Cluster Verification Utility Overview
Tool Originator

The Cluster Verification Utility (CVU) verifies that the major components of a two-node cluster system function correctly.

Important
The fact that this utility verifies your cluster configuration does not mean that your configuration can support a cluster server. For the exact functionality that CVU tests, see Configuration Verification and Diagnostic Verification.

Important
The only hardware configurations that Microsoft supports are those listed under "Cluster" in the Hardware Compatibility List (HCL).
To locate the HCL for clustering
 1 Open the Hardware Compatibility List.
 2 On the HCL, click the **Advanced** tab. In the **Product Category** list box, choose "Cluster"--do not choose either "Cluster/Raid" or "Cluster/SCSI Adapter."

This program is divided in the following two parts, which you access in the initial CVU window by clicking the **Configure** or **Diagnostic** button, respectively:

 1 Configuration Verification, which verifies each node's:
 ▪   Computer name. The CVU verifies the name by opening the registry of the specified computer.
 ▪   IP address.
 ▪   Recognition of the shared SCSI drive.

The Configuration Verification output is a file, Cvptest.txt, which contains the verification test results. For more details, see Getting Configuration Verification Test Results.

 2 Diagnostic Verification, which tests the shared SCSI bus functionality as required by the Cluster service.

Caution The Diagnostic Verification test is destructive. It deletes all data on the disks attached to the shared bus.

For questions or problems with CVU, please contact:
rkinput@microsoft.com.

Configuration Verification

The Configuration Verification part of the Cluster Verification Utility tests the following Cluster service functionality:

 1 The two nodes' ability to communicate with each other by their computer names.
 2 The two nodes' ability to access the same shared SCSI drive.

In the Configuration Verification dialog box, enter the required parameters:

- Computer name of the other node. For more information, see <u>Computer Name of the Other Node</u>.
- IP address of the other node. For more information, see <u>IP Address of the Other Node</u>.
- Drive letter or letters of the shared SCSI drive. For more information, see <u>Shared SCSI Drive Letter</u>.

The Configuration Verification dialog box contains the following buttons:

- Verify Node 1. Starts node 1 verification and selects the related server.
- Verify Node 2. Starts node 1 verification <<and selects the related server.
- Previous. Returns you to the previous screen.
- Exit. Quits the Cluster Verification Utility.

If the configuration of a node fails verification, a warning message appears. You can skip the warning message and continue.

Computer Name of the Other Node

This test verifies that the two cluster nodes are communicating with each other by their computer names.

After you enter the computer name of the other cluster node, the CVU verifies the name by opening the registry of the specified computer.

If the computer name you enter is the same as that of the test system, CVU prompts you to either:

- Enter a different computer name.

or

- Skip the warning and continue with the verification process. To verify that

the test system is able to communicate with itself, skip the warning.

Note

- If you enter a computer name that is the same as the current test computer name and you skip the warning message, CVU appends a warning message at the end of the test result report.

IP Address of the Other Node

This test verifies that the two cluster nodes are communicating with each other via their respective IP addresses. After you input the IP address of the other cluster node, the CVU verifies the address with the "ping command."

If you don't provide an IP address before starting configuration verification, CVU prompts you to provide one.

Shared SCSI Drive Letter

This test verifies that both nodes access not only the same shared SCSI drive letter but also the same shared SCSI drive.

After you input the shared SCSI drive letter:

- On node 1, CVU verifies the shared drive letter by writing a data file onto the specified drive.
- On node 2, CVU verifies that the data file on the specified drive is identical to the data file written during node 1 verification.

The shared SCSI drive letter you enter on node 1 must be an alphabetical character (A-Z). If you enter an illegal character, CVU prompts you for an acceptable character.

The drive letter you enter on node 2 must be the same as the one you entered on node 1. If you specify two different drive letters, CVU prompts you to enter the same letter on each node.

Getting Configuration Verification Test Results

The configuration verification results for the node's recognition of the other node's computer name and IP address and of the shared SCSI drive letter each appear in the **Configuration** dialog box as Pass or Fail.

For details of the test results, click the **View Log** button.

Installing the Cluster Verification Utility

Before installing the Cluster Verification utility (CVU):

- Create an Mscvp directory on each node's system disk, to hold all the needed files. You cannot run the CVU utility over the network.
- Provide two preformatted floppy disks for the test results (Cvptest.txt) of both cluster nodes. If you wish, you can append the results for both nodes to the same Cvptest.txt, on one floppy disk.

Note
- The main difference between running the Configuration Verification and the Diagnostic Verification is that for Diagnostic Verification, the SCSI-Y cable is connected to both nodes. For Configuration Verification, the SCSI-Y cable is connected to only one node.

To install CVU
1. To start Setup, double-click Setup.exe.
   This copies all the files to the Mscvp directory on your hard drive. For more information on the CVU files, see Cluster Verification Utility Files.
2. When the initial CVU window appears, start CVU by choosing the **Verification** or **Diagnostic** button.

For more information, see Configuration Verification and Diagnostic Verification.

Cluster Verification Utility Files

The following CVU-related files reside in the Mscvp directory.

Setup.exe	Installation program that copies all the CVU files onto your local hard drive
Wpcvp.exe	CVU executable file
Wpcvp.hlp	CVU Help file
Clustsim.exe	Executable file for Diagnostic Verification
Ntlog.dll	Shared SCSI drive DLL
Readme.txt	Shared SCSI drive readme file

System Requirements

The Cluster Verification Utility requires the following system configuration:

1 A cluster server
2 Two cluster nodes
3 Shared hard-drive storage unit
4 Shared SCSI-Y cable
5 One or two preformatted floppy disks (to hold test results)

Before   Running Configuration Verification

To run Configuration Verification
 1 Install Windows 2000, with IP addressing, on one cluster node (node 1).
 2 Connect node 1 to the external hard-drive storage unit using a SCSI-Y cable.
 3 Turn on both cluster nodes.
 4 To assign the shared SCSI drive partitions on node 1, run the Windisk utility.
 5 Turn off both nodes.
 6 Repeat steps 1 through 4 for node 2.
 7 Keep the power on for verifying the configuration of node 1.

Note
▪   To communicate with each other, both cluster nodes must have Administrator accounts. <<JT/JD, GET ANSWER: administrator accounts where? for themselves? for each other? at which step can we add this to the following procedure?

Verifying the Configuration for Both Nodes

To verify the configuration for node 1
  1 Make sure node 1 is connected to the SCSI-Y cable.
  2 Insert a preformatted floppy disk in drive A of node 1.
  This disk will hold the Cvptest.txt file, which contains the verification test results.
  3 On node 1, run Wpcvp.exe.
  4 In the initial CVU window, click the **Verification** button and enter the required information in the text boxes.
  5 To run the verification and display the test result window, click the **Verify Node 1** button. If you have entered an incorrect value in the text boxes, you are prompted to change the value. For more information, see <u>Computer Name of the Other Node</u>, <u>IP Address of the Other Node</u>, and <u>Shared SCSI Drive Letter</u>.
  6 To view the detailed test results saved in Cvptest.txt, click the **View Log** button.

To verify the configuration for node 2
  1 Disconnect the cluster SCSI-Y cable from node 1.
  2 Use the SCSI Y cable to connect node 2 to the external hard-drive storage unit.
  3 Insert a preformatted floppy disk in drive A. To append the test results for node 2 to the same Cvptest.txt file generated for node 1, move the floppy disk you used for node 1 to drive A on node 2.
  4 On node 2, run Wpcvp.exe.
  5 Follow steps 4 through 6 of the procedure for verifying the configuration of node 1. This time, in the Configuration Verification window. click the **Verify Node 2** button.

To quit CVU
  ▪   Click the Exit button.

Diagnostic Verification Requirements

Caution   Because diagnostic verification is a destructive test, be sure to first back up any significant data that is stored on the shared drive. This test deletes all data on the disks attached to the shared bus.

Before you start diagnostic verification, make sure that:
- The Cluster Server software is not installed on either node.
- Both nodes' configuration passed the previous Configuration Verification.

Diagnostic Verification

Caution   This is a destructive test. It deletes the data on all disks located on the shared bus.

The Diagnostic Verification invokes Clustsim.exe to test the shared SCSI bus functionality as required by the Cluster service.

To perform diagnostic verification
 1 Connect both nodes to the SCSI drive with the SCSI-Y cable.
 2 Turn on both nodes and the shared hard drive.
 3 On node 1, run Wpcvp.exe from the Mscvp directory.
 4 In the initial CVU window, click the **Diagnostic** button.
     The Diagnostic Verification window appears.
 5 To specify a server as node 1 and start node 1 verification, click the **Start Server** button. An MS-DOS window appears.
     Note   Do not turn off either cluster node at this time.
 6   When the MS-DOS window displays the current test computer name (Node 1 Computer Name), repeat steps 1 through 4 on node 2, and stop running the test.
 7   On node 2, click the **Start Client** button and enter the node 1 computer name.
 8   Click the Go button. An MS-DOS window appears. When the test is complete, the MS-DOS window closes.
 9 To see the test results on node 1, click the **View Server Log** button. The test results are printed to a file in the Mscvp directory.
10 To see the test results on node 2, click the **View Client Log** button, which is enabled after the user clicks the **Start Server** button.
11 To quit CVU, click the **Exit** button.

This tool was originated by Compaq©.