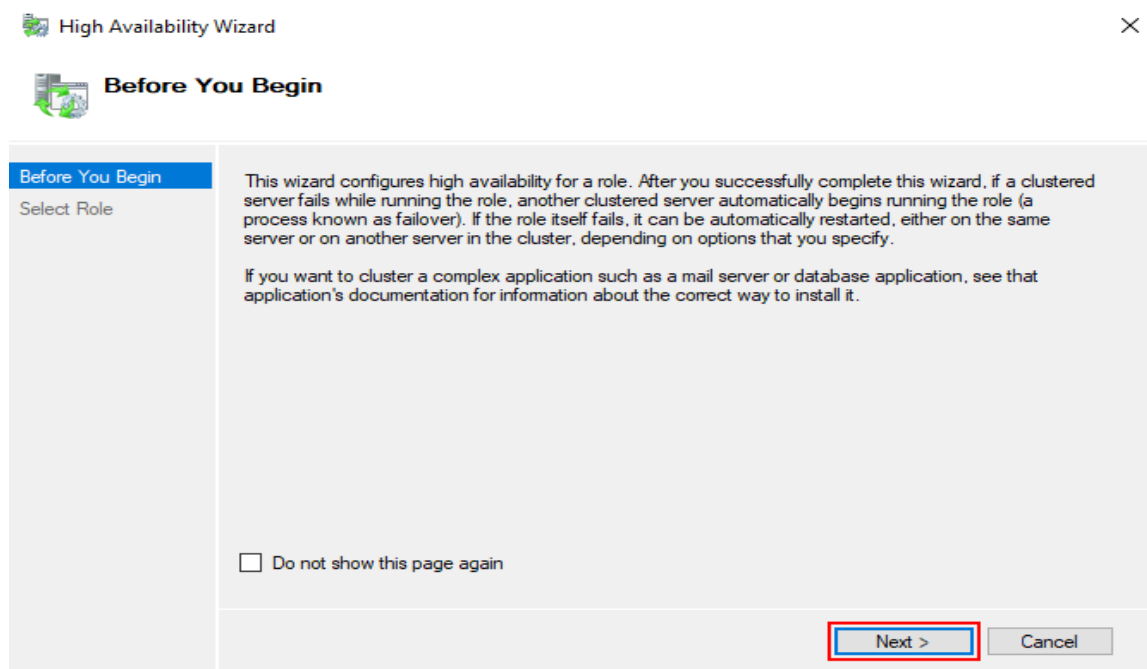
To add the Hirschmann Industrial HiVision xx.x.xx Service, perform the following steps:

- Open the Failover Cluster Manager tool.
- Click the Roles entry and select the Configure Role option in the Actions frame.

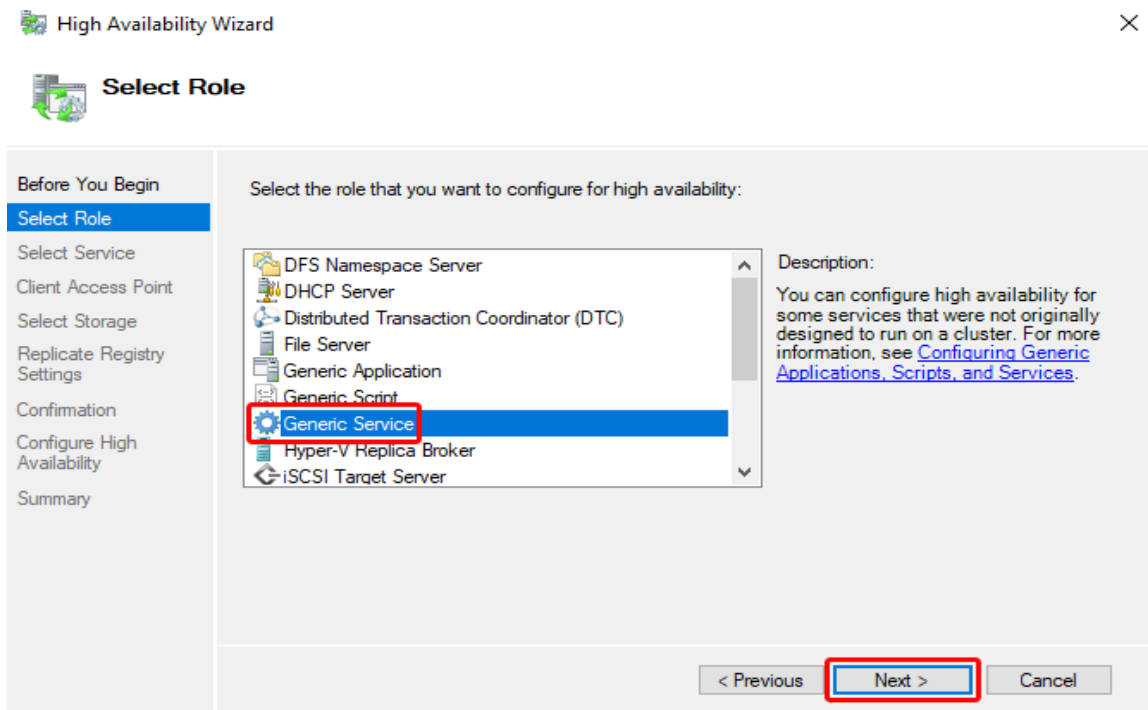


The High Availability Wizard opens.

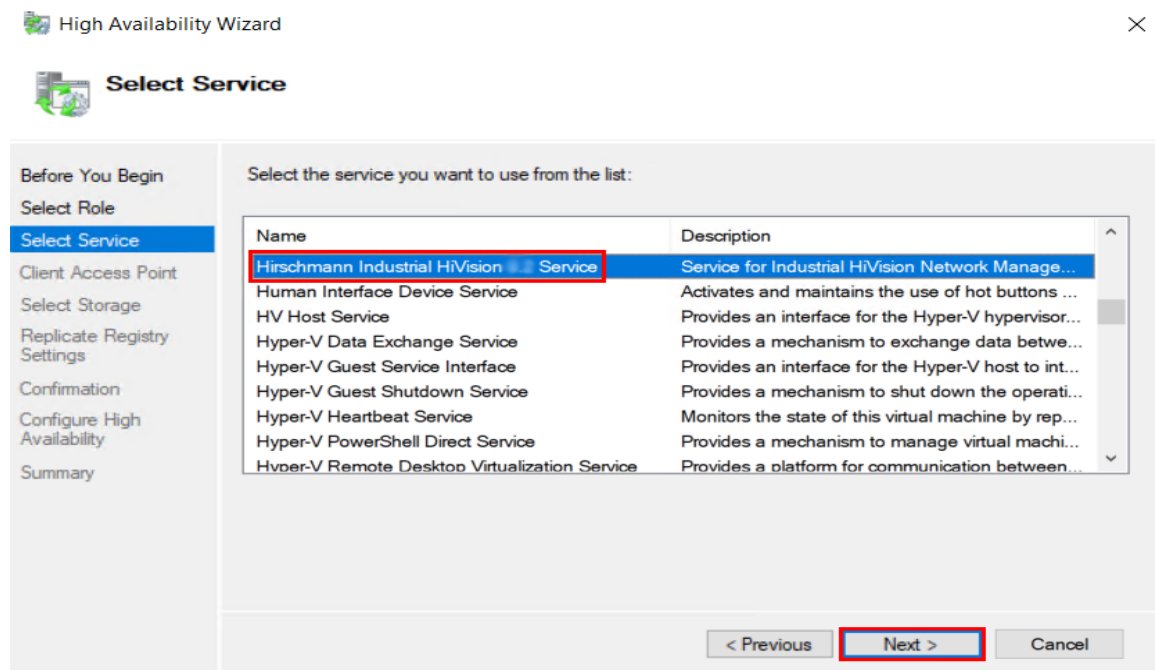
- In the Before You Begin dialog, click the Next button.



- In the Select Role dialog, select the Generic Service role and click the Next button.

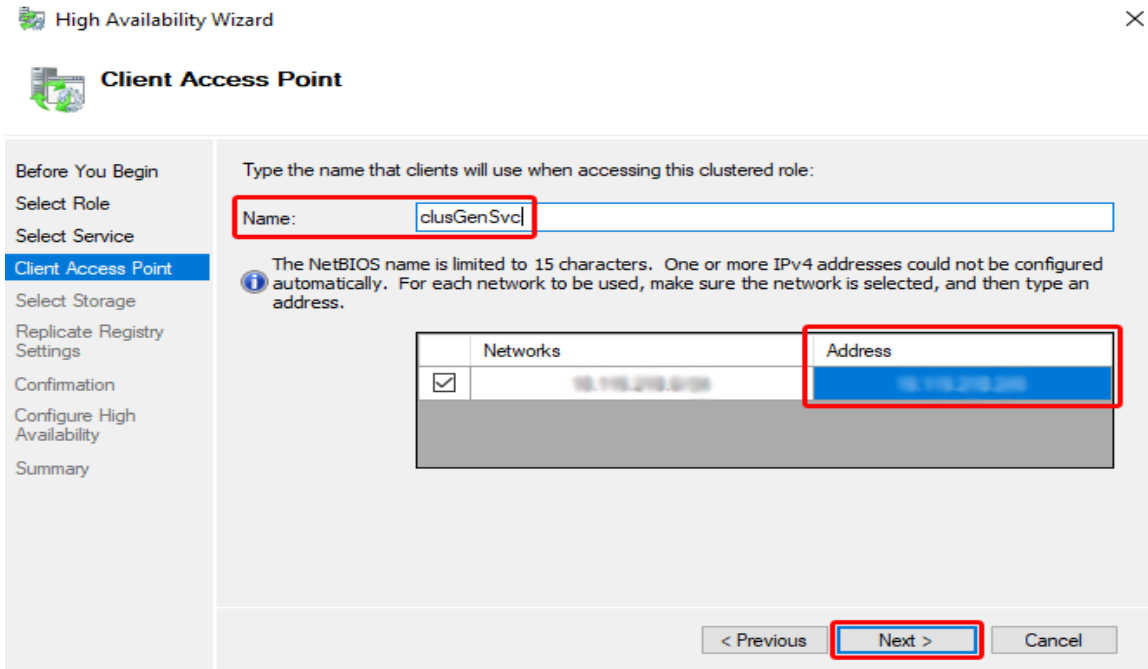


- In the Select Service dialog, select the Hirschmann Industrial HiVision xx.x.xx Service option and click the Next button.

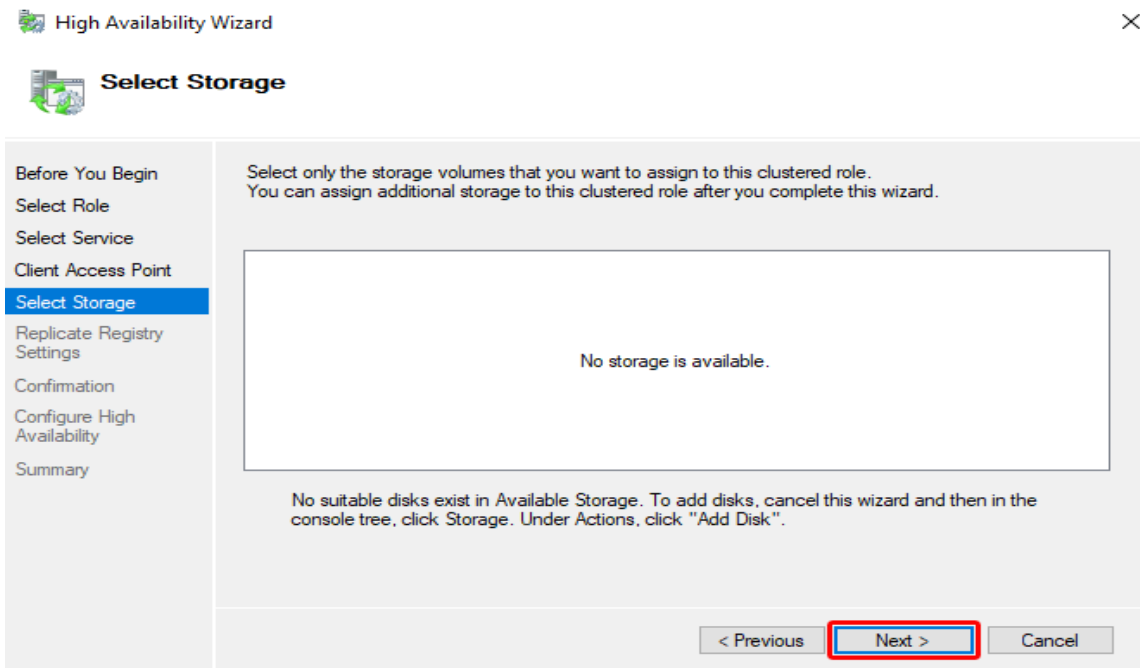


- In the Client Access Point dialog, perform the following steps:
 - ▶ In the Name field, specify the name of the access point.
 - ▶ In the Address field, specify the IP address of the access point.
 - ▶ Click the Next button.

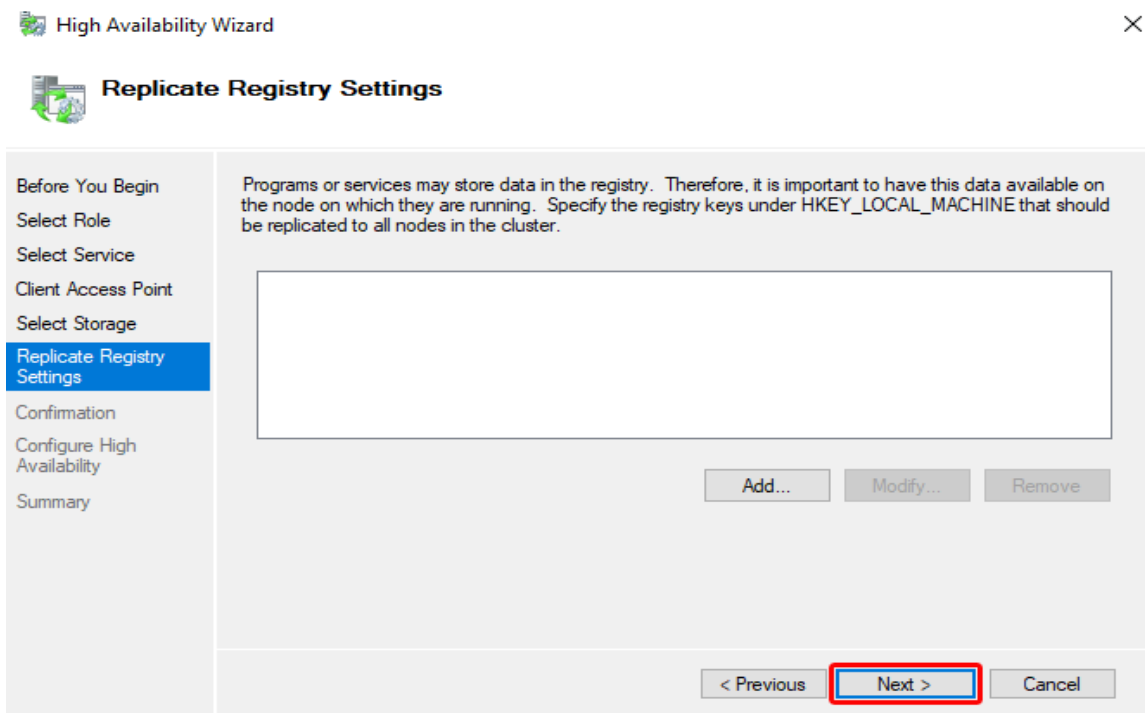
Note: Verify that the IP address of the access point is a free IP address, in the same range as the servers.



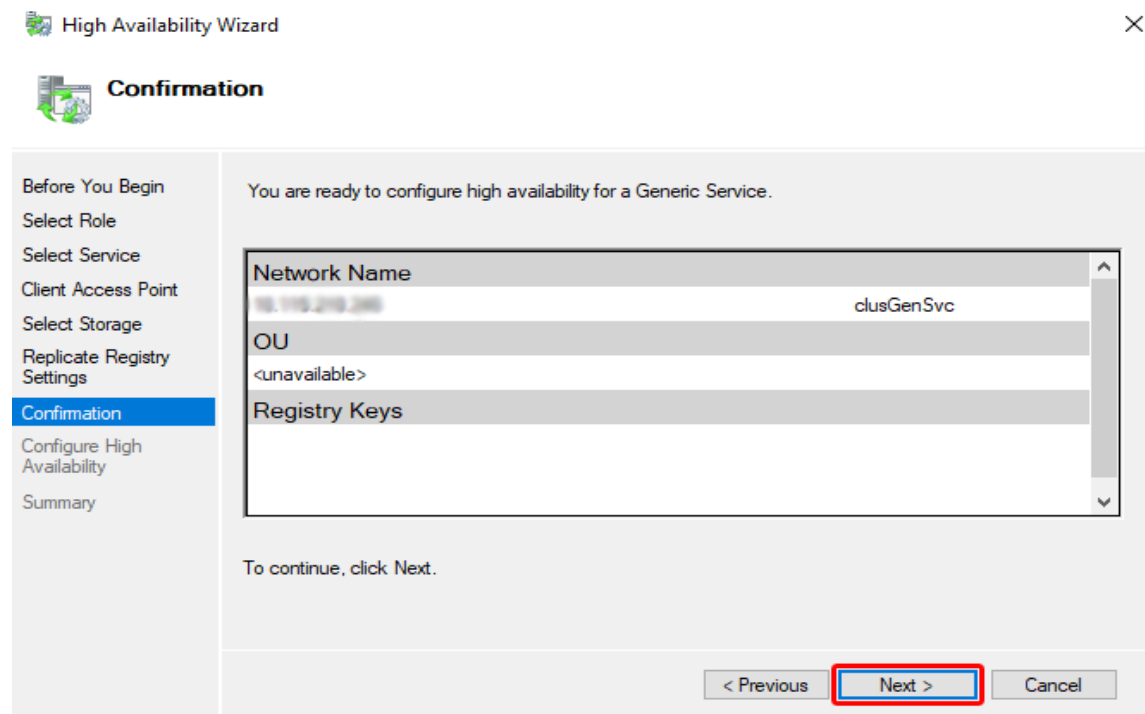
In the Select Storage dialog, click the Next button.



In the Replicate Registry Settings dialog, click the Next button.



In the Confirmation dialog, click the Next button.



In the Summary dialog, click the Finish button.

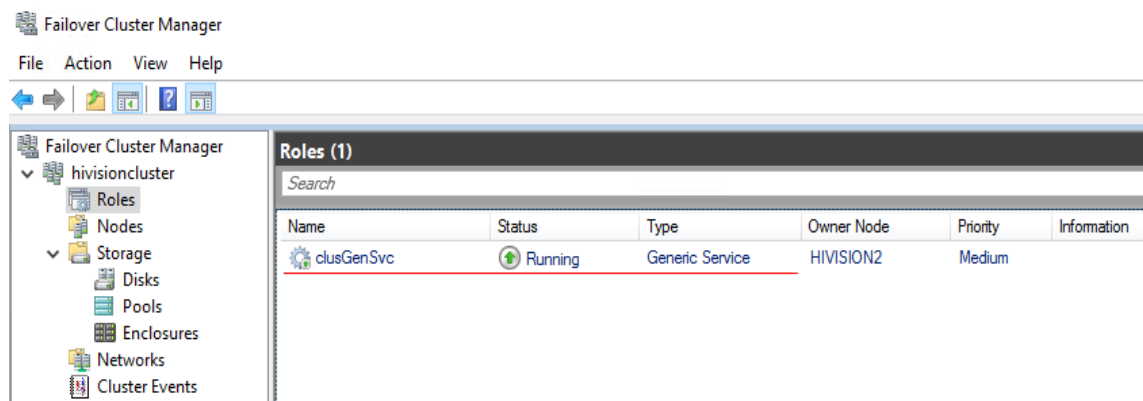
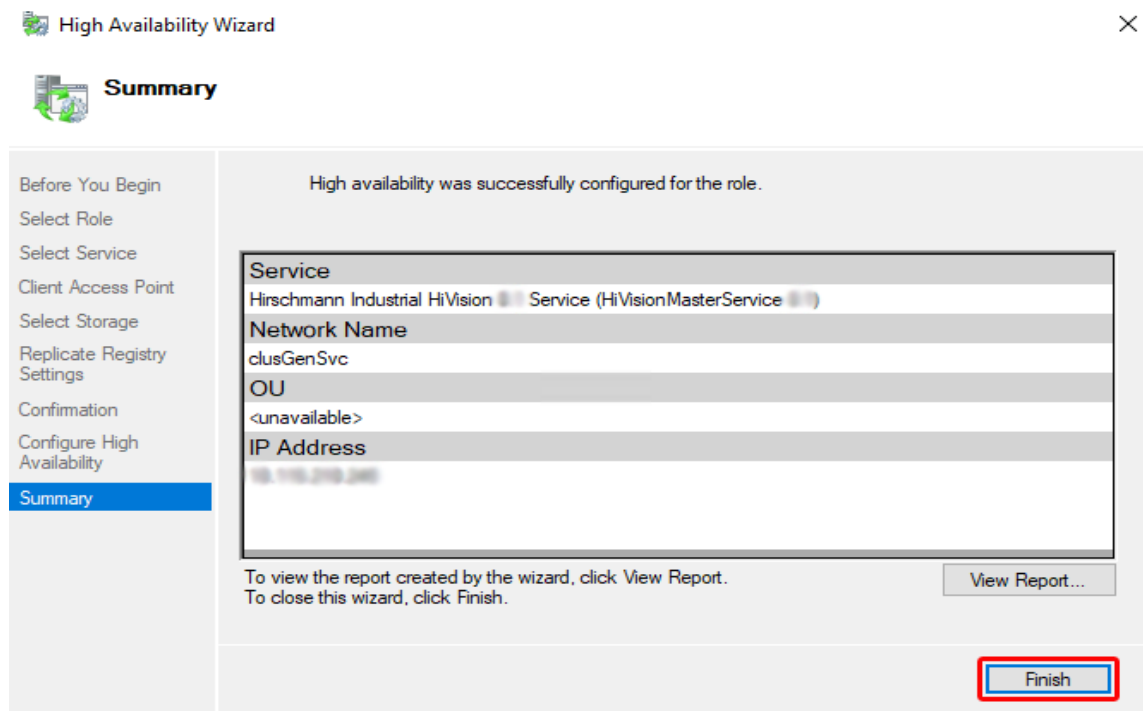


Figure 4: Roles

- Verify that the entries in the Cluster Service Properties dialog are as follows:

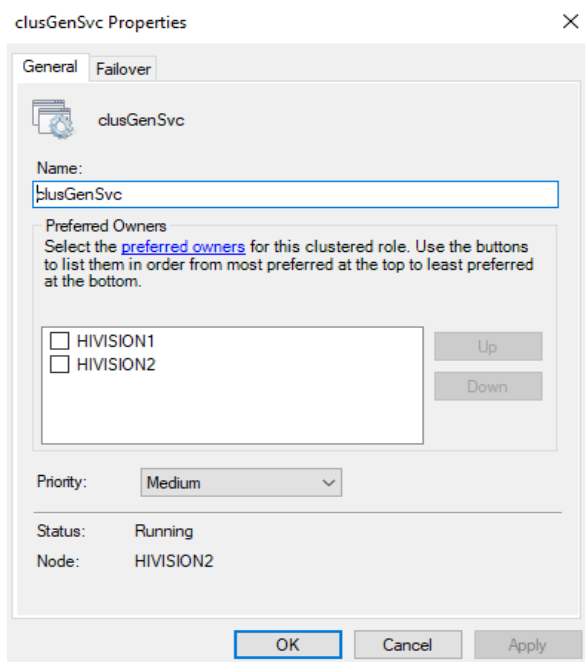


Figure 5: Cluster Service Properties - General dialog

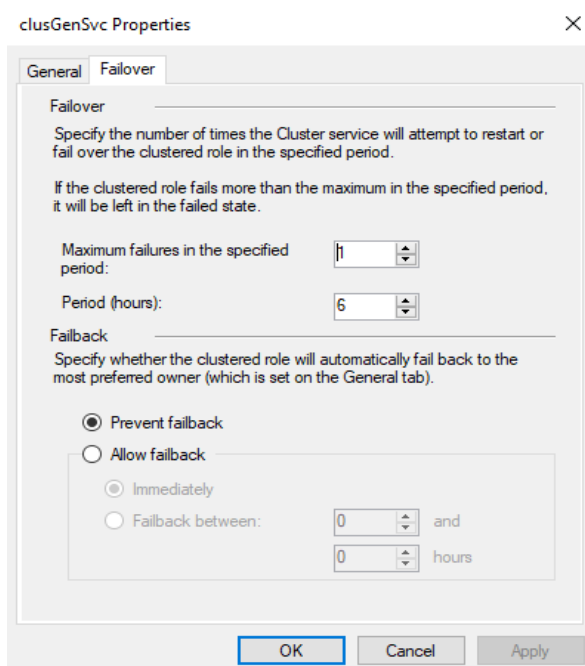


Figure 6: Cluster Service Properties - Failover dialog

- Verify that the Cluster Service is started on both servers.

A Appendix

A.1 FAQ

Answers to frequently asked questions can be found at the Hirschmann HiVision Website:

www.hivision.de

B Readers' Comments

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Your assessment of this manual:

	Very good	Good	Satisfactory	Mediocre	Poor
Precise description	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Understandability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Examples	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Structure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Tables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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