

Failover Cluster Management configuration of Server 2008

Failover Cluster Management tool in Windows Server 2008 allows users to create and manage multiple Cluster.

Although all versions of Windows Server 2008 include the Network Load Balance feature, however, only the Enterprise version and Datacenter have integrated Failover features that provide higher levels of functionality. this.

The cluster allows users to set high-level features available for general services or for specific applications. Failover Cluster Management tool in Windows Server 2008 allows users to create and manage multiple Cluster.

Here we will understand some of the most unique features about this tool.

Overview of settings and tasks

To deploy Clustering in the environment, the following steps need to be taken:

1. Ensure hardware compatibility with Windows Server 2008 Clustering.
2. Configure the drive on the shared storage area to be connected and appear on both servers.
3. Install the **Failover Clustering** feature on each Cluster node to use.

After you have completed these steps, you can open the Failover Cluster Management Console by going to **Start | Administrative Tools | Failover Cluster Management** . During the initial launch, we will see a window like Figure 1 appear. This window does not contain any configured Clustered Server.

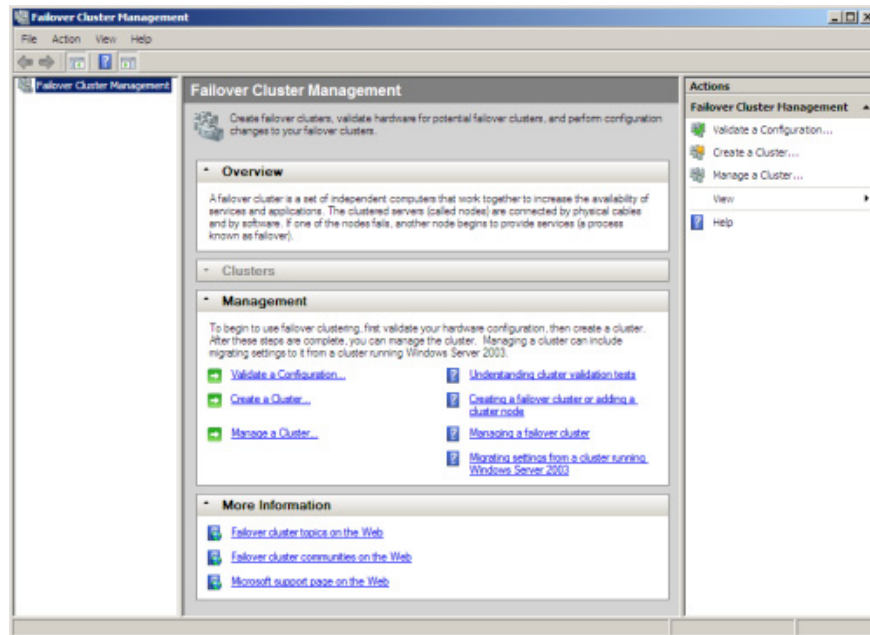


Figure 1: Failover Cluster Management.

The configuration options on this Console are very similar to other Microsoft administration tools, including a navigation panel on the left, a working table with the middle objects, and an Actions panel on the right.

The left panel of the Console shows the Cluster classification and various objects in a *Cluster*, such as *Nodes*, *Services*, *Services*, *Storage*, *Networks*, etc. When you click on one object in the left table, the content of that object will be displayed in the right panel. For example, when clicking on the *Active Resources* object of a certain node, its content will display in the right table along with the *State*, *Owner*, *Group*, and many. Other properties.

The tasks we can do with the Failover Cluster Management tool include:

1. *Create or cancel a Cluster.*
2. *Add and remove node from Cluster.*
3. *Add disk drives to Cluster.*
4. *Supplement or type of services for Cluster.*
5. *Configure the number of rules for the drive.*
6. *Check for events related to all Cluster components.*

Menu

Failover tool Cluster Management has four following menus:

File menu. The File menu contains very few tasks in this Console, only the Options and Exit commands. Action. The Action menu contains most of the Cluster management tasks in the Failover Cluster Management tool. The commands in the File menu will vary depending on the selected object in the tables in the Console. In any case, we can choose the Open Connection command from the File menu to open a connection to an existing Cluster or create a new Cluster. It is best to work with the context menu of each object to create errors.

View menu. The View menu provides several options for customizing the interface of the Management Console.

Menu Help. Use this menu to call Failover Cluster Management Console help.

In addition, on this Console also contains a toolbar including the following buttons: *Back, Forward, Up One Level* (Irregular display), *Show / Hide Console Tree, Properties, Refresh* (Not often displayed) and *Help* .

Console tree

Although the Failover Cluster Management tool is not an MMC snap-in, it does have the interface and functionality of an MMC. In the Console tree (the left panel) contains an open Cluster connection that is displayed in the hierarchy tree. This tree includes the following objects:

Services and Applications: Select this navigation option to open the list of services and applications configured in the Cluster.

Nodes: Each node in the Cluster will be displayed in the Console tree under the Nodes option (Figure 2). When a node is selected, all details of that node will appear in the working table (middle table) of the Console. If you want to add a drive to the Cluster, right-click this option, on the context menu, select **Add Node** .

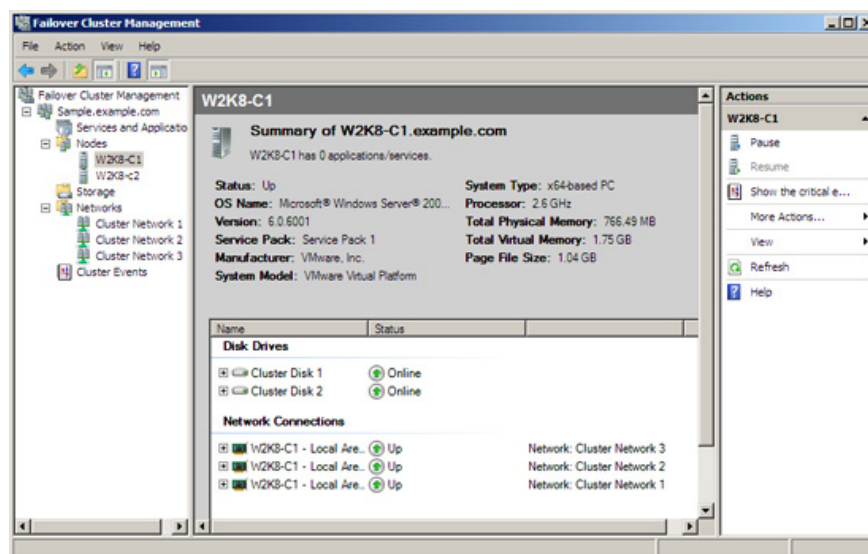


Figure 2: Details of a Cluster Node.

Storage: When selecting *Storage* in the navigation panel, the working table will list all shared drives in that Cluster (Figure 3). If you want to open an additional drive into that Cluster, right-click on *Storage* and select **Add a Disk** .

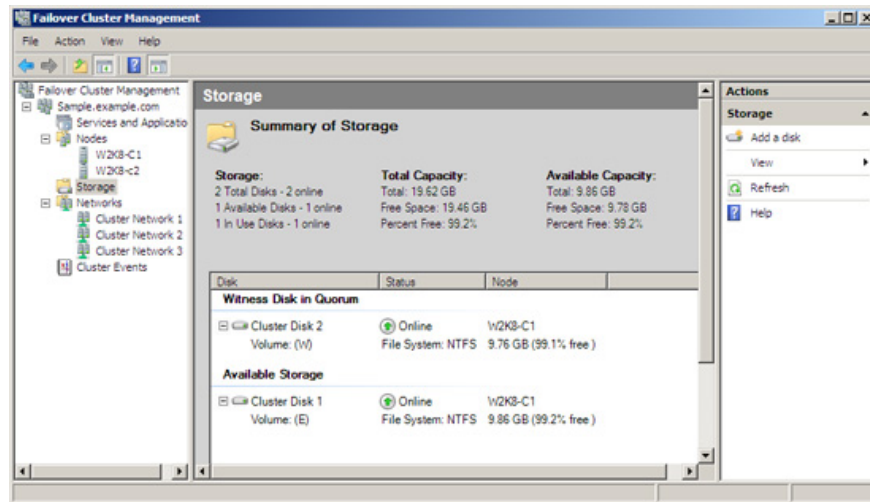


Figure 3: List of storage resources in the Cluster.

Networks : Each network of the Cluster is displayed in the Networks section of the Console tree (Figure 4). When selecting a network, all details of that network will appear in the middle pane of the workspace.

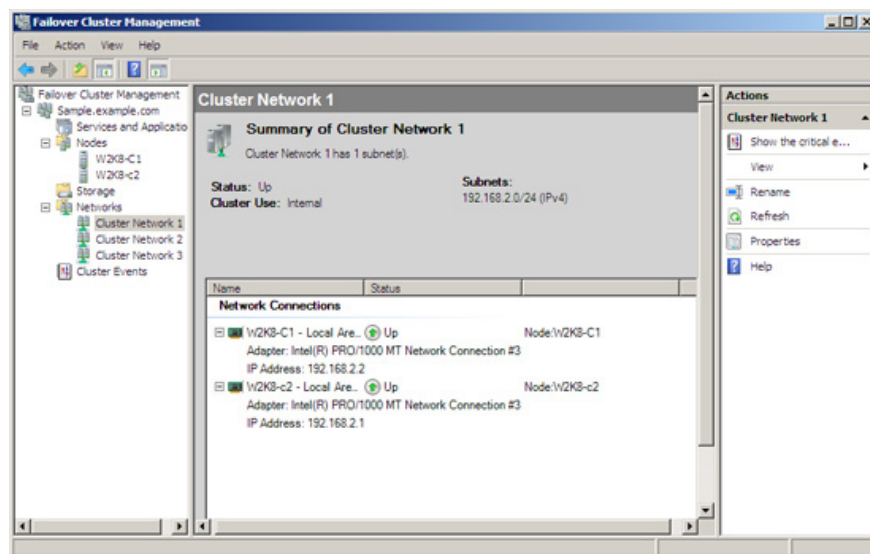


Figure 4: Details of a Cluster network.

We can specify the Cluster to use a specific network by right-clicking on a network entry, select **Properties** . There are two options on the **Properties** dialog box, including *Allow the cluster to use this network* (allow Cluster to use the network), and *Do not allow the cluster to use this network* (do not allow Cluster to use the network). In addition, there is an additional checkbox of the first option, when selecting this box, the clients will be connected via the network that Cluster uses.

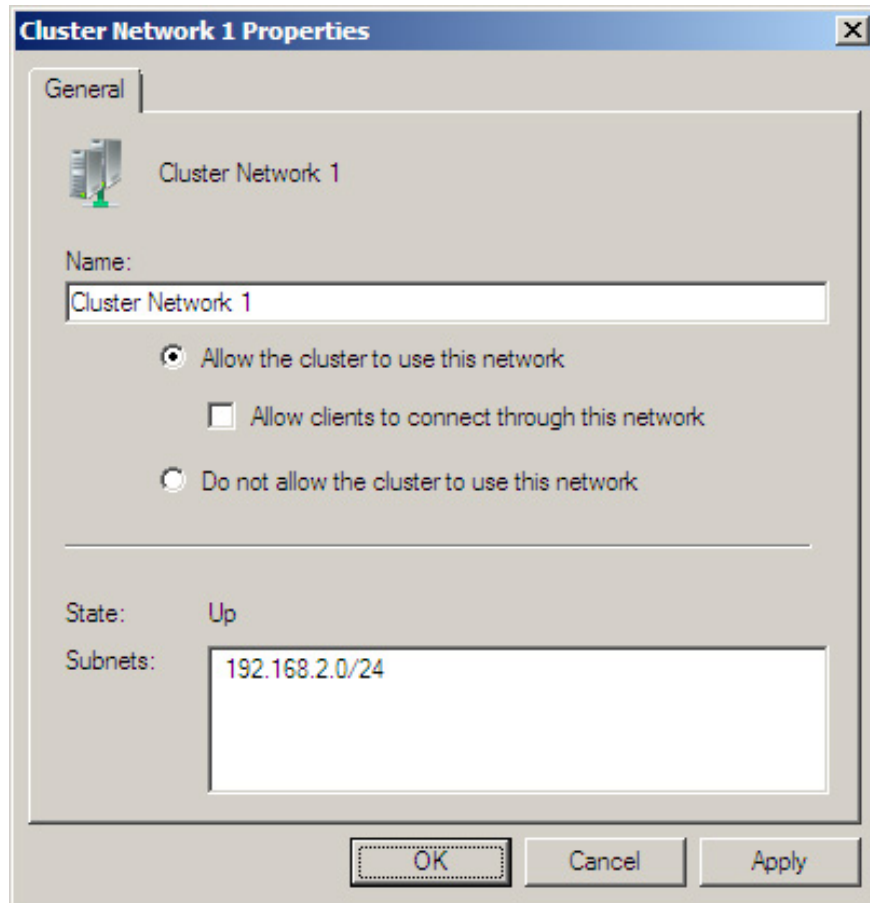


Figure 5: Change network configuration.

Cluster Events : This link contains all events related to the Cluster service.

Working with the Failover Cluster Management Wizard

Failover Cluster Management tool provides many wizards to help users perform many common tasks such as installing a Cluster, adding nodes, adding groups, and adding resources.

Determine the hardware configuration

Before creating the Cluster, we need to check the hardware in use to ensure that the hardware system supports the High Availability configuration. To perform this task, launch the **Hardware And Infrastructure Validation Wizard** with one of the following methods:

1. Go to **Action** menu select **Validate A Configuration** .
2. Right-clicking on **Failover Cluster Management** selects **Validate A Configuration** from the context menu.
3. In the **Actions** panel select **Validate A Configuration** .
4. When the Failover Cluster Management tool has just been launched, the **Validate A Configuration option is** in the middle table.

1. The first page of this Wizard only provides some information. Click **Next** to continue.
2. On the **Select Servers or a Cluster** page , enter the name of the server that will join the Cluster and then click **Next** .

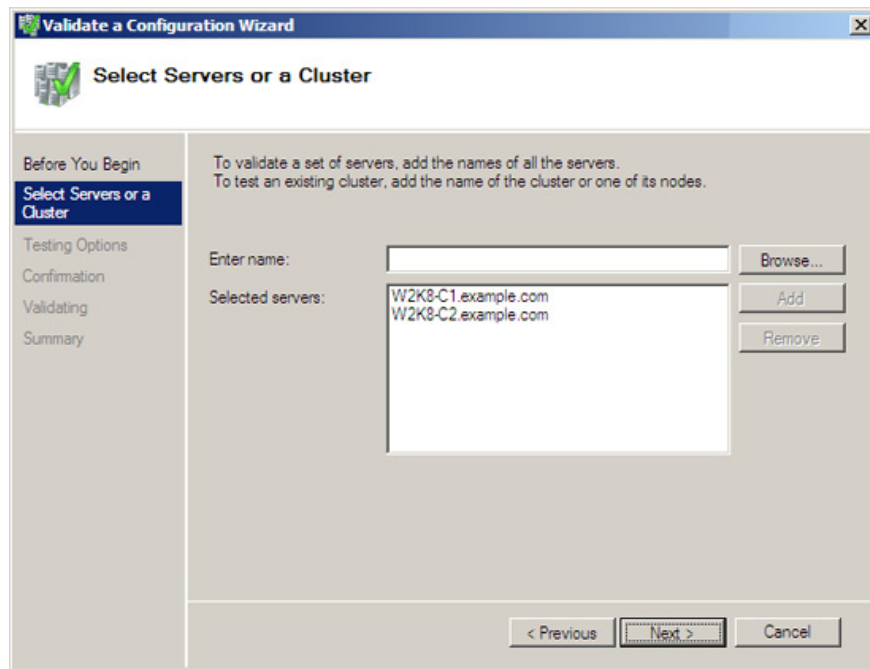


Figure 6: Validate A Configuration Wizard.

3. Many configuration verification processes will be performed, including iSCSI counting or Fiber Channel storage adapters, configuring network groups, configuring Cluster member firewall system exceptions, and storage systems file. We can choose to carry out any testing process, or specify certain processes (Figure 7).

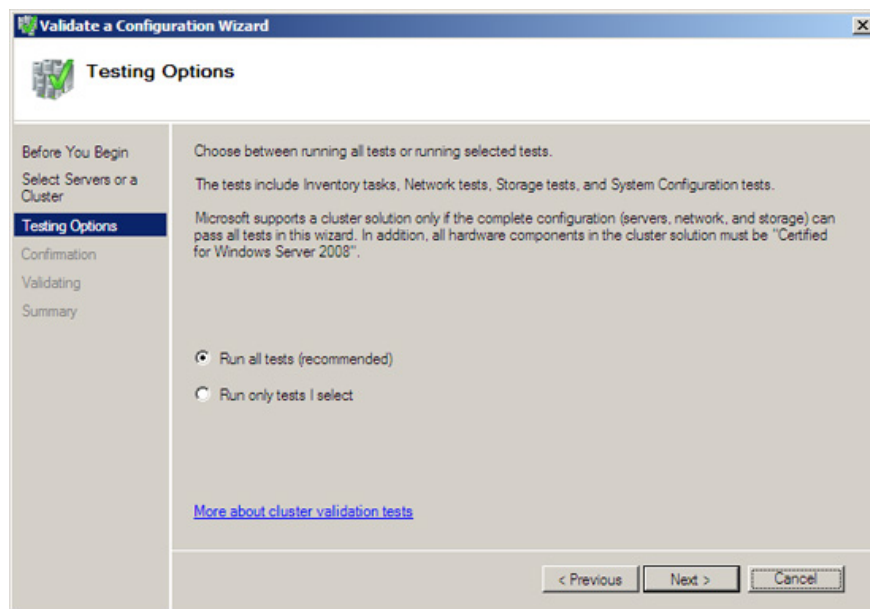


Figure 7: Select the test process you want to perform.

4. After selecting one of the two options (Figure 7) then click **Next** , the processes will be listed on the **Confirmation** page. Once confirmed, click **Next** to begin the process (Figure 8).

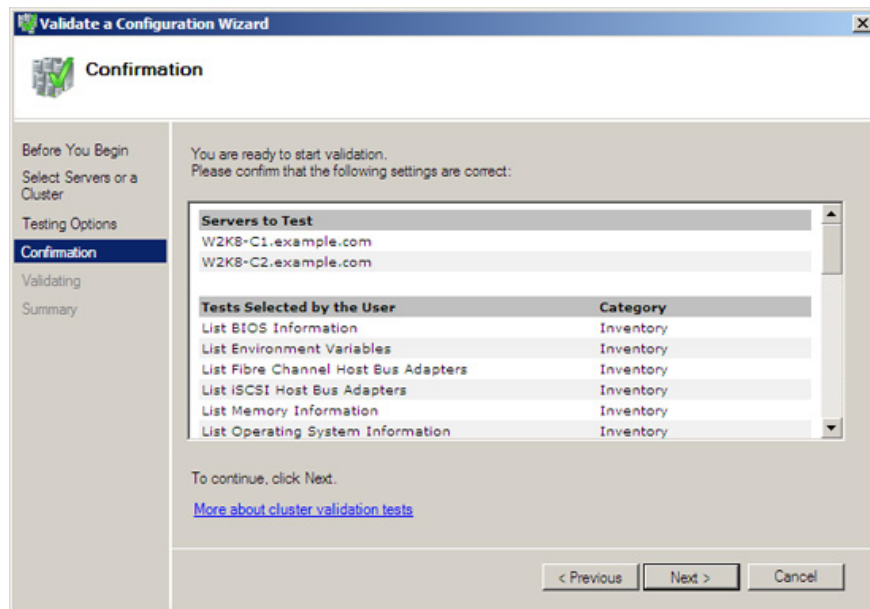


Figure 8: Confirm the test method.

5. When you are checking, if a process is completed we will receive a message with the green text on the right side of the test window, if a failure is displayed, a message with red text will appear. In this case we can check the detailed report that accurately describes the cause of the error. If all processes have completed successfully, click **Finish** to continue.

Create a Cluster

The purpose of management tasks is to group servers. Microsoft provides a Wizard called **Create Cluster** that helps users easily perform this task.

We can launch Create Cluster Wizard according to one of the following methods:

1. Go to the **Action** menu and choose **Create A Cluster** .
2. Click on **Failover Cluster Management** and select **Create A Cluster** from the context menu.
3. In the **Actions** panel, select **Create A Cluster** .
4. When the new Failover Cluster Management tool is launched, select **Create A Cluster** in the middle pane.

1. On the first page of this Wizard, click **Next** .

2. On the **Select Servers** page, select the servers that contain this Cluster. Use the **Browse** button to browse for servers in Active Directory. Now click **Next** .

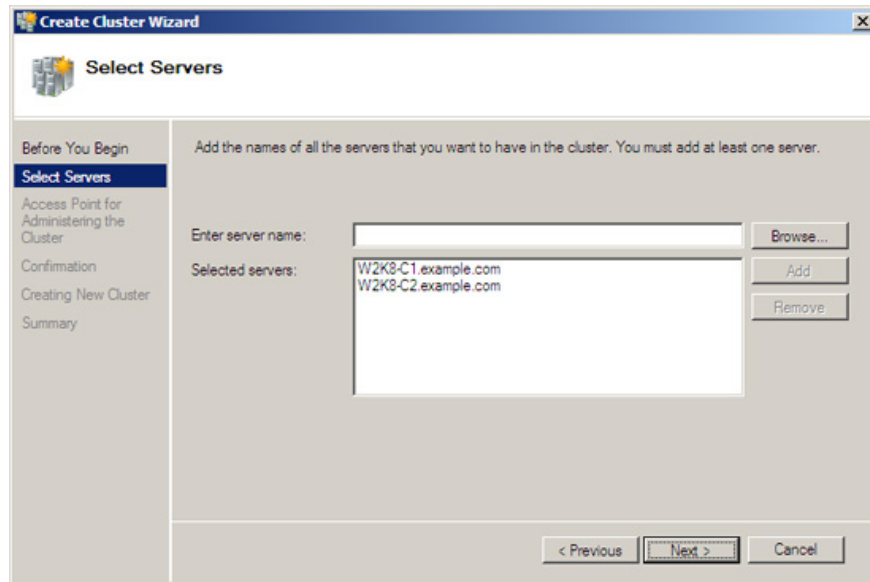


Figure 9: Create Cluster Wizard's Select Servers page.

3. On the **Access Point For Administering The Cluster** page , enter a name for the new Cluster, when required, enter the IP address that will be used to identify this Cluster (Figure 10). Then click **Next** .

Note: Although standalone servers will use their IP addresses, this Cluster also needs an IP address.

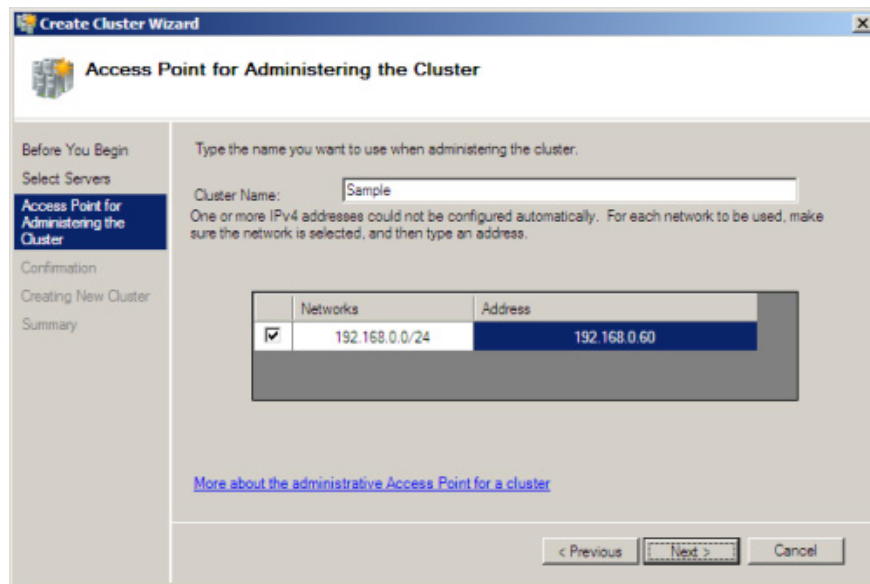


Figure 10: Create Cluster Wizard Access Point For Administering The Cluster

4 On the **Confirmation** page, confirm the settings that were made and click **Next** .

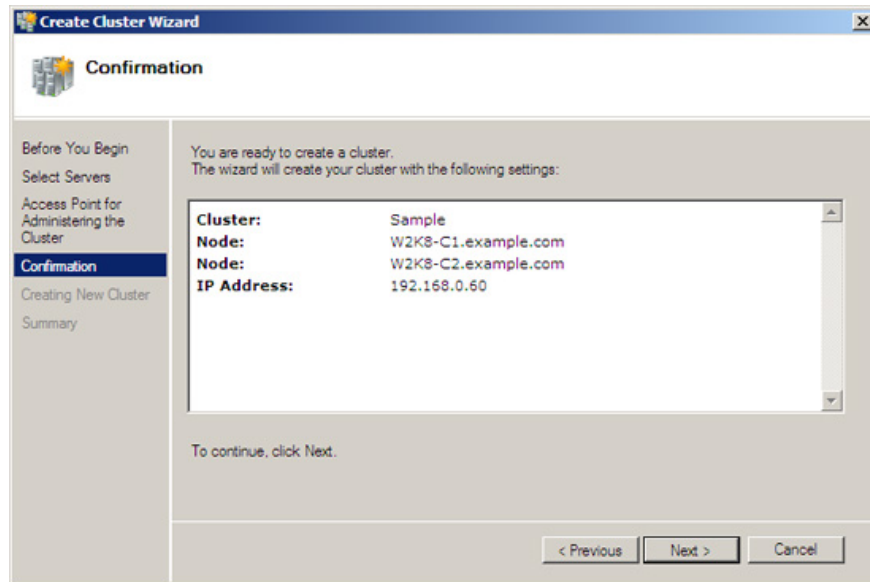


Figure 11: Confirm page of Create Cluster Wizard.

Once the settings have been confirmed, the new Cluster will be created, and we will see a summary page showing the results of the creation process. If there is a problem, we can check in the detailed report created in the Cluster creation process. Then, when done, click **Finish** . At that time, if the Failover Cluster Management tool was started, a screen similar to Figure 12 would appear confirming that the Cluster creation process was successful.

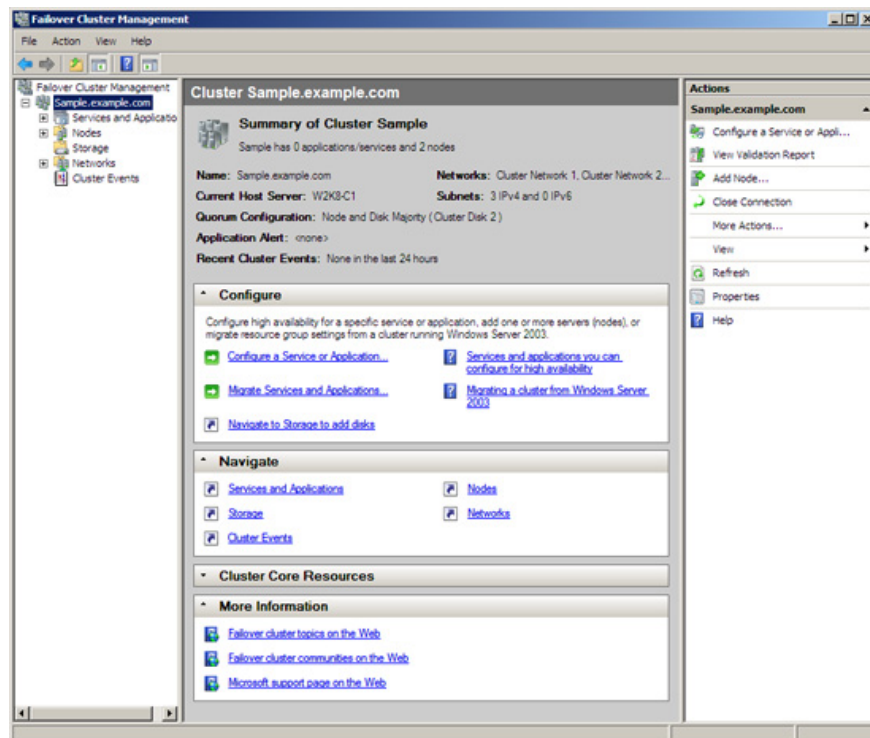


Figure 12: The navigation panel of the Management Console after the Cluster has been created.

Adding Cluster service

To add to the Cluster service, launch the **Failover Cluster Management** tool, browse to the Cluster that needs to be added to the service, and then click on **Services and Applications** . From the context menu, select the **Configure a service or application option** . The **High Availability Wizard** will then launch.

1. On the **Select Service or Application page** , we will receive a request to select the service or application you want to use. Check the software vendor to determine Cluster compatibility. This wizard will change depending on what is selected on this page (Figure 13).

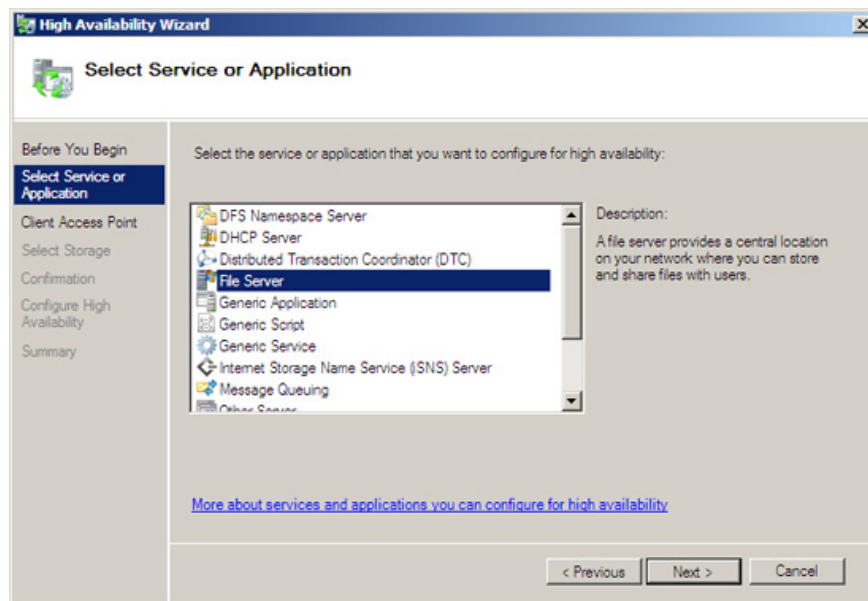


Figure 13: Select Service or Application page of High Availability Wizard.

2. On the **Client Access Point** page, for each service configured, we must specify the client method to access that service. Remember that the service cluster will display as a single entity with workstations. Name and enter a private IP address for this service.

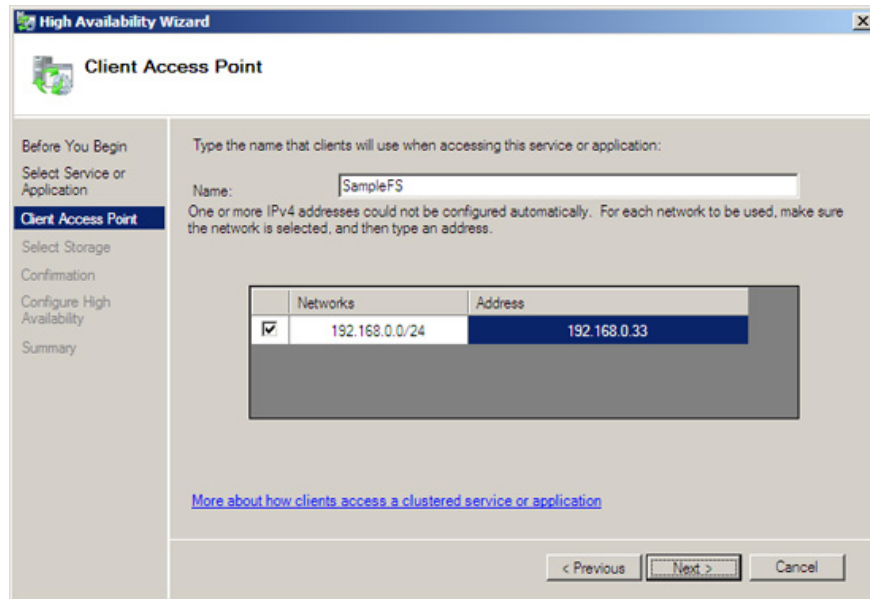


Figure 14: Client Access Point page of High Availability Wizard.

3. On the **Select Storage** page, select the shared storage area. Once the selection is made, we can confirm the selected storage area. Then, the wizard will display the selected service on the network.

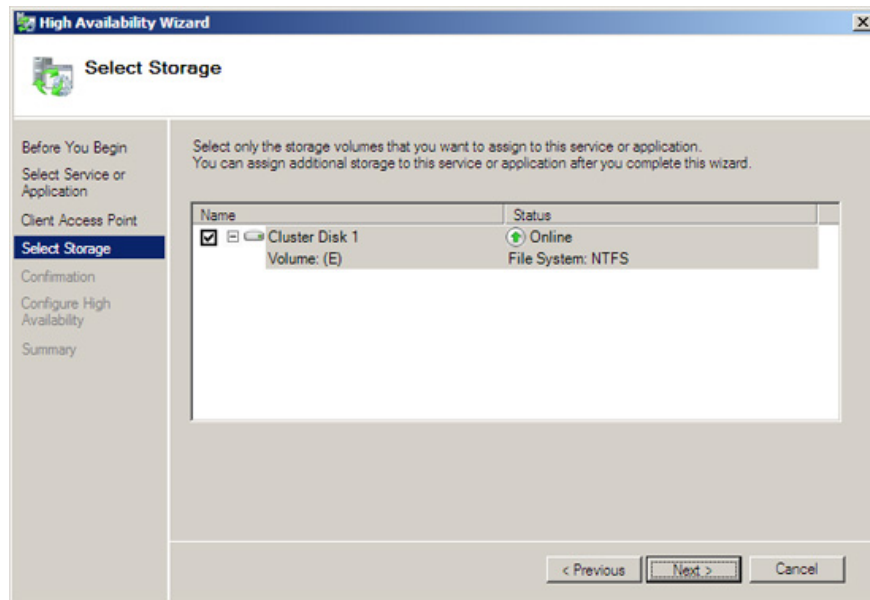


Figure 15: The selected service is displayed on the network.

In Figure 16 we can see the data sharing server running.

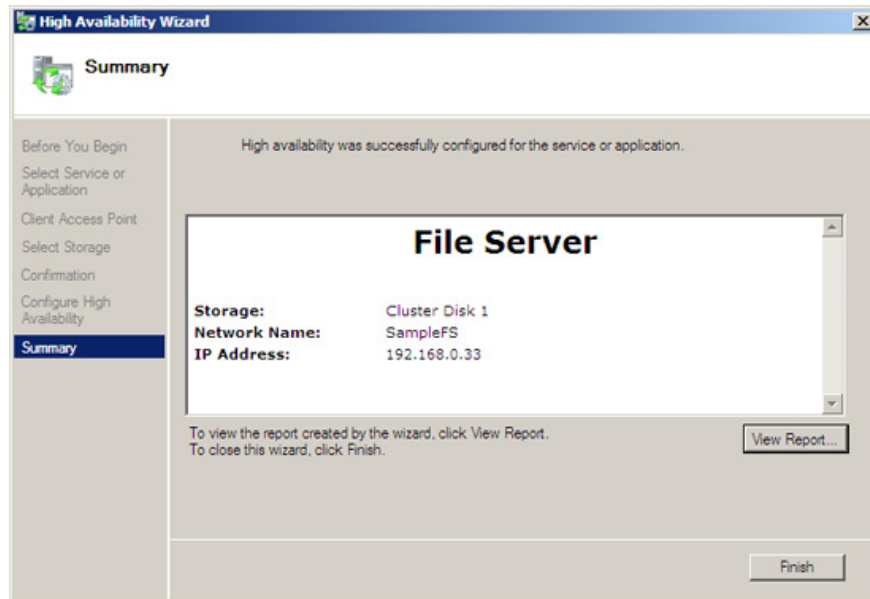


Figure 16: Server sharing data.

In Figure 17 we can see the shared file servers are active.

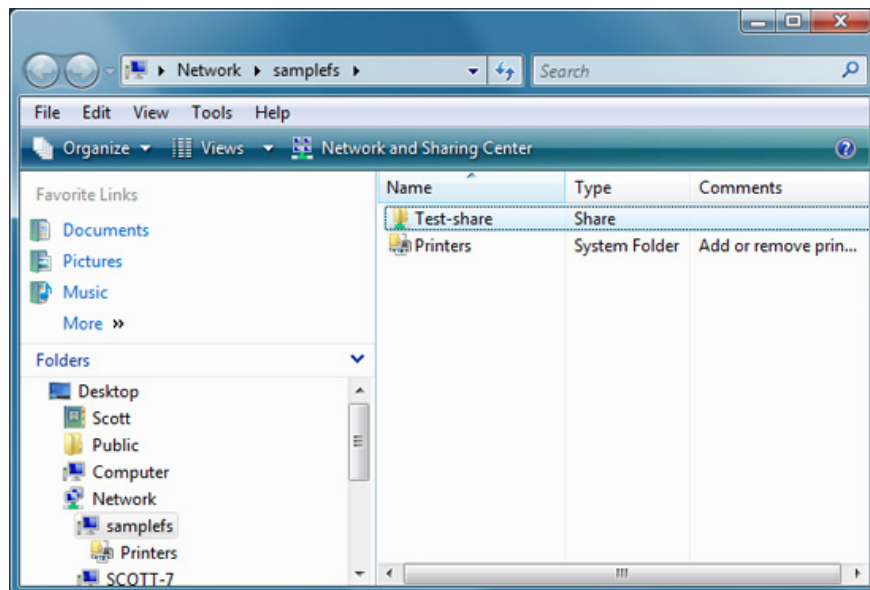


Figure 17: Shared file server.

Task list

Up to now, we have learned quite a lot about Failover Cluster Management tool, able to create and manage Cluster. The following table lists common Cluster administration tasks, and outlines how to perform these tasks with the Failover Cluster Management tool.

Action Manipulate Cluster hardware configuration

1. Go to **Action** menu select **Validate A Configuration** .
2. Right-clicking on **Failover Cluster Management** selects **Validate A Configuration** from the context menu.
3. In the **Actions** panel select **Validate A Configuration** .
4. When the Failover Cluster Management tool has just been launched, the **Validate A Configuration option is** in the middle table.

Create Cluster

1. Go to the **Action** menu and choose **Create A Cluster** .
2. Click on **Failover Cluster Management** and select **Create A Cluster** from the context menu.
3. In the **Actions** panel, select **Create A Cluster** .
4. When the new Failover Cluster Management tool is launched, select **Create A Cluster** in the middle pane.

Adding a node Right-clicking on any node selects **Add Node** from the context menu. Modifying the node Right-clicking on the node selects **More Actions | Stop Cluster Service** . Confirm operation. Cluster Service configuration to start manually (if necessary) on this node. Edit and restart this node, reconfigure the Cluster Service to start automatically. Right-click on this node node in **Cluster Administrator** select **More Actions | Start Cluster Service** . Delete node Right-click on the deleted node and select **More Actions | Stop Cluster Service** . Right click on this node and select **More Actions | Evict** . Pause or reactivate the Right mouse button on this node select **Pause** or **Resume** . Stop or start Cluster Service Click on the node containing the service to perform the operation, select **More Actions | Stop Cluster Service** or **More Actions | Start Cluster Service** .

Install the Service Failover / Failback Policy

Right click on the service you want to install and select **Properties** . Select the **Failover** tab. Moving the service to another node Clicking on the cluster contains the service you want to move to select **More Actions | Migrate Services And Applications** . Create a new resource Right-click on a group select **New | Resource ?? b?t ??u Ph?n m?m m?i**. Delete resources Change the status of resources to offline, right-click it and select **Delete** . Change the online status of a resource Right-click on the resource selected **Take Offline** or **Bring Online** . Check service information Right-click on the service that select **Show Dependency Report** . Specify the nodes that can own resources Right-click on the resource and select **Properties** . Edit the nodes that can have resources in the **Avanced Policies** tab. Forwarding simulation resources Right-clicking on the resource selects **More Actions | Simulate Failure Of This Resource**.

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