

Question No:1

You are the cluster administrator for your company. The company wants its file services to be highly available. You need to evenly migrate all of the data on 10 dedicated file servers across an active/active cluster. The old servers will be deployed throughout the network for various noncritical functions.

Many users have mapped drives an embedded UNIC references to the existing servers name and share names. You need to ensure that those existing connections continue to function properly after the migration.

The cluster is configured to have three disk groups. Cluster group, Disk group 1, and Disk group 2. You have created File Share resources in the appropriate disk groups by using the existing share names.

You want to redirect user access to the new Server cluster without changing the settings on the user's computers. What should you do?

- A. For the Cluster group, create 10 IP Address resources and 10 Network Name resources that use the original service names.
Rename the old servers.
- B. For Disk group1, create one IP Address resource and five Network Name resources that use the original Server names.
For Disk group2, create one IP Address resource and five Network Name resources that use the original Server names.
Rename the old servers.
- C. For Disk group1, create one IP Address resource and five Network Name resources that use the original Server names.
For Disk group2, create one IP Address resource and five Network Name resources that use the original Server names.
Change the IP Addresses on the old servers.
- D. For the Cluster group, create 10 IP Address resources that have the same IP addresses as the original servers.
For Disk group1, create Network Name resources that have unique names.
For Disk group2, create Network Name resources that have unique names.
Change the IP Addresses on the old servers.

Answer: B

Explanation: To ensure that users can still use their old settings with the new Server cluster it is important that the new disk groups IP Addresses resource and Network Name resources use the original server name. Then the old servers need to be renamed.

Incorrect answers:

A. To ensure that the file service is highly available you must create at least 2 disk groups and not just provide the Cluster group with 10 IP address resources and 10 Network Name resources.

- C. To ensure there are no problems with the new cluster, the old servers we need to be renamed and not just have their IP addresses changed.
- D. To ensure there are no problems with the new cluster, the old servers we need to be renamed and not just have their IP addresses changed.

<http://www.microsoft.com/windows2000/techinfo/planning/server/clustersteps.asp>

Question No: 2

You are the administrator of a Windows 2000 Advanced Server cluster. The cluster provides file and print share resources for your company. You add 350 cluster File Share resources to support a new research project.

After adding the resources, you decide to test the cluster for failover. During the test, the users of the new shares are denied access to their files after failover.

You need to ensure that users can access the shares after failover. What should you do?

- A. Use Windows Explorer to reassign share-level permissions.
- B. Use the cluster administrator to reassign share-level permissions.
- C. Use dynamic file shares to remove and then re-create the cluster File Share resources.
- D. In the **Advanced File Share Properties** dialog box, clear the **Hide subdirectory shares** check box.

Answer: B

Explanation: In order for users to access the shares after a failover the share-level permissions must be reassigned. In order to change the share-level permissions you will need to do so from the cluster administrator account.

Incorrect answers:

- A. Windows Explorer does not have the required permissions to reassign share-level permissions.
- C. Dynamic file shares is not one of the three File Share resources types: basic, share subdirectories, and DFS root.
- E. This action will not have the desired effect.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, page 94-106.

Question No: 3

You are the administrator of a new Windows 2000 Advanced Server cluster. You want to configure the cluster to support both DHCP service resource and a WINS service resource. You create a Services Resource group. The group contains the resources shown in the following table.

DHCP Service resource
WINS Service resource
Physical Disk resource
IP Address resource

The services resource group fails when you try to bring it online. What should you do to bring the group online?

- A. Add a Network Name resource to the Services Resource group.
- B. Add one Generic Service resource to the Services Resource group.
- C. Add a second IP Address resource to the Services Resource group.
- D. Add two Generic Service resources to the Services Resource group.

Answer: A

Explanation: Whenever you create a resource on a cluster you need to include a Network Name resource. The Network Name resource is used to assign a name to a resource.

Incorrect answers:

- B. The Generic Service resource is used to support a cluster-unaware service and to provide basic cluster functionality.
- C. A second IP Address Resource will not allow the group online.
- D. Two Generic Service resources will not allow the group to come online.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 97, 164, and 177.

Question No:4

You are the Cluster Administrator for your company. You need to create a new cluster. First, you install and configure the cluster storage. Next, you configure two network adapters each in two Windows 2000 Advanced Server computers named Server1 and Server2. Server1 and Server2 are member servers in Windows 2000 domain and will be configured as cluster nodes.

On Server1, you create a local cluster named Cluster Account. You enable the User cannot change password option. You place the Cluster Account user in the Administrators group. You assign the necessary rights to the Cluster Account user. You install the Cluster service on Server1. You specify the Cluster Account user as the account under which the Cluster service will run. You install the Cluster service on Server2, specifying the same user name and password as you did for Server1.

You receive an error message stating that the Server cannot join the cluster. You want to ensure that Server2 can join the cluster. What should you do?

- A. For the Cluster Account user on Server1, enable the **Password never expires** option. B. Create a domain user under which the Cluster service will run on Server1 and Server2.
- C. For the Cluster Account user on Server1, disable the **User cannot change password** option.
- D. Add the Cluster Account user on Server1 to the Administrators group on Server2. On Server2, assign the necessary rights to the Cluster Account.

Answer: B

Explanation: In order of Cluster Service to run it requires a domain user account under which the Cluster Service can run. In this question the Cluster account was created as a local account and not a domain account.

Incorrect answers:

- A. It is recommended that the Password never expires option is selected but it is not required. When you do not select this option you must ensure that you renew the password and update the cluster service configuration on each node before the passwords expires.
- C. Microsoft recommends that the Cluster user account have the User cannot change password selected.
- D. The Cluster user account must be a domain user account. Adding the Cluster Account user on Server1 to the Administrators group on Server2. On Server2, assign the necessary rights to the Cluster Account will not correct the problem.

<http://www.microsoft.com/windows2000/techinfo/planning/server/clustersteps.asp>

Question No: 5

You are the administrator of Windows 2000 Advanced Server computer. You need to prepare the Server for use as a cluster node. The Server contains a SCSI controller and three internal 4.3 GB hard disks. You plan to attach the Server to an external storage subsystem that contains eight 18.3-GB hard disks. You connect the three 4.3-GB hard disks to the SCSI controller's internal connector. Next, you connect the external storage subsystem to the SCSI controller's external connector. When you start the Server, you receive numerous BIOS error messages that indicate errors on the SCSI bus. Before installing the Cluster service, you need to be able to access the internal and external disks attached to the Server. What should you do?

- A. Replace the SCSI controller.
- B. Replace the external SCSI cable.

- C. Set the SCSI ID to **6**.
- D. Install an additional SCSI controller in the Server. Connect the external drive array to the new controller's external connector.
- E. Disable the on-board SCSI termination on the SCSI controller.
- F. Connect a SCSI terminator to the SCSI-out connector on the external storage subsystem.

Answer: D

Explanation: When you use SCSI hardware in a cluster there is a requirement for two SCSI adapter cards. One card for the internal disks and one for the external disk

Incorrect answers:

- A. If you replaced the SCSI controller and still connect internal and external drives the same problem will still exist.
- B. As the errors are in the BIOS the problem could not be related to the external SCSI cable.
- C. Each SCSI device will require it's own SCSI ID and changing just one of them will not achieve the desired result.
- E. The on-board SCSI termination on the SCSI controller only needs to be disabled when you terminate externally.
- F. As the errors are in the BIOS the problem could not be corrected by connecting an external SCSI terminator.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 44-46.

Question No: 6

You are the cluster administrator for your company. You need to configure the two Windows 2000 Advanced Server computers for cluster nodes. You need to implement fault-tolerance methods for the local storage. You also need to implement fault-tolerance methods for the external storage subsystem.

Each Server contains two 9.3 GB hard disks. The external storage subsystem contains eight 10-GB hard disks. You need to ensure that the cluster can tolerate the failure of a single hard disk in either Server and in the external storage subsystem. Which two fault-tolerance methods should you use?

- A. Configure the hard disks in each Server as Windows 2000 striped volumes.
- B. Configure the hard disks in each Server as Windows 2000 RAID 5 volumes.
- C. Configure the hard disks in each Server as Windows 2000 mirrored volumes.
- D. Configure the hard disks in the external storage subsystem to use a hardware RAID 5 array.
- E. Configure the hard disks in the external storage subsystem as Windows 2000 striped volumes.

- F. Configure the hard disks in the external storage subsystem as Windows 2000 RAID 5 volumes.

Answer: C, D

Explanation: In order to provide fault tolerance to the internal disk drives they will need to be configured as mirrored volumes. With mirrored volumes when data is saved it is written on both drives. To offer the best fault tolerance to the external storages device RAID 5 is the best but this is done at the expense of performance.

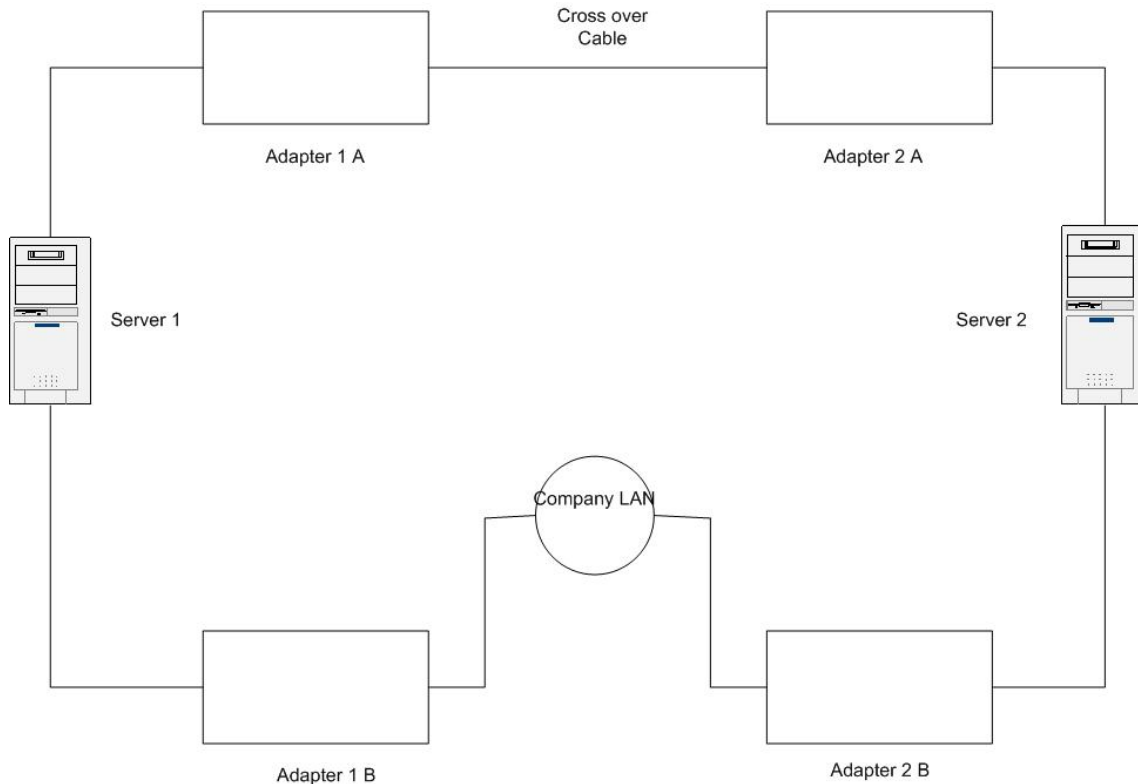
Incorrect answers:

- A. Stripped volumes do not provide fault tolerance.
- B. RAID 5 requires at least 3 disks to function. There are only two internal disks.
- E. Clustering service does not support the software implementation of RAID. RAID needs to be implemented at the hardware level.
- F. Clustering service does not support the software implementation of RAID. RAID needs to be implemented at the hardware level.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 46-48.

Question No: 7

You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You install two network adapters in each Server and then connect them as shown in the following diagram.



You turn off Server2 and begin installing the Cluster service on server1. In the Cluster service Configuration wizard, you designate Client access only for Adapter 1B. the wizard does not allow you to configure Adapter 1A, however.

You verify that the crossover cable between Adapter 1A and Adapter 2A is connected properly.

You need to designate Internal cluster communications only for Adapter 1A. What should you do?

- A. Start Server2, and enter the BIOS setup screen.
Run the Cluster Service Configuration Wizard on Server1. Designate Adapter 1A for **Internal cluster communications only**.
- B. Start Server2, and start Windows 2000 Advanced Server, but do not log on.
Run the Cluster Service Configuration Wizard on Server1.
Designate Adapter 1A for **Internal cluster communications only**.
- C. Disconnect crossover cable from Adapter 1A.
Run the Cluster Service Configuration Wizard on Server1. Designate Adapter 1A for **Internal cluster communications only**. Connect the crossover cable to Adapter 1A.
- D. Disconnect crossover cable from Adapter 1A.
Run the Cluster Service Configuration Wizard on Server1.
Designate Adapter 1A for **All communications**.
Connect the crossover cable to Adapter 1A.

Use the Cluster administrator to designate Adapter 1A for **Internal cluster communications only**.

Answer: A

Explanation: As a Windows 2000 Media sense prevents you from configuring Adapter 1A. There are two ways to resolve this problem: during the cluster installation, the other node must be booted but stopped at the Boot menu so that there is power to the network adapter but it does not have write access to the shared disks or edit the registry.

Incorrect answers:

B. Server 2 had to be stopped at the boot menu. By allowing Server 2 to boot fully you are likely causing more problems and not fixing any.

C. Even with the crossover cable disconnected, Media sense will consider the adapter down Therefore you will not be able to configure it.

D. Even with the crossover cable disconnected, Media sense will consider the adapter down Therefore you will not be able to configure it.

<http://support.microsoft.com/default.aspx?scid=KB;EN-US;q242430&>

Question No: 8

You are the administrator of a Windows 2000 Advanced Server cluster. The cluster nodes are two member servers in the same domain. These nodes are designated NodeA and NodeB.

You want to delegate control of the cluster to the global group cluster operations. You do not want the members of the Cluster Operations group to have Administrator permission on the cluster nodes.

You want to accomplish the following goals:

Enable members of the Cluster Operations group to change the location that is used for cluster log file.

Enable members of the Cluster Operations group to add and remove resources.

Enable the members of the Cluster Operations group to bring resources online and take resources offline.

Enable the members of the Cluster Operations group to stop and start the Cluster service.

You take the following actions:

Create a new domain local group named Node Operations.

Add the Cluster Operations group to the Node Operators group.

Use the Cluster Administrator tool to grant the Node Operations group permissions to administer the cluster.

Which result or results do these actions produce?

- A. Members of the Cluster Operations group can change the location that is used for the clustering log file.
- B. Members of the Cluster Operations group can add and remove resources.
- C. Members of the Cluster Operations group can bring resources online and take resources offline.
- D. Members of the Cluster Operations group can stop and start the Cluster service.

Answer: B, C

Explanation: As you granted the Nodes Operation group permissions to administer the cluster they will be able to manage resources (add/remove and bring on/offline).

Incorrect answers:

- A. As you only granted the Nodes Operation group permissions to administer the cluster they are not able to change the location of the log file.
- D. As you only granted the Nodes Operation group permissions to administer the cluster they are not able to stop and start the Cluster service.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 86-90.

Question No: 9

You are the administrator of a Windows 2000 Advanced Server cluster. The cluster consists of two nodes that are designated NodeA and NodeB. You configure several groups and resources, but you cannot bring any of the Network Name resources online. Windows 2000 is installed in the default location on both NodeA and NodeB, and the Quorum resource is located on logical drive Q in the default path. You attempt to view the log of cluster activity, but the log does not appear.

You want to be able to review as much detail of the cluster activity as possible so that you can identify the problem.

What should you do?

- A. Increase the size of quorum log.
- B. Increase the size of the System event log.
- C. Configure the Application event log to not overwrite events.
- D. On both nodes, configure a system environment variable named ClusterLog with a value of **C:\winnt\cluster\cluster.log**.

Answer: D

Explanation: The quorum log file does not appear. A likely cause of this problem could be a nonexistent or a misconfigured environment variable.

In Microsoft Cluster Server, you can turn Cluster Logging on as a way of troubleshooting problems with the clustering software. To enable Cluster Logging, there are two variables you need to place in the Windows NT environment variable list. These variables are ClusterLog and ClusterLogLevel.

Procedure adding System environment variables,:

1. In the **System** tool in **Control Panel**, click the **Environment** tab. 2
Click an entry in the **System Environment Variable** window.
3. Click the **Variable** and **Value** text boxes to clear them.
4. **Type ClusterLog in the Variable box**, type *path*\cluster.log in the **Value** box, and then click **Set**, where *path* is the drive and folder to store the Cluster Server log file.

NOTE: The recommended path is %SystemRoot%\Cluster. For example, **C:\WinNT\Cluster\Cluster.log**. Cluster logging is enabled by default in Windows 2000, and this is the default path.

5. Type **ClusterLogLevel** in the Variable box, type **0, 1, 2, or 3** in the Value box, and then click **Set**.
6. Click **OK**.
7. Restart your computer for Cluster Server to read the variables correctly.

Reference: How to Enable Cluster Logging in Microsoft Cluster Server, Microsoft Knowledge Base Article - Q168801

Incorrect answers:

- A. The scenario states that the quorum log does not appear. Increasing the size of the quorum log would not make it appear.
- B. The System event log does not contain a copy of the Quorum log file nor does it contain cluster activity. This will not allow you to see as much detail as possible of the cluster activity.
- C. The Application event log cannot overwrite cluster activity.

Question No: 10

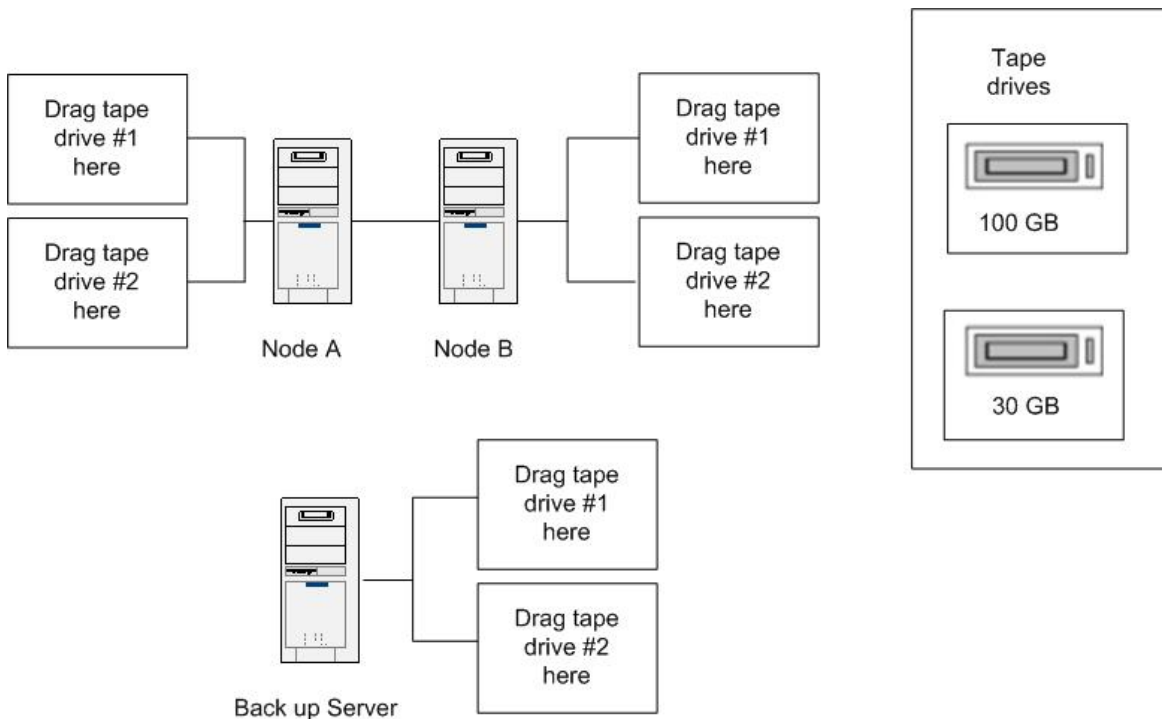
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster contains two nodes that are designated NodeA and NodeB. A third Windows 2000 Server computer on your network is named BackupSvr.

You need to implement a disaster recovery plan. You decide to use Windows 2000 Backup to perform the backup operations.

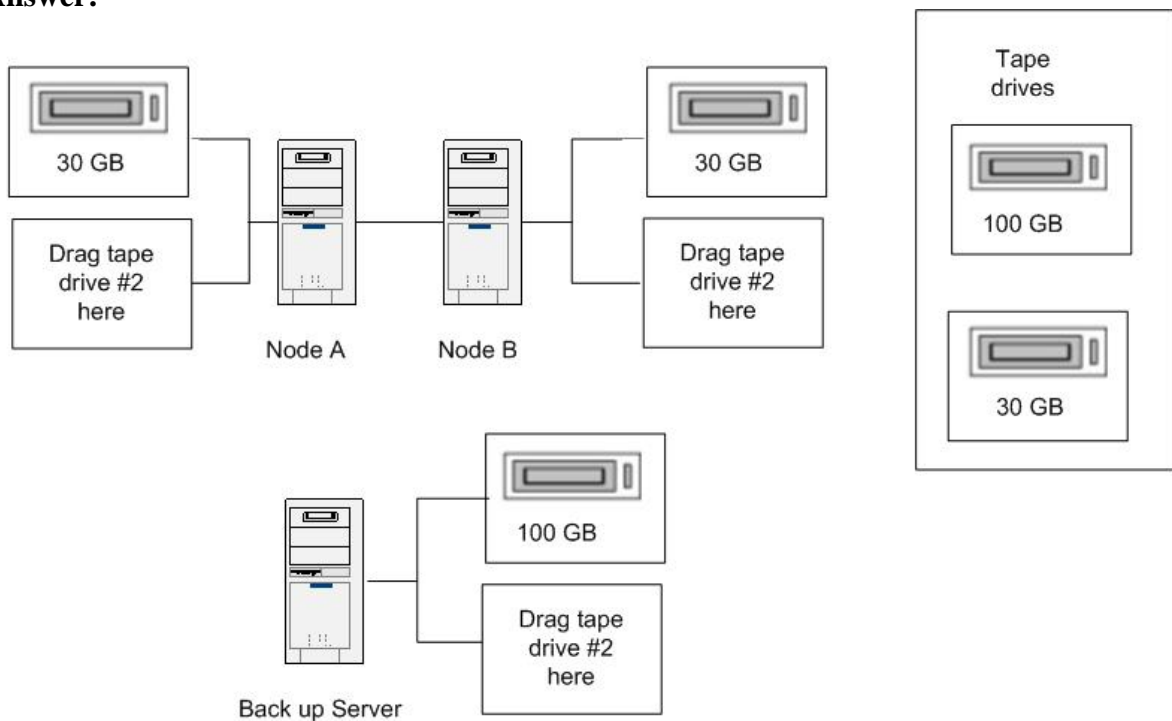
You want to accomplish the following goals:

**Backup the 80-GB cluster storage subsystem to a single tape daily.
Complete the backup even if a single node of the cluster fails.
Backup the cluster information databases on NodeA and NodeB daily.**

Your company uses 100-GB tape drives and 30-GB tape drives. You need to decide which tape drive you will use for the backups. You need to use the smallest possible tape drives for NodeA, NodeB and BackupSvr. You can attach up to two tape drives to each Server. To answer click the Select and Place button. Drag the appropriate tape drives to appropriate answers.



Answer:



Explanation: As the cluster information databases on NodeA and NodeB will not be that large a 30 GB tape drive will suffice. Each node requires its own tape drive in case one of the nodes fails. In addition, in order to backup the 80 GB cluster storage subsystem to one tape then the 100 GB tape drive is required.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 237-244.