Dynamic quorum

Quorum – the number of elements that must be online for a cluster to continue running

Dynamic quorum configuration is a new feature in Windows Server 2012 in which the number of votes required to reach quorum automatically adjusts to the number of active nodes in the failover cluster. If one or more nodes shuts down, the number of votes to reach quorum in Windows Server 2012 changes to reflect the new number of nodes. With dynamic quorum, a failover cluster can remain functional even after half of its nodes fail simultaneously. In addition, it's possible with dynamic quorum for the cluster to remain running with only one node remaining.

If you see a question in which nodes in the cluster are running an earlier version of Windows and "you want to have the number of votes automatically adjust based on the number of available nodes at any one time," you know you need to upgrade all nodes to Windows Server 2012. In addition, remember that dynamic quorum works only with the following quorum configurations, and not with the Disk Only quorum configuration:

1. Node Majority

Node majority is used when there is an odd number of cluster nodes. The cluster is available as long as half the nodes are available.

2. Node and Disk Majority

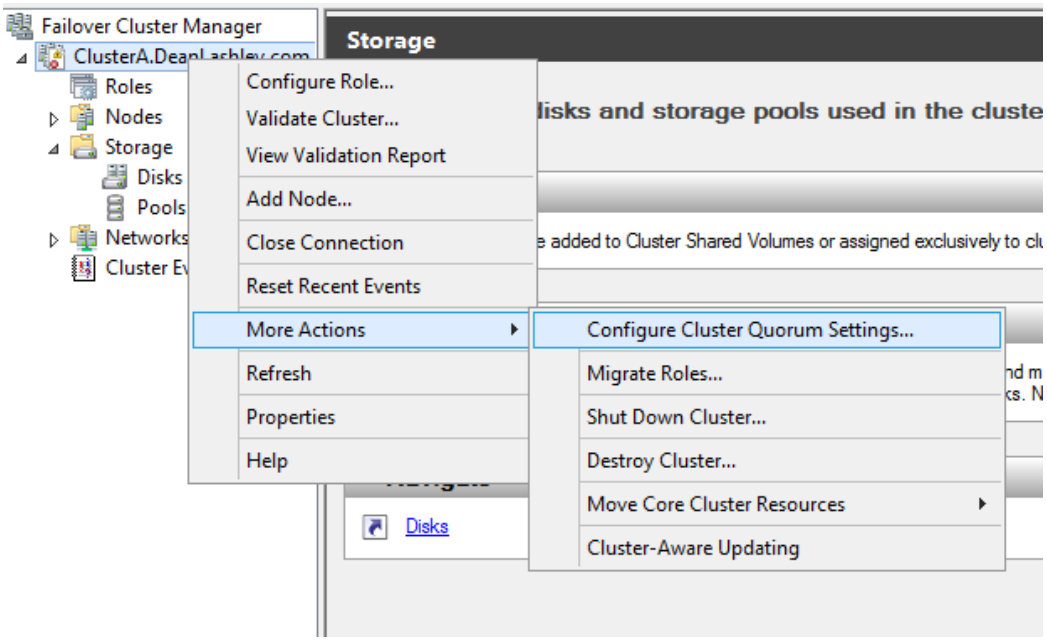
Node and disk majority is used when there are an even number of cluster nodes. This type of cluster is available as long as half the nodes and the witness disk is available.

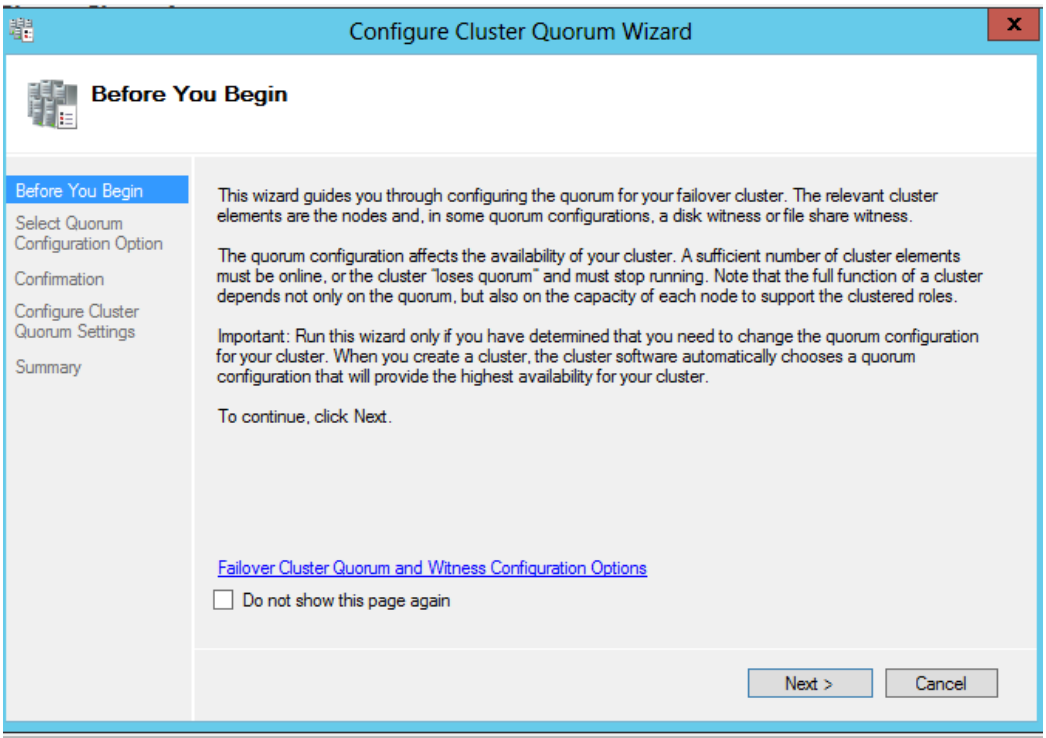
3. Node and File Share Majority

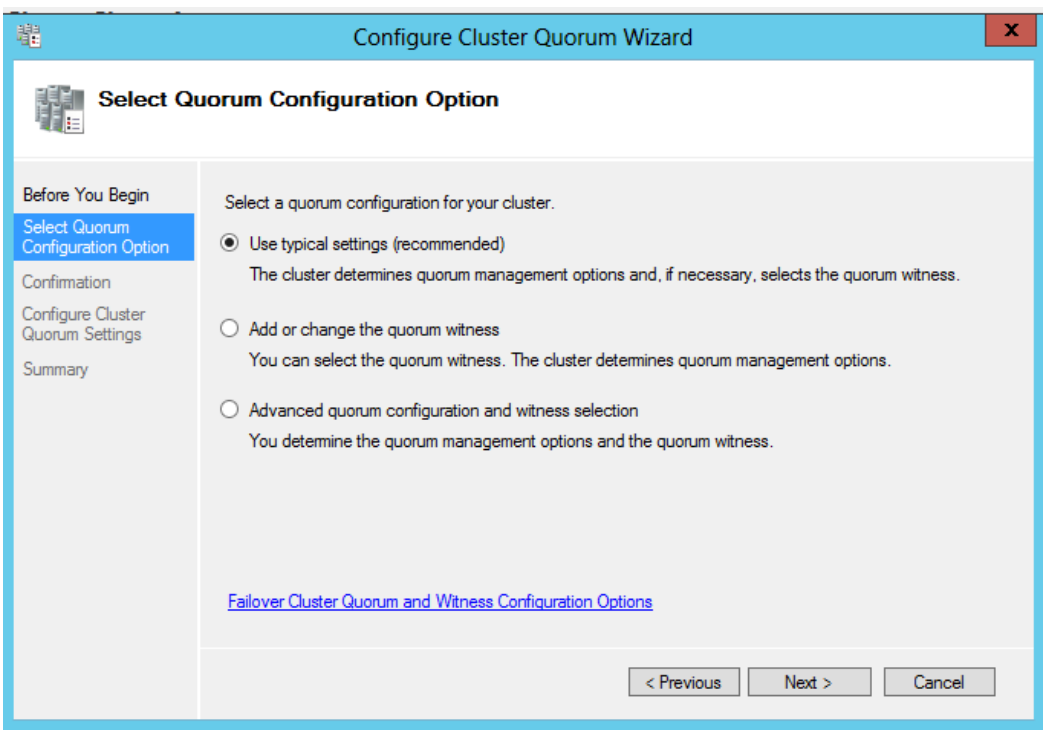
The node and file share majority is the same as node and disk majority except a witness share is used instead of a witness disk.

Remember that the cluster quorum settings determine the number of elements in a failover cluster that must remain online for it to continue running. **You**

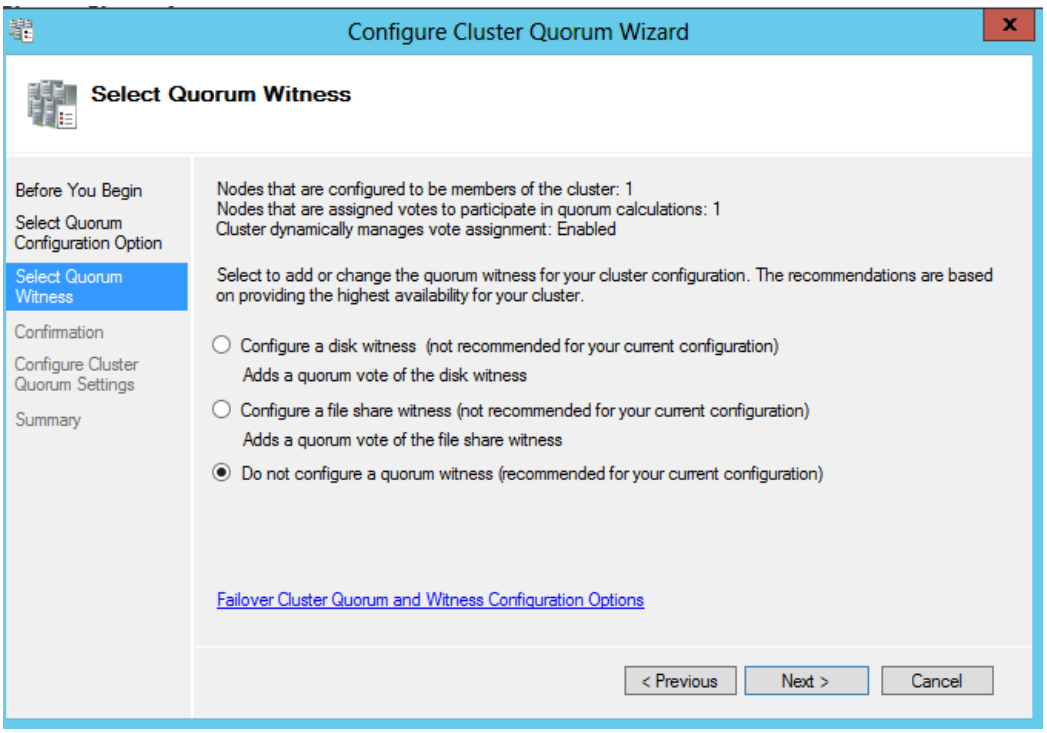
access these settings by clicking a cluster in Failover manager console tree, selecting more actions, and then clicking Configure Cluster Quorum Settings.



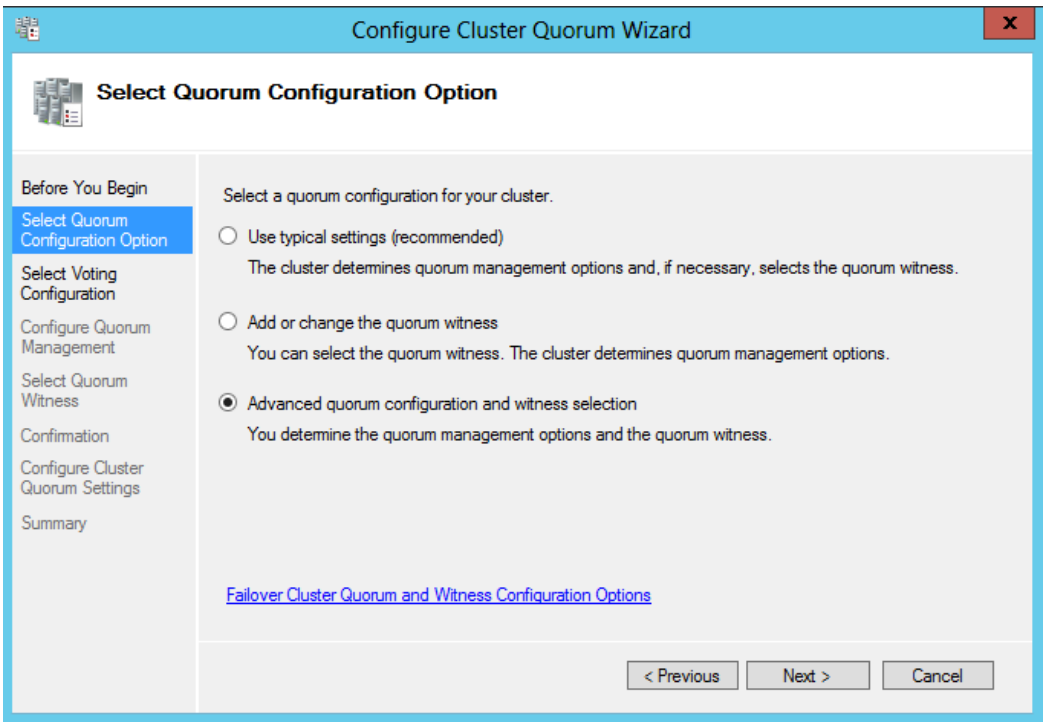

Configure Cluster Quorum Wizard
Before You Begin
Before You Begin
Select Quorum Configuration Option
Confirmation
Configure Cluster Quorum Settings
Summary
This wizard guides you through configuring the quorum for your failover cluster. The relevant cluster elements are the nodes and, in some quorum configurations, a disk witness or file share witness.
The quorum configuration affects the availability of your cluster. A sufficient number of cluster elements must be online, or the cluster "loses quorum" and must stop running. Note that the full function of a cluster depends not only on the quorum, but also on the capacity of each node to support the clustered roles.
Important: Run this wizard only if you have determined that you need to change the quorum configuration for your cluster. When you create a cluster, the cluster software automatically chooses a quorum configuration that will provide the highest availability for your cluster.
To continue, click Next.
Failover Cluster Quorum and Witness Configuration Options
Do not show this page again
Next >
Cancel


Configure Cluster Quorum Wizard
Select Quorum Configuration Option
Before You Begin
Select Quorum Configuration Option
Confirmation
Configure Cluster Quorum Settings
Summary
Select a quorum configuration for your cluster.
Use typical settings (recommended)
The cluster determines quorum management options and, if necessary, selects the quorum witness.
Add or change the quorum witness
You can select the quorum witness. The cluster determines quorum management options.
Advanced quorum configuration and witness selection
You determine the quorum management options and the quorum witness.
Failover Cluster Quorum and Witness Configuration Options
< Previous
Next >
Cancel

If your select the Add or change the Quorum witness option you will get the dialog box shown below:



If your select the Advanced Quorum configuration option your will get the dialog box shown below:


Configure Cluster Quorum Wizard
Select Quorum Configuration Option
Before You Begin
Select Quorum Configuration Option
Select Voting Configuration
Configure Quorum Management
Select Quorum Witness
Confirmation
Configure Cluster Quorum Settings
Summary
Select a quorum configuration for your cluster.
Use typical settings (recommended)
The cluster determines quorum management options and, if necessary, selects the quorum witness.
Add or change the quorum witness
You can select the quorum witness. The cluster determines quorum management options.
Advanced quorum configuration and witness selection
You determine the quorum management options and the quorum witness.
Failover Cluster Quorum and Witness Configuration Options
< Previous
Next >
Cancel