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Installing, Configuring, and Administering Clustering Services by Using Windows 2000 Advanced Server

Version 3.0

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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 no 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 t 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 the 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.

Question No: 11

You are the administrator of a Windows 2000 Advanced Server cluster named Cluster1. Cluster1 consists of two nodes that are designated NodeA and NodeB. Each node has a 8 GB of local disk storage. The cluster storage is composed of eight 10 GB hard drives in a hardware RAID 5 array.
The local disk storage on both nodes consists of a single volume, which is shared as C$. The cluster storage is shared as Z$.
You need to implement a disaster recovery strategy that includes regular backups of the cluster. You decide to use Windows 2000 Backup.

You want to accomplish the following goals:

- **Perform a full daily backup of the cluster storage, even if one node in the cluster fails.**
- **Perform a full daily backup of the System State data on the node that owns the Quorum resource.**
- **Perform a full daily backup of the local disk storage on the node that owns the Quorum resource.**
- **Save all of the backed-up data to a single tape.**

You take the following actions:

- **Connect a 100-GB tape drive to NodeA.**
- **Use Windows 2000 backup to create a backup selection file that includes \\Cluster1\Z$ and \\NodeA\c$. Save the backup selection file in C:\ClusterBack.bks on NodeA.**
- **Use the Scheduler service on BackupSvr to launch Windows 2000 Bcakup daily. Use the following command line parameters:**
  ntbackup backup systemstate c:\clusterback.bks

Which result or results do these actions produce? (Choose all that apply)

A. Cluster storage is fully backed up daily, even if one node in the cluster fails.
B. The System State data on the node that owns the Quorum resource is fully backed up.
C. The local disk storage on the node that owns the Quorum resource is fully backed up daily.
D. All of the backed-up data is saved to a single tape.

Answer: D
Explanation: All backup-up data is saved to a single tape.

Incorrect Answers
A:: You save the backup selection on NodeA. If node a fails, the backup command would not run.
B, C:: Only node a is backed up (including the system state). If NodeA fails, NodeB becomes the owner of the quorum resource. But NodeB\C$ is not included in the backup. So it cannot be guaranteed that the system state and the local disk storage of the quorum owner will be backed up, if the owner is NodeB.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 236-241.

Question No: 12
You are the administrator of a Windows 2000 network. The network contains a two-node cluster that functions as a file Server for 500 users in the manufacturing department. The cluster consists of two nodes that are designated NodeA and NodeB. Both cluster nodes are single-processor, Hardware Compatibility List (HCL)-compliant systems. Both nodes contain 128 MB of RAM, 500 MB of available local storage and 3.5 GB of available cluster storage. The CPU utilization for each node average 70 percent.
The accounting department requests that you add a new application to the cluster. The new application will support 500 additional users. The application requires multiprocessing. It also requires 128 MB of RAM, 750 MB of local storage space for installation, and 1.5 GB of cluster storage. The application is cluster unaware, but it meets the requirements for a cluster application.
You want NodeA to be the preferred owner for all File Share resources. You want NodeB to be the preferred owner for the accounting Application resource.

You want to accomplish the following goals:

- **Reduce processor utilization on both nodes.**
- **Optimize NodeB for running the accounting application.**
- **Optimize NodeA for use as a file Server.**
- **Enable NodeA and NodeB to provide for failover support for each other.**

You take the following actions:

- **Add 512 MB of RAM to each node.**
- **Add another processor on NodeB.**
- **Upgrade the processor on NodeA.**
- **Add 2 GB of local storage on NodeB.**

Which result or results do these actions produce?

A. Processor utilization on both nodes is reduced.
B. NodeB is optimized for running the accounting application.
C. NodeA is optimized for use as a file Server.
D. NodeA and NodeB can provide for failover support for each other.

Answer: A, B
Explanation:
A: Processor utilization on both nodes is reduced.
B: NodeB is optimized for running the accounting application.

Incorrect answers:

C: NodeA was not optimized with the processor upgrade.
D: No steps has been done to provide failover support for both nodes.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 40-41.

Question No: 13
You are the administrator of a two-node Windows 2000 Advanced Server cluster that serves as an application Server for your company. The cluster runs a resource-intensive, critical application. You want to be able to run diagnostics on the application and the cluster nodes after failover. Business hours for your company are 8:00 A.M. to 6:00 P.M. and the application must be available during these hours.
You want to configure the failback policy for the application. What should you do?

A. Configure the Application resource group properties to **Prevent failback.**
B. In the Application resource group properties, configure both nodes as preferred owners.
C. Configure the Application resource group properties to **Allow failback between 1 and 4 hours.**
D. Configure the Application resource group properties to **Allow failback between 4 and 1 hours.**

Answer: A
Explanation: If you want to run diagnostics on the application and cluster nodes after a failover it is necessary that you prevent failback.

Incorrect answers:
B. If both nodes were preferred owners it is very likely that the application could become unavailable during working hours.
C. It is possible with these setting that the application could become unavailable during work hours.
D. It is possible with these setting that the application could become unavailable during work hours.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 220-222.

Question No: 14
You are the Cluster Administrator for your company. You need to create a cluster that consists of two Windows 2000 Advanced Server computers that are designated NodeA and NodeB. Your network infrastructure includes Windows 2000 WINS

servers, Windows 2000 DNS servers that have dynamic updates enabled for all zones and Windows 2000 DHCP servers that have client DNS registration enabled. Client computers in the network include Windows 2000 computers, Windows NT Workstation 4.0 computers and Windows 95 computers. These client computers are dispersed over multiple subnets. All of the client computers receive DNS and WINS Server assignments by using DHCP and do not require additional manual configuration. All of the Administrators on the network use Windows 2000 client computers.
You want the cluster to provide high availability for a cluster-aware Windows sockets application and for file shares.
For each service you configure a resource group that contains a Network Name resource. You manually configure the IP address, the subnet mask and the default gateway TCP/IP properties on NodeA and NodeB.
You install the cluster service on NodeA and NodeB. After the installation, none of the users can connect to any of the virtual servers by name.

You want to accomplish the following goals regardless of which node owns the resources.

- **Provide the ability to administer the cluster remotely by using the cluster name.**
- **Enable all of the users to access the Windows sockets application by using a virtual Server name.**
- **Enable all of the users to access file shares by using a virtual Server name.**
- **Provide the ability to dynamically register the virtual Server names.**

You take the following actions.

- **Configure NodeA as a WINS client computer.**
- **Configure NodeB as a WINS client computer.**

Which result or results do these actions produce? (Choose all that apply)

A. The cluster can be administered remotely by using the cluster name.
B. All the users can access the Windows sockets application by using a virtual Server name.
C. All the users can access file shares by using a virtual Server name.
D. The virtual Server names can be registered dynamically.

Answer: A, B, C, D
Explanation: By configuring NodeA and NodeB as a WINS client computer you accomplished all of the goals that you wanted to achieve.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 174-178.

Question No: 15
You are the Cluster Administrator for your company. You need to install the Cluster service on two servers named Server1 and Server2. Both servers have one network adapter that is attached to the company LAN and a second network adapter that is attached to a private cluster network, as shown in the exhibit. (Click the exhibit button.)
During the installation of cluster service on Server1, you provide an IP address for the cluster and receive the following error message:

How should you configure the IP address for the cluster?

A. Configure the IP address for the cluster to be 127.0.0.1.
B. Configure the Server1 and Server2 to be DHCP client computers prior to cluster installation.
C. Configure the IP address for the cluster to be unique IP address on the 10.0.5.0 subnet.
D. Configure the IP address for the cluster to be a unique IP address on the 192.168.5.0 subnet.

Answer: D
Explanation: It is very important that the cluster receive a unique IP address. As you were configuring an IP address for the cluster it can be assumed that you were configuring the Public Cluster Connection. As this is the Public Cluster Connection, it will require a public IP address. Therefore, the IP address should be in the 192.168.5.0 subnet.

Incorrect answers:
A. This is the IP address of the local loop back. It cannot be used as a valid IP address.
B. It is highly recommended that a cluster have a static IP address. DHCP servers are not a valid solution.
C. The public cluster connection should not have a private IP address.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 64-68.

Question No: 16
You are the Cluster Administrator for your company. You create a file and print cluster. The cluster contains two nodes that are designated NodeA and NodeB. Both nodes are directly connected to a SCSI storage enclosure.
The cluster is configured to have five disk groups. All five-disk groups are online on NodeA, and none of the disk groups have errors. You decide to test failover. When you shut down NodeA, you cannot access the cluster storage form NodeB.
You want to ensure that you can access the cluster storage from one node when the other node is shut down.
What should you do?

A. Enable passive termination on the SCSI bus.
B. Configure all of the cluster groups to allow immediate failback.
C. Attach a Y cable and a terminator to the SCSI adapter in each node.
D. Attach a Y cable and a terminator to each SCSI storage enclosure connection.

Answer: C
Explanation: As with as SCSI devices it is important to ensure that each end of the SCSI chain. In this case it would be best to attach a Y cable to each adapter. One part of the cable would attach to the device and the other would be terminated. This would ensure access to the cluster storage from one node when the other node is down.

Incorrect answers:
A. Passive termination would achieve the desired effect.
B. Failback would not allow access to the storage devices without proper termination.
D. The termination must be off the SCSI adapter on each node.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 202-206.

Question No: 17
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster nodes are two member servers that are designated NodeA and NodeB.
The cluster hosts an application named Invoice that is used by the finance department. Invoice runs on a virtual Server named InvServer.
The Generic Application resource for Invoice is a member of a resource group named Invoice Group. The resources in the Invoice Group and their dependencies are shown in the following table:

Resource name	Resource Type	Resource dependencies
Invoice App	Generic Application	▪ Invoice Name ▪ Administrator Share
Invoice Name	Network Name	Invoice IP
Invoice IP	IP Address	(none)
Admin share	File Share	(none)

The Admin Share resource is used only once per week, to perform backup of the invoice data files. Currently, the Invoice application fails over when the Admin share resource is not available or when the Admin Share resource fails.
You need to configure the resources in the Invoice Group so that invoice will remain on the same node when the Admin Share resource is not available or when the Admin Share resource fails.
What two actions should you take? (Choose Two)

A. On the Admin Share resource, set the restart threshold to 0.
B. On the Admin Share resource, disable the **Affect the group** option.
C. Configure the Administrator Share resource to run in a separate resource monitor.
D. Remove the Admin Share resource from the Invoice App resource dependencies list.
E. Run **cluster.exe** to set the RetryPeriodOnFailure value of the Invoice App resource lower than the RestartPeriod value.

Answer: C, D
Explanation:
C: .To prevent one resource from affecting the resources in the group is to provide that resource with its own resource monitor.
D: You can backup the admin share even if it is not in the invoice app dependencies.

Incorrect answers:
A: The threshold setting is the number of times a resource can be restarted within the specified period. By setting the threshold to 0 it means that if the resource fails it will never be restarted and failover immediately.
B: If you take off the admin share out of the Invoice application dependencies, the application would not fail.
E: The RetryPeriodOnFailure is the amount of time that a resource can be failed before it is restarted. The RestartPeriod is the amount of time a restart will be attempted. The action suggested above will not achieve the desired results.

MCSE Clustering Using Advance Server 2000, pages 69-70 and 172-174.

Question No: 18
You are the Cluster Administrator for your company. You need to configure a cluster for highly available Web, file, and print services on servers that are designated NodeA and NodeB. Every day, between 12:00 A.M. and 6:00 A.M., the cluster is backed up over the network.
You have created the appropriate resources with default settings for Web, file and print services in the following groups:

- **File Service group**
- **Print Service group**
- **Web Service group**

You want to accomplish the following goals:

- **Provide failover for resources.**
- **Enable Web, file and print services to be statically load balanced.**
- **Enable resources to automatically move back to the original owner node after failover.**
- **Ensure that the network backup of cluster storage will not fail when the original owner node comes back online after failover.**

You take the following actions:

- **Configure NodeA as the preferred owner for the File Service group and the Print Service group.**
- **Configure NodeB as the preferred owner for the Web Service group.**
- **Configure the failback settings for the Web Service, File Service and Print Service to allow failback at all times exception from 12:00 A.M. to 6:00 A.M.**

Which result or results do these actions produce? (Choose all that apply.)

A. Failover is provided for resources.
B. Web, file and print services can be statically load balanced.
C. Resources automatically move back to the original owner node after failover.
D. The network backup of cluster storage will not fail when the original owner node comes back online after failover.

Answer: A, B, D
Explanation: Through your actions you have been able to provide for failover, load balancing, and preventing the failure of network backup.

Incorrect answers:
C. The resources will automatically move back to the original owner node after failover except during a specified period 12:00 A.M. to 6:00 A.M..

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 100-101.

Question No: 19
You are the administrator of two new computers. You need to configure the computers before installing Windows 2000 Advanced Server and the Cluster service.
You install a new SCSI controller in each computer. You connect both controllers to an external disk array, which will serve as the cluster storage. The external disk array contains three hard disks.
You start both servers and receive a BIOS message on each Server. The error message indicates that a device conflict has been detected on the SCSI bus.
You need to correct this error. What should you do?

A. Change the SCSI ID to 0 on all three hard disks.
B. Change the SCSI ID on one of the SCSI controllers.
C. Add a SCSI bus terminator to the connector on the external disk array.
D. Add a SCSI bus terminator to the connectors on both SCSI controllers.

Answer: B
Explanation: Whenever a SCSI devices are installed their controllers have a default SCSI ID of 7. This would cause the SCSI device conflict. To correct this conflict you would need to change the SCSI ID on one of the controllers to something else, such as SCSI ID 6.

Incorrect answers:
A. Changing the SCSI ID on all three hard disk would also cause a conflict.
C. Adding a terminator to the external disk array would not cause the SCSI ID to end. You would still receive a conflict message.
D. Adding a terminator to the SCSI connectors would not solve the SCSI ID conflict. You would still receive a conflict message.

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

Question No: 20
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You need to configure these servers for use as cluster nodes.
Each Server contains two network adapters. Adapter1A and Adapter2A will be designated for Internal cluster communications only. Adapter1B and Adapter2B will be designated for All communications.
You need to connect the network adapter so that they provide dedicated network connectivity for internal cluster communications. You also want to avoid having a single point of failure in the internal cluster communications.
How should you connect the network adapters?

To answer click the appropriate network diagram in the exhibit.

Answer: DIAGRAM D
Explanation: One of the keys to this question is the fact that Adapter 1B and 2B are designated for all communications. Thus these adapters must be connected to the

Company LAN. Adapters 1A and 2A need to be connected directly to each other, in this case with a stand-alone hub.

Incorrect answers:
Diagram A – As Adapters 1B and 2B are designated for all communications a crossover cable will not achieve this.
Diagram B - As Adapters 1B and 2B are designated for all communications a stand-alone hub will not achieve this.
Diagram C – As all adapters are connected to Company LAN this diagram does not meet the requirement of a single point of failure in internal cluster communications.

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

Question No: 21
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster has a Fibre Channel cluster storage subsystem that is connected as shown in the exhibit.

Both cluster nodes lose power unexpectedly. When you start both nodes, neither node can access any of the disks in the cluster storage. You examine the cluster storage subsystem, and it appears to be working properly.
You need to ensure that the servers can access the cluster storage. What should you do?

A. Reinitialize the Fibre Channel hub.
B. Reinitialize the cluster storage subsystem.
C. Shut down both nodes, the cluster storage subsystem, and the Fibre Channel hub.
Start the Fibre Channel hub and the cluster storage subsystem.
Start both nodes.
D. Shut down both nodes, the cluster storage subsystem, and the Fibre Channel hub.
Start the Fibre Channel hub and both nodes.
Start the cluster storage subsystem.

Answer: C
Explanation: It is important to bring a cluster's resources online before the nodes. As a result, the hub and storage subsystem will need to be brought back online first and then the nodes.

Incorrect answers:
A. The reinitialization of the hub alone will not ensure that the servers can access the cluster storage.
B. The reinitialization of the cluster storage subsystem alone will not ensure that the servers can access the cluster storage.
D. Remember the nodes should be restarted after the cluster storage subsystem.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 207-218.

Question No: 22
You are the Cluster Administrator for your company. You need to configure your company's cluster of two nodes that are designated NodeA and NodeB. The following groups exist on the cluster:

- **Cluster group**
- **Disk group 1**
- **Disk group 2**

You need to create two dynamic file share resources. The finance department will use one file share named FIN. The human resources department will use another file share named HR. Your network infrastructure includes WINS and dynamic DNS.

You want to accomplish the following goals:

- **Enable users to connect to the file shares by using a virtual server name**
- **Ensure the file share to be load balanced, one on NodeA and one on NodeB.**
- **Ensure that resources that should always be together on the same cluster node will always failover together.**
- **Ensure that a virtual server name is available for connections only when the associated file share resource is online.**

You take the following actions:

- **Create two file share resources in the cluster group**
- **Create two network name resources in the cluster group**
- **Configure the file share resources to be dependent on the physical disk resource in the cluster group.**
- **Configure the network name resources to be dependent on the existing IP address resources in the cluster group.**

Which result or results do these actions produce? (Choose all that apply)

A. Users can connect to the file shares by using a virtual server name
B. File share can be load balanced, one on NodeA and one on NodeB.
C. Resources that should always be together on the same cluster node will always failover together.
D. A virtual server name is available for connections only when the associated file share resource is online.

Answer: A, C
Explanation: By creating a network name resources you enabled users to connect to the file shares using the virtual server name. In addition, by the actions you took you were able to ensure that resources together on the same cluster node will always be able to failover together.

Incorrect answers:
A. In order for the file shares to be load balanced some form of static load balancing would have been need to be configured.
D. In order for the virtual server name to only be available when the associated file share resources is online there would need to be a dependency between the network name and the file share resource.

MCSE Clustering Using Advance Server 2000, pages 150-160.

Question No: 23
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster provides file services to your company. You add a print spooler resource to the cluster and configure NodeA to be its preferred owner. During a scheduled maintenance procedure, you move the printer resources group to NodeB. After you move the resources group, users report that the Print Spooler resource is no longer available.
You need to ensure that the Print Spooler resource is accessible from both nodes. What should you do?

A. Copy the printer driver to the shared disk
B. Publish the printer to the Active Directory
C. Install the printer driver to the virtual server on NodeB
D. Configure the port on NodeB to match the port on NodeA.

Answer: C
Explanation: You must install printer drivers on each cluster node when that node is the owner of the spooler group. In this case the printer driver will need to be installed on the virtual server on Node B.

Incorrect answers:
A. Copying the printer driver to a shared disk does not ensure that the Print Spooler is available to both nodes.
B. Publishing the printer to AD will not make the Printer Spooler available to both nodes.
D. Sharing ports will have no impact on the Printer Spooler.

http://support.microsoft.com/default.aspx?scid=kb;en-us;Q228904

Question No: 24
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster contains 1,200 file share resources for the home directories of 1,200 users. The name of each file share is the same as the name of the corresponding home folder. You notice that the cluster service software constantly uses an unusually high percentage of processing time.
You want the cluster service to use less processing time. What should you do?

A. Use the net.exe command line utility to change each share to a hidden share.
B. Create a new file share resource, and share all of the home folders as subdirectories.
C. Use the cluster.exe command line utility to run each file share resource in a separate resource monitor.

D. Configure the "Is Alive" poll interval of the file share resource type to be equal to the "Look Alive" poll interval

Answer: B
Explanation: In order to reduce the processing time you should create a file share resource and then share all of the home folders as subdirectories.

Incorrect answers:
A. Creating hidden shares will not reduce the processing time.
C. You can use the cluster command to do a number of things but running each file share in a separate resource monitor and have this reduce the processing time is not one of them.
D. Making the "Is alive" poll interval equal to that of "Look Alive" poll interval will not reduce the processing time.

http://support.microsoft.com/default.aspx?scid=kb;en-us;q256926

Question No: 25
You are the administrator of an existing Windows 2000 Advanced Server cluster. You want to add a DHCP Service resource to the cluster. Currently, the cluster uses two of the three available disks. On the unused disk, you create a new resource group named DHCP Resource to be used by the DHCP Service.
You want to add the DHCP Service resource and its required dependencies to the cluster. What should you do?

To answer click the Select and Place button and then drag the appropriate resources to the dependency tree in the correct order. Some resources and slots might not be used. Some resources might be used more than once.

Select and Place

DHCP Service dependancy tree
Drag Resource
Drag Resource
Drag Resource
DHCP Service Resource
Possible Resources
Network Name Resource
DHCP Service Resource
Generic Service Resource
WINS Service Resource
Physical disk Resource
IP address Resource

Answer:

Explanation: Dependencies are created when one resource relies on other resources for functionality. If any resource should fail, so will any resource that depends on the failed resource. Each resource type has its own dependency (ies). For DHCP Service resource the dependencies are physical disk and IP address.

MCSE Clustering Using Advance Server 2000, pages 53-54.

Question No: 26
You are the administrator of a Windows 2000 Advanced Server cluster. Two domain controllers are configured as cluster nodes. On the cluster storage subsystem, you create a folder structure to store user's files.
Part of the folder structure on the cluster storage subsystem is shown in the exhibit.

All of the administrators need access to the files in F:\Data\Admins. The other folders within the Data folder contain individual user's files.
You create a new resource group named Files. You create two new File Share resources within the Files group and configure them as shown in the following table:

Resource Name	Share Name	Path	Share Subdirectories?	Share Permissions
Admin Files	Admins	F:\Data\Admins	No	Administrators Full Control
User Files	Data	F:\Data	Yes	Everyone Full Control

NTFS permissions control the access to each user folder.
The CLUSTER Administrator indicates that the new File Share resources seem to come online. However, the System event log includes an error message stating that the Admin file Share resource did not start successfully.
You want to ensure that the Admin files resources starts successfully. What should you do?

A. Configure the Admin Files resource to be independent on the User Files resource.
B. Move the Admins File resource to a different resource group from the User File resource.
C. Move the Admins folder to a location outside the Data folder. Configure the Admin Files resource to use this new location.
D. Remove the permissions for the Administrators group. Configure the Admin File resource to grant permissions to the Domain Admins group.

Answer: C
Explanation: A conflict was created when User Files resource was granted the ability to share subdirectories but no share permissions the Admins subfolder. This is why the Admins folders needs to moved outside the Data folder.

Incorrect answers:
A. The problem is with the share permissions and not with the dependencies of the resources. This would not solve the problem.
B. The problem lies in the location of the Admin folder and the associated permissions. Moving the Admin File will not solve the error.
D. Without their permissions the Administrators group would not be able to perform their functions.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 121-124.

Question No: 27

You are the administrator of a Windows 2000 Advanced Server cluster named Cluster1. The cluster nodes are two member servers that are designated NodeA and NodeB.
The cluster hosts a network service named Alpha that the ID department uses. Alpha runs as a generic service on a virtual Server named Vserver.
You need to stop the Alpha service from 8:00 A.M. to 9:00 P.M. so that you can perform maintenance on the service. You schedule net stop Alpha and net start Alpha commands.
The next morning, however, the ID department reports that the Alpha service is not stopped.
The system event log contains the following error message:
Event Type: Error
Event Source: ClusSvc
Description: Cluster resource 'Alpha' failed.

The cluster log contains the following entries:
000006dc.000000730: :2000/05/10-80:00:48.646 Generic Service
<Alpha>: Terminate request
000006dc.000000730: :2000/05/10-80:00:48.646 Generic Service
<Alpha>: GenSvcTerminate : calling SCM.
000006dc.000000730: :2000/05/10-80:00:48.646 Generic Service
<Alpha>: Service died; status = 1062/

You want to ensure that the Alpha service is stopped every morning from 8:00 A.M. to 9:00 P.M. What should you do?

A. Schedule the **net stop Vserver** command and the **net start Vserver** command.
B. Schedule the **cluster res Alpha/fail** command and the **cluster res Alpha/Resume** command.
C. Schedule the **cluster res Alpha/offline** command and the **cluster res Alpha/online** command.
D. Schedule the **cluster res Alpha/prop PersistentState=0** command and the **cluster res Alpha/pop PrsistentState=1** command.

Answer: C
Explanation: To configure options on a resource in a cluster a specific syntax must be used. Various options of this syntax do different things. To bring a resource offline you use the /offline option and to bring a resource online you would use the /online option.

Incorrect answers:
A. There is no such command in relation to cluster resources.
B. The /fail option will initiate a resource failure and not take it offline like you require. There is no /resume option for cluster resources.

D. There is no such option as PresistentState in relation to cluster resources. PersistentState is cluster group property name, though.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 370-371.

Question No: 28
You are the Cluster Administrator for your company. You install a two-node file Server cluster, as shown in the exhibit.

During testing all of the cluster resources come online after failover. However, the remote subnet client computers that connect to file shares by using the virtual Server names receive the following error message: "The Network path was not found."
You want to allow remote client computers to seamlessly reconnect to the virtual Server after failover. What should you do?

A. Configure NodeB to use Router B as the default gateway.
B. Configure the network adapters to have the same physical MAC address.

C. Ensure that the Address Resolution Protocol (APR) cache is updated on both routers during failover.
D. Install a second network adapter on both nodes and configure a private network between NodeA and NodeB.

Answer: C
Explanation: To ensure that the remote clients can reconnect to the virtual server you will need to ensure that ARP entry is current. In fact it may be required to add a static ARP entry.

Incorrect answers:
A. Configuring a different default gateway for NodeB will not guarantee a seemless reconnect.
B. Configuring the NICs to have the same physical MAC address would cause many problems.
D. Configuring a private network between the nodes would not solve the problem that the cluster is experiencing.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 300-301.

Question No: 29
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. The servers have a Fibre Channel external storage subsystem that is connected as shown in the exhibit.

You discover that Server1 cannot access the external storage subsystem. You replace the fibre cable that connects Server1 to the Fibre Channel hub, but the problem persists. When you test the original fibre cable by using a cable tester, the test reveals no problems with the cable.
You swap the Fibre Channel Host-Based Adapter (HBA) in Server1 with the HBA in Server2. Server1 still cannot access the external storage subsystem. Hardware diagnostics report no failed ports on the Fibre Channel hub.
You need to be able to access the external storage subsystem from either Server. What should you do?

A. Reinitialize the Fibre Channel Hub.
B. Replace the Fibre Channel Hub in Server1.
C. Replace the Gigabit interface Converter (GBIC) for Server1 in the Fibre Channel Hub.
D. Replace the Gigabit Interface Converter (GBIC) for the external storage subsystem in the Fibre Channel hub.

Answer: C
Explanation: All Fiber Channel devices have GBIC, which is a plug-in module specific to the type of cable being plugged into the device. As Server 1 is currently experiencing problems it GBIC should be replaced.

Incorrect answers:
A. As hardware diagnostics reported no errors reinitialising the hub will not resolve the connection problem.
B. Instead of replacing a hug the GBIC can be replaced and this most often will fix a Fibre Channel connection problem.
D. As the connection problem is with Server1 it's GBIC should be the one that is replaced.

MCSE Clustering Using Advance Server 2000, pages 50-51.

Question No: 30
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster hosts an Application named Plan that is used by the Marketing department.
The Generic Application resource for the Plan application is a member of a resource group named Plan Group. The resources in Plan Group and their dependencies are shown in the following table.

Resource Name	Resource Group	Resource dependencies
Plan App	Generic Application	Plan Share Plan Name
Plan Share	File Share	Plan Name Plan Disk
Plan Name	Network Name	Plan IP
Plan IP	IP Address	(none)
Plan Disk	Physical Disk	(none)

The network addresses that your company uses change. As a result, you need to change the IP address for the virtual Server that runs the Plan application.
You want to implement this change by taking the fewest possible steps. You also want to ensure that the Plan Disk resource remains online while you change the IP address for the virtual Server.

What should you do?

To answer click the Select and Place button, and then drag the fewest possible required resource actions in the correct order to the boxes in the left column.

Necessary Actions	Possible Actions
First Action	Take plan App offline
Second Action	Take plan Share offline
Third Action	Take plan Name offline
Fourth Action	Take plan IP offline
Fifth Action	Bring plan App online
Sixth Action	Bring plan Share online
Seventh Action	Bring plan Name online
	Bring plan IP online
	Change IP address

Answer:

Necessary Actions	Possible Actions
Take plan IP offline	Take plan App offline
Change IP address	Take plan Share offline
Bring plan IP online	Take plan Name offline
Fourth Action	
Fifth Action	Bring plan App online
Sixth Action	Bring plan Share online
Seventh Action	Bring plan Name online

Explanation: As the IP address is part of the Plan IP group that group will need to be taken offline. The proper order would be Take Plan IP offline, Change IP Address, and the Bring Plan IP online

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 88-89.

Question No: 31
You are the administrator of Windows 2000 Advanced Server cluster. Hardware diagnostics indicate that one of your cluster disks is beginning to fail and needs to be replaced. The failing disk contains the Quorum resource for the cluster.

You need to prepare the Quorum resource before you replace the failing disk. What should you do?

A. Backup the drive containing the Quorum resource.
B. Copy the Quorum resource recovery log to another cluster disk.
C. Backup the System State data with the Quorum resource recovery log.
D. From the Quorum tab of the Cluster Properties dialog box, change the Quorum resource to another disk.

Answer: D
Explanation: As the Quorum resource is required for clusters to function, you will need to move the Quorum resource to another location. Using the Quorum tab of the Cluster Properties dialog box, you can change the location of the Quorum resource.

Incorrect answers:
A. Backing up the drive will not make the Quorum resource available when the failing disk is brought offline or fails.
B. There is no such thing as a Quorum resource recovery log.
C. The key to this question is that you want the Quorum resource to be available when you replace the failing log.

MCSE Clustering Using Advance Server 2000, pages186 and 66.

Question No: 32
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster consists of two nodes that are designated NodeA and NodeB. You notice the following error message in the event log: "There was a quorum resource logging problem. The quorum resource log may be corrupted."
You need to restore the Quorum resource log from a recent backup tape. What should you do?

A. One NodeA, stop the Cluster service.
Perform a restore of the Quorum resource log.
Start the Cluster service.
B. On NodeA, stop the Cluster service.
Start the Cluster service by using the **noquorumlogging** parameter.
Perform a restore of the Quorum resource log.
Start the Cluster service.
C. On both nodes, stop the Cluster service.
Start the Cluster service on one node by using the **noquorumlogging** parameter.
Perform a restore of the Quorum resource log.
Start the Cluster service on both nodes.

D. On both nodes, stop the Cluster service.
Disconnect the cluster communications network instance.
On one node, start the Cluster service.
Perform a restore of the Quorum resource log.
Reconnect the cluster communications network interface.
Start the Cluster service on the second node.

Answer: C
Explanation: You will need to stop the Clustering Service on both nodes and start the Cluster Service on one node with the nonquorumlogging parameter to allow access to the Quorum disk. Next you will need to perform a restore of the Quorum resource log. Once the restore is complete you will need to start the Cluster service on both nodes.

Incorrect answers:
A. To work the quorum log it is necessary to stop all nodes on the cluster and to stop the quorum logging.
B. Remember it is necessary to stop all nodes to work on the quorum log.
D. Disconnecting the cluster communications network instance will create more problems that will need to be corrected.

MCSE Clustering Using Advance Server 2000, pages 276 and 261-262.

Question No: 33
You are the administrator of a file cluster that has been stable for several months. The cluster configuration is shown in the exhibit.

You need to perform hardware maintenance on Ncf02b. from your computer, you use the Cluster Administrator to move all of the groups to Ncf02a. Next, you turn off Ncf02b. During the move, you mistakenly take the default Cluster group offline and you immediately lose connection to the cluster. Using the Cluster Administrator, you attempt to reconnect to the cluster by the name of cf-blv02. The reconnection is unsuccessful, and you receive the following message:

You click Yes and then receive the following error message:

You want to use the Cluster Administrator to establish a connection, allowing you to bring the Cluster group resources back online.
What should you do?

A. Use the Cluster Administrator to connect to the cluster by using the name Ncf02a.
B. Restart Ncf02b, and connect to the Cluster Administrator by using the name cf-blv02.
C. Use the Cluster Administrator to connect to the cluster by using the IP address 192.168.5.100.
D. Stop and then start the Cluster service on Ncf02a. Connect to the Cluster Administrator by using the name cf-blv02.

Answer: A
Explanation: Cluster Administrator is the primary tool for cluster management, maintenance, and troubleshooting. Once Cluster Administrator is connected to a cluster, you can mange any node within that cluster. This is how you would bring the Cluster group resources back online.

Incorrect answers:
B. Restarting Ncfo2b will not permit you to bring the Cluster group resources back online.
C. When connecting with Cluster Administrator you connect by entering the cluster name or the individual node name.
D. You will not need to stop the Cluster service on Ncf02a.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 86-87.

Question No: 34
You are the administrator of a two-node Windows 2000 Advanced Server cluster. The cluster storage contains three Physical Disk resources named M, R, and S. NodeA is a file and print Server for the manufacturing department and uses

Physical Disk resource M. NodeB is an application Server for the research department and uses Physical Disk resource R.
You add a new research application, named ResApp, to the cluster, with NodeB designated as the preferred owner. The application is a member of the Application resource group and uses Physical Disk resource R. Users report that the access times to the research applications are now excessively long. The CPU utilization for the cluster nodes is shown in the following table.

Node	**Average CPU utilization before installing ResApp**	**Average CPU utilization after installing ResApp**
NodeA	60%	60%
NodeB	72%	80%

You need to reduce the access times for the research applications while maintaining high availability. What should you do?

A. Move ResApp to a new resource group on Physical Disk resource M, and specify NodeB as the preferred owner.
B. Move ResApp to a new resource group on Physical Disk resource M, and specify NodeA as the preferred owner.
C. Move ResApp to a new resource group on Physical Disk resource S, and specify NodeB as the preferred owner.
D. Move ResApp to a new resource group on Physical Disk resource S, and specify NodeA as the preferred owner.

Answer: D
Explanation: In order to bring the average CPU utilization down you should take three actions. Create a new resource group for the new application, move that resource to Disk S (it is not used), and specify NodeA as the preferred owner. We should use NodeA, not NodeB, as NodeA is lower CPU utilization compared to NodeB.

Incorrect answers:
A, B. We should use the unused physical disk S.
C. NodeA needs to be the preferred owner as it is lower utilization compared to NodeB..

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 115-117.

Question No: 35
You are the administrator of a Windows NT 4.0 Enterprise Edition cluster. The nodes of the cluster are two member servers that are designated NodeA and NodeB. A rolling upgrade of the operating system can be performed on all of the resources on the cluster. Hardware constraints require you to upgrade NodeA first and then upgrade NodeB. You do not want to load balance the nodes.
You want to upgrade the cluster nodes to Windows 2000 Advanced Server. During the upgrade you also want to minimize the interruption of the cluster service to the client computers.
Which actions should you take?

To answer, click the Select and Place button, and then drag the appropriate actions to the boxes in the left column in the correct order.

Necessary Actions	Possible Actions
First Action	Install Windows 2000 on Node A
Second Action	Install Windows 2000 on Node B
Third Action	Pause Node A, move all groups to Node B
Fourth Action	Pause Node B, move all groups to Node A
Fifth Action	Evict Node A
Sixth Action	Evict Node B
Seventh Action	Resume Node A
Eigth Action	Resume Node B

Answer:

1. **Pause NodeA; Move all groups to NodeB**
2. **Install Windows 2000 on NodeA**
3. **Resume NodeA**
4. **Pause NodeB; Move all groups to NodeA**
5. **Install Windows 2000 on NodeB**
6. **Resume NodeB**

Explanation: A rolling upgrade is a planned process that takes one node offline to be upgraded while a second node assumes responsibility for the resources in the cluster. Microsoft has identified the following steps for upgrading a Cluster to Windows 2000:

1. Pause one of the nodes and moves its groups to the other node.
2. Upgrade the paused node to Windows 2000 Advance Server.
3. When the upgrade is complete the cluster rejoins and must be restarted.
4. The second node is then paused and all groups are moved to the first node.

5. The second node is upgrade.
6. The upgraded node is resumed.
7. The groups are redistributed among the nodes. (This step is not asked for.)

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 76-78.

Question No: 36
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster nodes are two domain controllers that are designated NodeA and NodeB.
The marketing department wants to run an application named Press Report on the cluster. You want to run the application on a virtual Server named MktgServer.
The application requires a shard folder named Reports. The path to the Reports file share is E:/Data/Reports. Drive E is located on the cluster storage subsystem.
You want to delegate the control of the cluster and the application to the administrators from the marketing department. These administrators are members of a security group named Marketing Admins. All of the users in the marketing department are members of a security group named Marketing users.

You take the following actions:

- **Create a new resource group named Marketing group. In the Marketing group, create a virtual Server named MktgServer, a new File Share resource and a new Generic Application resource.**
- **Configure the Application resource to be dependent on the MktgServer Server name and on the File Share resource.**
- **Use the cluster administrator to grant the Marketing Admins group permissions to manage the cluster.**
- **Grant NTFS access permissions on the E:/Data/Reports folder to the Marketing Users group only.**

A member of the Marketing Admins group attempts to bring the Marketing group online. The attempt fails. The following error message is shown in the System event log:

Event type: Error
Event source: ClusSvc
Computer: NODEA
Description: Cluster file share resource Reports failed to start with error 5.

You need to bring the Marketing group online. What should you do?

A. Add the Marketing Admins group to the Server Operators group on a cluster node.

B. Grant NTFS access permissions on the E:\Data\Reports folder to the marketing Admins group.
C. For the cluster service account, grant NTFS permission to access the e:\Data\Reports folder.
D. Use the cluster Administrator to grant the Marketing Admins group Full Control permission on the Reports share.

Answer: C
Explanation: In order for you to bring the Marketing group online you will need to ensure that the cluster service account has the necessary permissions. Thus the cluster service account will need to be granted NTFS permissions to access the e:\Data\Reports folder.

Incorrect answers:
A. By adding the Marketing Admins group to the Server Operator group will not allow you to bring the group online.
B. By providing the Marketing Admins group additional NTFS permissions will not allow you to bring the group online
D. NTFS permissions are required not file share-level permissions.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 123-124.

Question No: 37
You are the administrator of a cluster named Cf-blv02. The cluster consists of two nodes that are designated NodeA and NodeB.
You need to perform maintenance tasks on NodeA that will require the node to reboot several times. You must maintain the availability of the cluster's service and minimize service interruption during the maintenance tasks.
You inform users that their service might be interrupted briefly while you move the cluster groups.
The groups view of the cluster is shown in the following screen.

You restart NodeA. Afterward, some users report that their service was briefly interrupted a second time.

The groups view of the cluster immediately after you restart NodeA is shown below.

You want to eliminate service interruptions during the subsequent restarts of NodeA. You want to achieve this goal with minimum administrative effort. What should you do?

A. Pause NodeA before restarting.
B. Configure the Disk group 5 properties to prevent failback.
C. Configure Cf-BLVB as the only possible owner of all of the resources in Disk group 5.
D. Configure the properties of the resources in Disk group 5 to not effect the group.

Answer: A
Explanation: A node that has been paused will not allow any new resource groups to come online, but any currently online groups will remain online. You might consider pausing a node in order to perform line maintenance or to conduct a test.

Incorrect answers:
B. Configuring Disk group 5 to prevent failback will not eliminate the service interruptions.
C. This will not eliminate the service interruptions with the less amount of administrative effort.
D. This will not eliminate the service interruptions with the less amount of administrative effort.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 116-117.

Question No: 38
You are the administrator of a Windows 2000 Advanced Server cluster. Hardware diagnostics indicate that one of the cluster data disks is falling. You perform a complete backup of the cluster systems and cluster disks and you replace the falling disk. You need to configure the disk before you bring it online. Application requirements do not allow for creation of a new physical disk resource.
You need to configure the disk for use on the cluster. What should you do?

A. Use Windows 2000 Backup to restore the System State data.
B. Use Disk Management to assign a new drive letter to the new disk.
C. Use DumpConfig to restore the disk signature from the old disk to the new disk.
D. Use the cluster administrator to point the physical disk resource dependencies to the new disk.

Answer: C
Explanation: To write the disk signature of the failed disk to the new disk you type something like: dumpcfg.exe /s signature disknumber. In this command, signature is the disk signature and disknumber is the number of the dick that you replaced.

Incorrect answers:
A. As you are replacing a cluster disk that is online Windows 2000 Backup is not an option.
B. The Create Partition Wizard assign the new disk the drive letter that was assigned to the replaced disk.
D. You will only need to do this for resources that fails to come online after the disk comes online.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 146-148.

Question No: 39
You are the administrator of two Windows 2000 Advanced Server computers. You need to configure these servers for use as cluster nodes.
Each Server contains two network adapters. One network adapter in each Server is designated for Client access only. The second network adapter in each Server is designated for Internal cluster communications only. You plan to connect the second network in each Server to stand-alone hub.
You need to configure the IP addresses for the four network adapters. You want to minimize the chance of a failure in the network connectivity on both servers.
What should you do?

A. Configure static IP addresses for the network adapters that are designated for **Client access only.**
   Configure static IP addresses for the network adapters that are designated for the **Internal cluster communications only.**
B. On dynamic IP addresses for the network adapter that are designated for C**lient access only.**
   Configure dynamic IP addresses for the network adapters that are designated for the **Internal cluster communications only.**
C. Configure static IP addresses for the network adapters that are designated for **Client access only.**
   Configure dynamic IP addresses for the network adapters that are designated for the **Internal cluster communications only.**
D. Configure dynamic IP addresses for the network adapters that are designated for **Client access only.**
   Configure static IP addresses for the network adapters that are designated for the **Internal cluster communications only.**

Answer: A
Explanation: Microsoft states that DHCP should not be used to assigned IP addresses to neither your privates network NICs nor your public network NICs. Therefore, you should plan to configure all networks adapters with static IP addresses.

Incorrect answers:
B, C, D. Dynamic IP addresses should not be used either type of network cards.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 36 – 40.

Question No: 40
You are the administrator of two different models of Windows 2000 Advanced Server computer that you plan to configure as cluster nodes. Before installing the Custer service, you want to install network adapters in each Server. In each Server, you want to install three network adapters, as described in the following table.

Network Adapter	Description
10BaseT	Used for private cluster communications.
100BaseT	Connected to the IS test LAN.

FDDI	Connected to the main company LAN. The device driver for this network adapter requires that it be installed in either PCI slot #1 or PCI slot#2 in the Server.

To ease maintenance tasks, company policy requires that cluster nodes be configure identically.
You need to install each network adapter in the correct PCI slot. How should you install the network adapters?
To answer click the Select and Place button, and then drag the PCI cards and network connections to the appropriate locations.

Answer:

Explanation: As there is a crossover cable connected to slot 1 this slot must be used for the private network. The private network uses a 10 Base T adapter. Thus the 10 Base T adapters must be put into slot # 1.
Next the public network adapter should be connected to slot 2 on both boxes this a FDDI adapter. This adapter should be connected to the Company LAN.
Finally slot 3 should have the 100 Base T installed and connected to the Test LAN.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 32-40.

Question No: 41
You are the Cluster Administrator for your company. You need to con two Windows 2000 Advanced Server computer for use with Advanced Server cluster nodes. The servers are named Server1 and Server2. Each Server contains two 8-GB hard disks. You also need to connect an external storage subsystem for use as the cluster storage. The external storage subsystem contains eight 10-GB hard disks.

You need to connect the disk type for the eight disks. You also need to decide which file system and which hardware fault-tolerance method to use for the local storage on both servers and for the external storage subsystem.

You need to accomplish the following goals:

- Ensure that the local storage on Server1 and Server2 is accessible from the Windows 2000 Recovery Console.
- On Server1 and Server2, provide security for files on the local storage.
- One Server1 and Server2, provide the ability to change volume configuration on the local storage without restarting the Server.
- Provide failover on Server1 and Server2, even if a single hard disk in the local storage on the external storage subsystem.

What should you do?

To answer, click the Select and Place button, and then drag the appropriate disk type, file system, and fault-tolerance method to the appropriate storage location on the Server and on the external storage subsystem.

Select and Place

Answer:

Explanation: In order to meet your goals both the servers must have a dynamic disk type, NTFS file system, and RAID 1 fault tolerance. With clustering service the external disk array have specific requirements: all shared drives must be configured as basic and all partitions of the disks must be formatted as NTFS. For your fault tolerance requirements you should implemented RAID 5.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 46-48 and 34-35.

Question No: 42
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster nodes are two member servers that are designated NodeA and NodeB.
The sales department wants to run a new application named Sales Tracker on the cluster. The Sales Tracker application is cluster unaware. You want to run the application on a virtual server named Sales2.

You take the following actions:

- Install Sales Tracker on NodeA and NodeB.
- Create a new resource group named Sales App.
- Create a new Network name resource named Sales2. Specify SALES2 as the network name property.
- Create a new Generic Application resource named Sales tracker. Specify complete path and the executable filename for the Sales Tracker application. Configure the Sales Tracker resource to be dependent on the Sales2 Network Name resource.

The resources in the Sales App resource group are shown in the following screen.

Name	State	Owner	Resource Type	Description
Sales2	Offline	NODEA	Network Name	SALES2 virtual server
Sales Tracker	Offline	NODEA	Generic Application	Sales Tracker application

When you attempt to bring the sales tracker application resource online, the sales2 resource fails, and the application does not come online.
What should you do?

A. Configure NodeA and NodeB as possible owners of the Sales2 resource.
B. Rename the Sales2 resource to be different from the SALES2 network name itself.
C. Configure the Sales2 resource to be dependent on a new IP address resource in the Sales App group.
D. Configure the Sales2 resource to be dependent on a new Physical Disk resource that contains the Sales Tracker executable file.

Answer: C
Explanation: In order for cluster resources to function properly the correct dependencies must be configured. A network name resources require an IP address (that correspond to the name).

Incorrect answers:
A. Configuring possible owners for the Sales resource will not over come the requirement of an IP address.
B The Sales resource requires the same name as it network name.
D. Name resources are not dependent on the Physical Disk.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 97-99.

Question No: 43
You are the administrator of a Windows 2000 Advanced Server cluster. You need to enable highly available print services for the cluster.
You need to ensure that you configure the necessary resources and resource dependencies in order to successfully create a Print Spooler resource.
How should you configure the dependency tree for the print spooler resource?

To answer, click the Select and place button, and then drag the appropriate resources to the dependency tree.

DHCP Service dependancy tree
Drag Resource
Drag Resource
Drag Resource
DHCP Service Resource
Possible Resources
Physical Disc Resource
SMTP Server Instance
File Share Resource
Generic Service Resource
IP Address Resource
NNTP Server Instance
Network Name Resource

Answer:

Explanation: The Physical Disk resource is placed by itself because it does not depend on other resources. The Network Name dependency is places above the IP address dependency because the Network Name is dependent on the IP address.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 98 and 33.

Question No: 44
You are the Cluster Administrator for your company. The cluster consists of two nodes that are designated NodeA and NodeB. You need to configure the cluster to provide highly available file services. Two groups, named File group 1 and File group 2 contain the File Share resources for the Cluster.
You need to configure the cluster to provide access to 1,000 different file shares. You want to create the necessary resources with the least amount of administrator effort. You also want to maintain high availability for the cluster and the ability to load balance.
What should you do?

A. Create a script that automates the creation of 500 file shares resources in file group 1nad 500 file share resources in file group 2.
B. Create one file share resource in file group 1 and a file share resource in file group 2. Configure each file share resource as a Dfs root.
C. Create one file share resource in file group1 and one file share resource in file group 2. Configure both file share resources to share subdirectories.
D. On each node, script the automation of 500 shares to the HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\lanmanserver\Shares registry key.

Answer: C
Explanation: Due to the number of users and the clusters structure it is required that a file share resource be created in each file group. There is a requirement that the folders you need to share on your network all the subfolders of the same folder.

Incorrect answers:
A. The less shares there on the cluster the better. If at all possible there should only be one file share resource. 500 file share resources are unacceptable.
B. For the cluster to function properly the folders you need to share on your network all the subfolders of the same folder.
D. As stated before 500 file share resources are unacceptable.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 122-128

Question No: 45
You are the administrator of a Windows 2000 Advanced Server cluster. You create a new File Share resource that contains project files that are used by the sales department. The name of the share is Sales2000.
All of the users in the sales department are in the Sales security group. The Sales security group has full control permissions on the NTFS folder that is shared as Sales2000. The Everyone group has Modify permissions on this folder.
When users in the sales department try to access the project files in Sales2000, they receive an "access denied" error message.
You use Windows Explorer to grant the Sales group Change permission on the Sales2000 share. The users in the sales department can now access and modify the project files. Two weeks later, however, the users in the sales department report that they receive the same error message when they try to access the project files.
You want to ensure that users in the sales department can access and modify the project files in the Sales2000 share. What should you do?

A. Grant the cluster service account Change permission on the Sales2000 share.

B. Use the Cluster Administrator to grant the Sales group Change permission on the Sales2000 share.
C. Use Windows Explorer to ensure that inheritable permissions propagate to the NTFS folder that is shared as Sales2000.
D. Use Windows Explorer to remove the Modify permission for the Everyone group on the NTFS folder that is shared as Sales2000.

Answer: B
Explanation: Permissions on file shares are set through Cluster Administrator, not through the standard procedure of setting shared folder permissions.

Incorrect answers:
A. The standard procedure of setting shared folder permissions will allow you to ensure the sales department can access and modify the project files.
C. Windows Explorer will not let make the necessary changes.
D. Attempting this changes will not allow the necessary department to take the necessary actions.

MCSE Clustering Using Advance Server 2000, pages 159-160.

Question No: 46
You are the cluster administrator for your company. You install the Cluster service on NodeA. When you attempt to install the Cluster service on NodeB and join NodeB to cluster, you receive the following error message: "The user cannot be found."
Both nodes are member servers in a Windows 2000 domain named contoso.com. You confirm that you have typed the same user name and password that were used to install the Cluster service on NodeA. You want the NodeB to be able to join the cluster.
What should you do?

A. Log on the local built-in Administrator account to install the Cluster service on NodeB.
B. Run **dcpromo.exe** on NodeA.
Continue the Cluster Service Configuration wizard on NodeB.
C. Reconfigure the Cluster service on NodeA to use an account in the administrator.contoso.com domain.
Use the same account to install the Cluster Service on NodeB.
D. Create a local user account on NodeB. Use the same name and password that was provided during the Cluster service installation on NodeA. Continue the Cluster service Configuration wizard on NodeB.

Answer: C
Explanation: In order for you to create or join a cluster you will need to have a domain user account. This account must be a Domain Administrator or local administrative rights on each node. As with the error message you received this was not the case. This is why you need to create a domain administrator account.

Incorrect answers:
A. There are no built in administrator account it will need to be created.
B. As both nodes are only member servers, running dcpromo will not allow connection. In fact both nodes either need to be member servers or domain controllers.
D. The account will need to be an administrative account.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 68-71.

Question No: 47
You are the administrator of a two-node Windows 2000 Advanced Server cluster. The cluster is configured as shown in the following diagram.

Adapter 1A and Adapter 2A are designated for Client access only. Adapter 1B and Adapter 2B are designated for Internal cluster communications only.
Which network components represent a single point of failure for internal cluster communications? (Choose all that apply.)

A. Adapter 1A
B. Adapter 1B
C. Adapter 2A
D. Adapter 2B
E. The crossover cable
F. The stand-alone hub

Answer: B, D, E
Explanation: All of the components involved with internal communication could be represent a single point of failure. Therefore adapters 1B and 2b and the crossover cable could be a single point of failure.

Incorrect answers:
A. Adapter 1A is used for client access and not internal communications.
C. Adapter 2A is used for client access and not internal communications.
F. The stand-alone hub is not involved in the internal cluster communication.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 5 and 25.

Question No: 48
You are the administrator of a cluster that provides highly available file services. The cluster contains two nodes that are designated NodeA and NodeB. The cluster contains two groups that have File Share resources. These groups are named File Group 1 and File group 2. NodeA owns File group 1, and NodeB owns File group 2. The cluster is connected to two networks named Public and Private. These networks are configured as follows.

- **Public (Client access only)**
- **Private (Internal cluster communications only)**

The CPU utilization percentages for the cluster nodes during work hours are shown in the following table.

Node	Current	1-hour average	24-hour average	72-hour average
NodeA	95%	90%	80%	85%

NodeB	40%	30%	35%	35%

You want to minimize the possibility of performance problems on NodeA. What should you do?

A. Decrease the value of Pending Timeout property for File group 1 and File group 2.
B. In the Failover properties for each group, specify 80 for the Threshold and 24 hours for the Period.
C. Use the Cluster Administrator to move File Share resources from File group 1 to File group 2 until the CPU utilization is balanced between the nodes.
D. Use the Windows Explorer and Cluster Administrator to migrate data and File Share resources from File group 1 to File group 2 until the CPU utilization is balanced between the nodes.

Answer: D
Explanation: To ensure a balancing of CPU utilization you will need to move data and File Shares resources. This will require the use of both the Cluster Administrator and Windows Explorer.

Incorrect answers:
A. Decreasing the pending time out will not correct the CPU utilization differences.
B. Failover will not assist with the over Utilization of the CPU.
C. You will need to also move the data to properly balance the CPUs.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 92-96.

Question No: 49
You are the administrator of a Windows 2000 Advanced Server cluster. Your company's sales department runs an application named Forecast on the cluster. The Forecast application resource group named Forecast group.
One morning, you discover that the Forecast Application has failed because the network cable has bee unplugged for a few minutes.
The disconnection of the network cable affects both cluster nodes. You want to ensure that the
Cluster always restarts the Forecast application automatically after a transient condition that affects both nodes.
What should you do?

A. Configure Forecast group to failback without time restrictions.

B. Set the RestartPeriod property of the Forecast Application resource to **3600000** milliseconds.
C. Set the RetryPeriodOnFailure of the Forecast Application resource to **3600000** milliseconds.
D. Set the PendingTimeout property of the Forecast Application resource to **3600000** milliseconds.

Answer: C
Explanation: The RetryPeriodOnFailure specifies the amount of time that a resource will remain in a failed state before Cluster Service attempts to restart it. Setting the RetryPeriodOnFailure property allows a resource to automatically recover from a failure.

Incorrect answers:
A. Failback will only return a resource to its original node when it comes back online. This will not assist in this situation.
B. The RestartPeriod property specifies the amount of time during which restarts attempts will be made. This will not meet the desired results.
D. The PendingTimeout property specifies the amount of time that a resource in a Pending Online or Pending Offline state must resolve itself before Cluster Service Fails the resource or puts it online.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 107-108.

Question No: 50
You are the administrator of two clusters that have been stable for several months. The first cluster, ClusterNorth, is located in the North Server room. ClusterNorth contains Windows 2000 member servers named North1 and North2. The second cluster, ClusterSouth, is located in the south Server room. ClusterSouth contains Windows 2000 member servers named South1 and South2. Both clusters are in the same Windows 2000 domain. On all four cluster nodes, the Cluster service is configured to use the same domain user account.
During an electrical storm, power to both Server rooms is lost temporarily. When power is restored, ClusterNorth starts normally and begins running the Cluster service. However, the cluster fails to start on both nodes in ClusterSouth. You log on to South1 as the local administrator. When you attempt to start the Cluster service manually, you receive the following error message.

You need to be able to start the Cluster service on both nodes of ClusterSouth. What should you do?

A. Logon to South1 as an Enterprise Administrator, and start the Cluster Service.
B. Ensure that there is network connectivity from the ClusterSouth nodes to a domain controller.
C. Ensure that there is network connectivity from the ClusterSouth nodes to the ClusterNorth nodes.
D. Ensure that the password for the user account for the Cluster service is configured to never expire. Reset the password.

Answer: B
Explanation: If one or more nodes are not responding and both servers are member servers rather than domain controllers, the domain controllers might have become available. If a DC is unavailable, the necessary authorizations become unavailable. Check the connectivity with the DC.

Incorrect answers:
A. As there is no connectivity with a DC this will not work.
C. As there is no connection to a DC, they ClusterSouth nodes seen like they are a local computer.
D. This will not solve the problem you are experiencing.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 220-221.

Question No: 51
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 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. Run **nbtstat-RR** on both nodes.
B. Review the Q:\MSCS|quolog.log file for the entries that are associated with name resolution.
C. Review the file C:\winnt\cluster\cluster.log on NodeA and NodeB for entries that are associated with name resolution.
D. Review the files in C:\winnt\System32\logfiles on NodeA and NodeB for the entries that are associated with name resolution.

Answer: C
Explanation: This is the proper location for the cluster log. The cluster log is a diagnostics log file that records the cluster activity.

Incorrect answers:
A. This will not allow you to view the cluster activity.
B. The Quorum log will not require the necessary information.
D. The system log file will not allow you to troubleshoot the Network Name resources.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 215 and 224-225.

Question No: 52
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster nodes are two member servers. You have configured the quorum disk to be shared disk with the drive letter Q.
After a temporary power failure on both nodes, the cluster service will not start. The Event Viewer includes the following error messages:

Event ID: 1147
Source: ClusSvc
Description: The Microsoft Clustering Service encountered a fatal error. The vital quorum log file 'QUESTION NO:\MSCS\quolog.log' could not be found.

You decide that the quorum log file is corrupt. You run chkdsk.exe on drive Q, and the program does not produce any error message.
You do not have a recent backup copy of the quorum log file. You need to create a new quorum log file that is based on the cluster configuration information in the local system's cluster hive.
What should you do?

A. Copy the Clussvc file to the MSCS folder on drive Q.

B. Start the Cluster service by using the command **clussvc –debug –fixquorum.**
C. Start the Cluster service in the Service console by using **–resetquorumlog** as a start parameter.
D. Set the Clusterlog environment variable to point to the location of the local system's cluster hive.
E. Stop the Cluster service, and restart the Cluster service in the Service console by using **–fixquorum** as a start parameter.

Answer: C
Explanation: If you do not have a backup of the Quorum log file, recreate a new quorum log file based on the cluster configuration information in the local system's cluster hive by starting the Cluster Service with the **ResetQuorumLog** switch.

Incorrect answers:
A. Copy the Clussvc to the MSCS folder will not allow you to recreate the quorum log from existing information.
B. This command sequence will attempt to fix a log that does not exist.
D. This will not achieve the desired result.
E. The fixquorom log command can be used to fix used if the resource can be brought back online this is not the case.

http://support.microsoft.com/default.aspx?scid=kb;en-us;Q245762

Question No: 53
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. The two servers are member serves in the same domain. You want to create a cluster that uses Server1 and Server2 as cluster nodes. An external storage subsystem is connected to both servers. The subsystem contains shared disks that are installed and configure correctly on both servers. The SCSI bus uses Y cables for termination. Both servers are turned off.
Before you install the cluster service on Server1 and Server2, you want to configure the networks by changing names of the network connections and the IP addresses of the network adapters in both servers.
Which steps should you take to configure the networks and install the cluster service?

To answer, click the Select and Place button, and then drag the minimum number of appropriate actions to the boxes in the left column in the correct order.

Necessary Actions	Possible Actions
First Action	Start up Windows 2000 on Server 1
Second Action	Start up Windows 2000 on Server 2
Third Action	Shutdown Windows 2000 on Server 1
Fourth Action	Shutdown Windows 2000 on Server 2
Fifth Action	Configure network settings on Server 1
Sixth Action	Configure network settings on Server 2
Seventh Action	Install Cluster service on Server 1
Eigth Action	Install Cluster service on Server 2

Answer:

Explanation: This scenario clearly states that we first should first configure network settings, the name and the IP address, on each of the servers. When this configuration is finished we should install cluster services on both servers.

MCSE Clustering Using Advance Server 2000, pages 85-91.

Question No: 54
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster contains several File Share resources. The cluster runs an application named Inventory, which is used by the Sales department. Inventory runs on a virtual Server named AppServer.
The users in the sales department can connect to the cluster successfully and can access the inventory application.
After a period when the cluster nodes have been very busy running other applications, the users in the sales department report that the inventory application

is not available. When you investigate the problem, you discover that in AppServer resource has failed and does not come online again.
You run cluster.exe. A selection of the properties of the AppServer resource is shown below:

Listing properties for 'AppServer':

```
T      Resource      Name Value
-----  -----------   ------------------------------------  ------------------
SR     AppServer     Name App Server
S      AppServer     Type Network Name
S      AppServer     Description
D      AppServer     SeparateMonitor 0 (0x0)
D      AppServer     PersistentState 0 (0x0)
D      AppServer     LooksAlivePollInterval 15000 (0x3a98)
D      AppServer     IsAlivePollInterval 30000 (0x7530)
D      AppServer     RestartAction 2 (0x2)
D      AppServer     RestartThreshhold 4 (0x4)
D      AppServer     RestartPeriod 600000 (0x927c0)
D      AppServer     PendingTimeout 2000 (0x7d0)
```

You want to ensure that the AppServer resource remains available to client computers when the cluster is very busy. What should you do?

A. Set the PersistentState property of the AppServer resource to 1.
B. Set the RestartThreshold property of the AppServer resource to 1.
C. Set the PendingTimeout property of the AppServer resource to a higher value.
D. Set the RestartPeriod property of the AppServer resource to a value that is lower than the value of the IsAlivePollInterval property.

Answer: D
Explanation: By lowering the RestartPeriod we would try to restart the resource before the IsAllowPollInterval comes into action and decides that resource is unoperational.

Note: At intervals determined by a resource's **IsAlivePollInterval** property, the Cluster service checks to see if the resource is still operational.
When a resource has failed, and the **RestartAction** property is set to allow a restart, the Cluster service attempts to restart the resource on the same node. The resource's **RestartThreshold** property determines the maximum number of restart attempts that can occur within a time period specified by the **RestartPeriod** property. If the Cluster service exceeds the maximum number of restart attempts within the specified time period, and the resource is still not operational, the Cluster service may attempt failover
Incorrect answers:

A. You would not save the resources PersistentState unless the resource is offline.
B. By lowering the RestartThreshold the quicker the resource will fail.
C. Increasing the pendingtimeout property allows the resource to stay in a pending state longer before it fails. However, the application might still fail.

Note: By increasing the PendingTimeout property you allow the resource to stay in a pending state longer before it is failed. PendingTimeout has the following relationship to RestartPeriod and RestartThreshold:

RestartPeriod >= RestartThreshold x PendingTimeout

Don't forget that the RestartPeriod is measured in milliseconds and that PendingTimeout is measured in seconds

Platform SDK: Windows Clustering, Resource Failure
http://msdn.microsoft.com/library/default.asp?url=/library/en-us/mscs/mscs/resource_failure.asp
Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 107-109 and 372-373.

Question No: 55
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You need to install the cluster service on the servers. You install a SCSI array controller in each Server.
Next, you connect the array controller to an external storage subsystem by using SCSI cables. You need to install at least one SCSI terminator in the external storage subsystem at one or more of the locations shown in the exhibit.
Where should you install a SCSI terminator or SCSI terminators? (Choose all that apply)

A. Install a SCSI terminator at location 1.
B. Install a SCSI terminator at location 2.
C. Install a SCSI terminator at location 3.
D. Install a SCSI terminator at location 4.
E. Install a SCSI terminator at location 5.

Answer: A, E
Explanation: Each end of the SCSI chain must be terminated. Assume that location 1 and location 5 are on each end of the chain. Select your termination points based on the fact that termination must done on each end of the chain.

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

Question No: 56
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You need to install the Cluster service on both servers to create a new cluster.
First, you install two network adapters in each computer. You connect and configure the network adapters as shown in the following diagram.

You successfully install the Cluster service on Server1 and create a customer named Cluster1.
Next, you attempt to install the Cluster service on Server2 to Cluster1. The Cluster service Setup fails, and you receive the following error message: "Setup was unable to locate Cluster1 on the network. "
You want to complete the Cluster service Setup. What should you do?

A. Uninstall the Cluster service on Server1.
   Change the IP address on Adapter 1A to 172. 17. 55. 14.
   Reinstall the Cluster service on both servers.
B. Uninstall the Cluster service on Server1.
   Change the IP address on Adapter 1A to 172. 17. 55. 13.
   Change the IP address on Adapter 2B to 172. 17. 54. 13.
   Reinstall the Cluster service on both servers.
C. Change the IP address on Adapter 1A to 172. 17. 54. 14.
   Change the IP address on Adapter 2B to 172. 17. 55. 13.
   Run the Cluster service on both Server2.
D. Change the IP address on Adapter 1B to 172. 17. 55. 13.

Change the IP address on Adapter 2A to 172. 17. 54. 14.
Run the Cluster service on both Server2.

Answer: D
Explanation: In order for the two servers to communicate over the private network and the public network the NICs for each of the servers for the same network must be on the same network. This is why to need to change the IP addresses in this manner.

Incorrect answers:
A. You do not need to uninstall clustering service and you would not want to use the same IP address on two different NICs.
B. You do not need to uninstall clustering service and you would not want to use the same IP address on two different NICs.
C. The NICs for the private network and the NICs for the public network need to be on the same network. Making these changes will still have the NICs in the wrong networks.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 40-43.

Question No: 57
You are the Cluster Administrator for your company. You want to create a new cluster that is composed of two existing file servers named server1 and server2. Each server has four configured shares, each containing unique data. The following table describes these shares:

Server1 shares	Server2 shares
Administration	Recruiting
HR	IT
Accounting	Engineering
General	General

You install the cluster service on both servers. You migrate all of the data on server1 to a resource group that server1 owns. The resource group has the network name resource Fileserv01. You migrate all of the data on server2 to a resource group that server2 owns. The resources group has a Network Name resource of Fileserv2. In each group, you create File Share resource and assign them share names that are identical to the original share names.
After one month of operating without problems, you move all of the groups to server2 so that you can perform hardware maintenance tasks on server1. Users who had been connected to the General share on Fileserv01 now report that they receive an "access denied" error message when they try to connect to the share by using the virtual server name.

You want the users to retain access to their shares during failover. What should you do?

A. Use Windows Explorer to change the share name of one of the General File Share resources.
B. Use the Cluster Administrator to enable shared subdirectories for both general file share resources.
C. Use the Cluster Administrator to change the share name of one of the general file share resources.
D. Use Windows Explorer to modify the NTFS permissions on both General file share resources to allow the appropriate user access.

Answer: C
Explanation: This conflict occurred when your moved server 1 shares to Server 2. The problem arose, as there were now two general shares on the on Server 2. This is why users could not connect to the General share on server 1. To correct this problem the Cluster Administrator to change the name of the General shares.

Incorrect answers:
A. As this a cluster environment Windows Explorer could not be used to change the name of one of the General Shares.
C. Enabling shared folders would not correct the conflict.
D. Permissions on shares are set by the Custer Administrator and nor Windows Explorer.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 97-100.

Question No: 58
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster will run a critical, cluster-unaware application. Both cluster nodes must support the application during failover.
You need to install the application to the cluster. You also need to minimize maintenance downtime for the application.
What should you do?

A. Install the application and the application data on one cluster disk
B. Install the application on one cluster disk, and install the application data on a separate cluster disk.
C. Install the application on each cluster node, and install the application data on a single, shared cluster disk.
D. Install the application on each cluster node, and install the application data on separate cluster disks for each node.

Answer: C
Explanation: As this is a cluster unaware application, to minimize the maintenance downtime for the application it will need to be installed on both nodes and its data will need to be installed on a share.

Incorrect answers:
A. The application would be installed on the cluster this way but it would not minimize the downtime of the application.
B. The application needs to be installed on both nodes and on a shared cluster disk.
D. The application also needs to be on a shared cluster disk.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 157-158.

Question No: 59
You are the cluster administrator for your company. You need to configure a cluster for highly available print services. The cluster contains the groups and resources shown in the following screen.

You need to create a Print Spooler resource in Disk group 2. Which resources should you place in the dependency tree for the Print Spooler resource?

To answer click the Select and Place button and then drag the appropriate resources to the Print Spooler resource dependency tree.

Cluster group Resources	Disk group 1 resources	Disk group 2 resources
Network name	File Share	File Share
IP Address	SMTP Server Instance	SMTP Server Instance
Physical Disk	NNTP Server Instance	NNTP Server Instance
	Network Name	Network Name
	IP Adress	IP Adress
	Generic Service	Generic Service
	Physical Disk	Physical Disk

Answer:

Explanation: The print spooler itself has two dependencies: physical disk and network name. The network name has one dependency also: IP address. This is why IP address is on top of the network name.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 98-99.

Question No: 60
You are the Cluster Administrator for your company. You are adding file and print services to a two-node Microsoft IIS Cluster. The cluster has two groups: cluster group and disk group 1.
Disk Group 1 contains the following online resources:

- **An IP Address resource**
- **An IIS Server Instance resource**
- **A Physical Disk resource**

Both nodes are configured as WINS client computers, and the Internet Information Services (IIS) virtual root has a static A host record in DNS.

- **You create a Network Name resource in Disk group 1. When you try to bring the Network Name resource online however, the group repeatedly fails over between the nodes. Eventually, the Network Name resource fails.**

You want to bring the Network Name resource online. What should you do?

A. Configure one of the nodes as a WINS Server.
B. Move the Network Name resource to the Cluster group.
C. Enable NetBIOS on the IP Address resource in Disk group 1.
D. Create a File Share resource and a Print Spooler resource in Disk group 1.

Answer: B
Explanation: In order for the Network Name resource to be brought online it needs to be moved to the cluster group.

Incorrect answers:
A. There is no need for a WINS server on one of the nodes.
B. As the nodes are WINS clients they do not need to use NETBIOS enabled.
D. Creating this share will not assist with bring the Network Name resource on line.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 88 and 215.

Question No: 61
You are the Cluster Administrator for your company. You need to configure a new user to provide highly available file share services.
You need to provide for disk fault tolerance. You also need to be able to load balance user data between the cluster nodes in 10-percent increments.

Which three steps can you take?

To answer click the Select and Place button, and then drag the appropriate steps in the correct order.

Necessary Actions	Possible Actions
First Action	Configure one logical disc by using Disk Manager
Second Action	Configure one RAID5 hardware volume
Third Action	Configure one virtual server in each default disk group
	Configure 10 logical discs by using Disk Manager
	Configure one RAID5 partition by using DISK Manager
	Configure 10 RAID5 hardware volume
	Configure 10 virtual servers in the Cluster group
	Configure 10 RAID5 partitions by using Disk Manager

Answer:

Necessary Actions	Possible Actions
Configure one RAID5 hardware volume	Configure one logical disc by using Disk Manager
Configure 10 logical discs by using Disk Manager	
Configure 10 virtual servers in the Cluster group	Configure one virtual server in each default disk group
	Configure one RAID5 partition by using DISK Manager
	Configure 10 RAID5 hardware volume
	Configure 10 RAID5 partitions by using Disk Manager

Explanation: In order to meet the requirements (fault tolerance and load balancing) you will need to take the following steps in this order: configure a RAID 5 hardware volume, configure 10 logical disks using disk manager, and then create 10 virtual servers in the clustering group.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 46-47, 17, 102-105.

Question No: 62
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You need to configure these servers for use as cluster nodes. You designate Server1 as the primary node in the cluster. You designate Server2 as the secondary node in the cluster.

Company policy for cluster configurations require that the cluster virtual IP addresses be higher than the IP addresses on either cluster node.
You need to configure the IP address used by the network adapters in each Server.
You also need to designate the IP address that the cluster will use.

To answer click the Select and Place button, and then drag the appropriate IP addresses beside the appropriate network adapters.

Answer:

Explanation: Great care must be taken when you configure both of the private network adapters that they are the same network of each other(this can be determined by the IP address) and that all of the public network adapters are also need to be on the same network (but different than the private network.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 40-43.

Question No: 63

You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You need to configure both servers for use as cluster nodes. Each Server contains two network adapters.
You want to provide dedicated primary network connectivity for both internal cluster communications and client communications. You also want to avoid a single point of failure for internal cluster communications.
You need to assign the appropriate role for each network adapter. Which roles should you assign? (Choose Four)
To answer click the appropriate role for each network adapter.

Internal cluster communications only
Client access only
All communications
Network adapter #1
Company LAN
Network adapter #3
Internal cluster communications only
Client access only
All communications
Internal cluster communications only
Client access only
All communications
Network adapter #2
NodeA
Stand-alone hub
Network adapter #4
NodeB
Internal cluster communications only
Client access only
All communications

Answer:

Explanation: Due to the results that you desire you the role of the NICs connected to the Company LAN for all communications and the NICs connected to the hub will be used for internal cluster communications only

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 50 .55

Question No: 64
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster nodes are two member servers that are designated NodeA and NodeB. The cluster storage subsystem contains three disks. The configuration of the shared disks is shown in the following table.

Shared disk	Number of positions	Position size
1	One	1,400 MB
2	Two	1,800 MB 2,500 MB
3	Three	1,000 MB

You want to run two applications named App-R and App-S on the cluster. App-R requires 1,200 MB of free space on the shared disk, and App-S requires 2,000 MB of free space on the shared disk. You he quorum log file.
You want to run the App-R application on NodeA and you want to run the App-S application on NodeB. The cluster group has not been charged.

You assign the drive letter to the appropriate disks on the cluster storage partitions for each node. What should you do?

To answer click the Select and Place button, and then drag the appropriate drive letters to the correct locations. The drive letters can be used more than once.

Answer:

Explanation: Due to the size requirements of the applications App R needs to be located on Disk 1 Node A, App s will need to be on Disk – partition 2 Node B and the Quorum will need to be on Disk 3.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 48-49.

Question No: 65
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You want to configure these servers for use as cluster nodes. You install and configure two network adapters in each Server. The network adapters are connected as shown in the exhibit.

You verify that the network adapters are configured correctly and that the client computers can connect to both servers.
You run the Cluster Service Configuration Wizard to install the cluster service on both servers. For the first network adapter that is presented in the wizard, you specify Internal cluster communications only. For the second network adapter that is presented in the wizard, you specify Client access only.
When you enter the cluster IP address, the wizard displays a warning message that the IP address can not be validated. You verify that the correct IP address has been entered.
After the cluster service is installed on both servers, the client computers cannot connect to either servers. What should you do?

A. Reverse the roles of the two network adapters in each Server.
B. Specify a DNS suffix for the network adapter that is used for client communications.
C. For the second network adapter that you configured in the wizard, enable NetBIOS over TCP/IP.
D. For the network adapter that is used for client communications, use the same subnet mask that is used for the client itself.

Answer: A

Explanation: The most likely thing to cause this error is that you have given the NICs the wrong role (private vs public network). As a result, you should reverse the role of the network adapters in each of the servers.

Incorrect answers:
B. Adding a DNS suffix will not allow the allow the IP to validate.
C. NETBOIS does not need to be configured.
D. Using the same subnet mask for both the client and its corresponding network adapter will create a conflict.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 41-43.

Question No: 66
You are the Cluster administrator for your company. You attempt to install the Cluster service on two servers named Server1 and Server2. Both servers are directly connected to a SCSI storage subsystem and have identical hardware.
The external storage subsystem is accessible by using Windows Explorer from either Server. However, when you run the Cluster service configuration wizard on Server1, you receive the following error message: "Cluster service setup did not find any disks on the shared SCSI bus that meet the criteria for clustering."
You want to complete the installation of the cluster. What should you do?

A. Convert the cluster storage drives to dynamic disks.
B. Configure a private network between servers and restart the Cluster Service Configuration wizard.
C. Disconnect Server1 from the external storage subsystem. Complete the Cluster service installation on Server1. Reconnect Server2 to the cluster storage.
D. Configure the cluster storage to use a SCSI bus that is separated from the OS partition on both servers. Restart the Cluster Service Configuration Wizard.

Answer: D
Explanation: In order for the cluster storage to function they must use a SCSI bus that is separated from the OS partition on both servers. Once the cluster storage is configured to use the proper SCSI bus, you will need to run the Cluster Service Configuration Wizard.

Incorrect answers:
A. Shared storage drive on a cluster must be configured as basic disks.
B. Microsoft recommends that a private network configured but it is not required.
C. When you are setting up the share, Node 1 and the storage device must be turned on.

Question No: 67
You are the Cluster Administrator for your company. You attempt to install the Cluster service on two servers named Server1 and Server2. Both servers are directly connected to a SCSI storage subsystem that contains a single physical disk.
You set the SCSI ID to 1 on the physical disk. Separately on each Server, you configure the storage for cluster use. You successfully install the cluster service on Server1. However, when you start Server2 to install the cluster service, you receive a BIOS error and cannot access the external storage subsystem.
You want to complete the installation of the cluster. What should you do?

A. Configure physical disk termination on the shared SCSI bus.
B. Enable passive SCSI termination for the SCSI adapter on both servers.
C. Assign unique SCSI Ids to the SCSI adapters on Server1 and Server2.
D. Assign SCSI ID1 to the SCSI adapter on Server1, and set the SCSI ID to 1 on Server2.

Answer: C
Explanation: Every SCSI device must be assigned a unique SCSI identification number. If they are not an error message will result.

Incorrect answers:
A. The shared must be properly terminated otherwise Server1 would not have been able to connect.
B. Passive SCSI termination would not solve a problem with overlapping SCSI Ids.
C. Every SCSI device must have its own SCSI ID otherwise errors will occur.

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

Question No: 68
You are the administrator of a Windows 2000 Advanced Server cluster. You discover that the Quorum resource recovery log files on the cluster are corrupt. You need to restore the log files from a recent backup tape without overwriting other cluster data or system data. What should you do?

A. Perform a System State restore, and run the **ntdsutil.exe** command.
B. Restore the contents of the Quorum resource drive from the backup tape, and specify that the files be restored to their original location.
Use the Cluster Administrator to re-form the cluster.
C. Perform a System State restore, specifying an alternate location for the restore. Copy the restored Quorum resource recovery files on the cluster to the quorum drive.
D. Use the Cluster Administrator to break the cluster.

Restore the contents of the Quorum resource drive from the backup tape and specify that only the recovery log files are restored.
Use the Cluster Administrator to re-form the cluster.

Answer: C
Explanation: In order to correct the problem with Quorum log without overwriting other cluster data you will need to do the following: system state restore specifying the alternate location and then copy the restored Quorum resource to the quorum drive.

Incorrect answers:
A. Using the ntdsutil will not produce the desired result.
B. This would lead to overwriting of information.
D. There is no need to break a cluster to fix a problem with a quorum resource recovery log.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 238, 242-244.

Question No: 69
You are the administrator of a two-node Windows 2000 Advanced Server cluster. The cluster serves as a high-traffic Web server for the marketing department and as a file Server for the accounting and marketing departments. NodeA is the preferred owner of all marketing resources and NodeB is preferred node of all accounting resources.
Each node contains separate network adapters that are dedicated for cluster communications, the accounting subnet and the marketing subnet. The overall utilization on the marketing subnet is equal to 70 percent of the total network. The average utilization for the network is 50 percent. You notice that the marketing network adapter on NodeA is dropping packets.
Marketing users report that access to the cluster is slow. You want to improve cluster access times.
What should you do?

A. Move the marketing Internet Information Services (IIS) resource group to NodeB.
B. Move the marketing File Share resource group to NodeB.
C. On both nodes, add a network adapter for the accounting subnet.
D. Select **All communications** in the network adapter properties for the cluster network.

Answer: B

Explanation: In this situation the best way to improve cluster access times is to move the marketing File Share resource group to NodeB.

Incorrect answers:
A. Moving the IIS resource Group to NodeB would not improve the cluster access times.
C. Adding additional NIC for the accounting subnet will not the cluster access times.
D. This would not assist with the dropping of packets.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 215-216.

Question No: 70
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster provides file and print services to 1,500 client computers in the manufacturing division. One private network on the cluster is configured for Internal cluster communications only. One public network is configured for Client access only. The average utilization for the network is 60 percent.
Your company recently acquired another company, which will add 500 manufacturing client computers to the cluster environment within the next six months. You anticipate that this addition will increase network utilization.
You want to modify the cluster environment to support the additional users. What should you do?

A. Designate the current public network for all **All communications.**
B. Designate the current private network for **All communications.**
C. Add network adapters to each node for **Client access only**, configured in the existing manufacturing subnet.
D. Add network adapters to each node for **Client access only**, configured for a new manufacturing subnet and segment.

Answer: D
Explanation: Client access only the public network adapter will be used by the cluster only for communications. By selecting the is property for the NIC for the new subnet and segment will allow the employees to be supported.

Incorrect answers:
A. This property is used when you only have 2 adapters and one is only for node-to-node communication. This is not the case in this situation.
B. It would not make sense to designate a private network adapters to All Communications.

C. You are currently able to support the marketing subnet. Therefore there is no need to add another adapter.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 65-67.

Question No: 71
You are the administrator of a file cluster. The cluster consists of two nodes that are designated NodeA and NodeB. The cluster storage subsystem contains more than 1 TB of data. This data is accessed by more than 1,000 users only. Each day, you process approximately 20 requests to create new shares in the cluster.
The systmroot folder on both nodes is configured as the default for Windows 2000. The cluster contains the default Cluster group, which contains the following resources.

- **Network Name = Cluster**
- **IP Address = 192.168.5.101**
- **Physical Disk = F**

You want to ensure that the maximum time for loss of cluster configuration data is one hour. What should you do?

A. Schedule an hourly backup of the system state data on each node.
B. Schedule an hourly backup of the C:\winnt\Cluster folder on each node.
C. Schedule an hourly backup of the HKEY_LOCAL_MACHINES\System registry key on both nodes.
D. In the Failover properties for the Cluster group, specify a Threshold of 1 and Period of 1 hour.

Answer: A
Explanation: In order to ensure that you only loose 1 hour of cluster configuration you will need to schedule an hourly backup of the system state data on each node. The system state data: registry, Active Directory, Windows boor files and Cluster Quorum.

Incorrect answers:
B. This file does not contain the necessary information.
C. This is the location for the system registry key. Cluster configuration is not located in this area.
D. This would ensure that a cluster would fail after one attempt at a failover.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 241-242.

Question No: 72
You are the administrator of a two-node Windows 2000 Advanced Server cluster that provides file, print and application services for your company. The cluster has two Physical Disk resources. One of these resources is used for the file and print resources and one is used for the application sources. NodeA is the preferred owner of the file and print resources and NodeB is the preferred owner of cluster applications.
You install a new application named AppZ to the cluster. After the installation, users report that their applications are note available. The cluster administrator reveals that both nodes are operating but that all of the applications in the Application resource group are offline one NodeB.
You need to ensure that the all other applications are available to the users while you troubleshoot AppZ. What should you do?

A. Prevent the failback for the Application resource group.
B. Increase the failback threshold value for the Application resource group.
C. Click **Do not restart** in the Advanced tab of the AppZ resource Properties dialog box.
D. On the Advanced tab for the AppZ resource Properties dialog box, clear the **Affect the group** checkbox.

Answer: D
Explanation: The most likely cause of the failure of the applications is the new AppZ. When it failed it obviously affected the group. In order to prevent the AppZ from affecting the group while you troubleshoot it you will need to clear the Affect the group checkbox.

Incorrect answers:
A. As you want the users to be able to use their applications you would want them to failback if there is a failure.
B. Remember the goal is for all applications to be available, increasing this period will not provide for this/
C. This would not assist with the problem of AppZ.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 210-211.

Question No: 73
You are the administrator of a Windows 2000 Advanced Server cluster named Cluster1. The cluster consists of two nodes that are designated NodeA and NodeB. The cluster has an IP address resource named AdminAddress. You use the IP address to access the cluster for administrator and maintenance. The ip address resource is configure with NodeA as the only possible owner.
Another administrator accidentally unplugs one of the network cables from NodeA. The AdminAddress resource fails, and it does not start after you plug in the network cable.
You need to configure the AdminAddress resource to automatically start when the network cable is plugged in again. What should you do?

A. Use the Cluster administrator to modify the Pending Timeout property for the AdminAddress resource to **5** seconds.
B. Run the **CLUSTER Cluster1 RESOURCE AdminAddress/prop RetryPeriodOnFailure=5000** command.
C. Use the Cluster administrator to configure the AdminAddress resource to fail only after a 5-second timeout.
D. Run the **CLUSTER Cluster1 RESOURCE AdminAddress/prop RestartPeriod=500** command.

Answer: B
Explanation: Setting the RetryPeriodOnFailure property allows a rersource to automatically recover from a failure.

Incorrect answers:
A. This will not allow for the automatic start when the cabling is plugged in again.
C. This action does not for the automatic start when the network cable is plugged in again.
D. This will only set the time attempts to restart a resource and not the automatic restarting.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 107-108.

Question No: 74
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster nodes are two domain controllers that are designated NodeA and NodeB.
You want to create a new clustered Dfs root resource on a clustered disk on drive X currently, neither cluster node hosts a Dfs root.

You take the following actions:

- **Create a new folder named X\dfsroot**
- **Create a new cluster group named Dfs group**
- **Create a new IP address resource in Dfs group**
- **When you attempt to create a new Dfs root file share resource in Dfs group, you receive an error message stating that it is not possible to create the Dfs root File Share resource.**

You need to create the Dfs root resource in Dfs group. What should you do?

A. Demote the cluster nodes to member servers
B. Create a network name resource in Dfs group
C. Create a normal file share resource for X:\dfsroot in Dfs group
D. Use the distributed file system console to create a stand-alone Dfs root for X:\dfsroot
E. Use the distributed file system console to create a fault-tolerant domain-based Dfs root for X:\dfsroot

Answer: B
Explanation: A DFS root can be accessed by using a network name and the associated IP address. Therefore, dependent Network name and IP address must be associated with the clustered DFS root.

Incorrect answers:
A. Demoting the cluster nodes to member servers is not required to create a DFS root.
C. This action is not required.
D. You use the Cluster Administrator for this task.
E. Cluster Administrator would be required for this task.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 95-100.

Question No: 75
You are the administrator of a Windows 2000 Advanced Server cluster. The two cluster nodes are domain controllers that are designated NodeA and NodeB. NodeA hosts a stand-alone Dfs root name Dfsroot. The Dfs root on NodeA is not clustered. NodeB does not host a Dfs root.
You want to migrate the current Dfsroot configuration to a Dfs root file share resource on the cluster. You also want to ensure that the current Dfs structure is included in the new cluster Dfs root.

What should you do? (Choose Three)

A. Use the dfscmd.exe command to restore the Dfs link configuration.
B. Create a new Dfs root file share resource that uses a new virtual server name
C. Use the distributed file system console to convert the stand-alone Dfs root on NodeA to a domain Dfs root.
D. Use the distributed file system console to create a new root replica. Specify NodeB as the new root replica
E. Create a new Dfs root file share resource.
Specify the server names of NodeA and NodeB as the virtual server names.
F. Use the dfscmd.exe command to save the current Dfs link configuration.
Edit the result to reflect the virtual server name.
Remove the Dfsroot on NodeA.

Answer: A, B, F
Explanation: In order to ensure that the current DFS structure is included in the new cluster DFS root you will need to: run dfscmd.exe, created a DFS root file with a corresponding virtual server, and use dfscmd to save the current DFS link configuration, edit the virtual server name and the remove the DFSroot from NodeA.

Incorrect answers:
C, D, E. These steps are not required to achieve the desired results.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 124-130.

Question No: 76
You are the administrator of a new Windows 2000 Advanced Server cluster. You want to provide high to provide high availability by adding it to the existing cluster. The application is non-cluster aware. The application uses TCP/IP to connect to client computers. The application was not previously clustered or tested for operability in a clustered environment.
You need to test the application to ensure that it will run properly and with full functionality on the cluster.
Which two actions should you take? (Choose two)

A. Install the application and application data files on both cluster nodes.
B. Fail over the application. Verify that the client computers reconnect to the application.
C. Install the application on both cluster nodes, and install the application data files on the cluster disk.

D. Run the ipconfig/renew command on the cluster nodes. Verify that the client computers can reconnect to the application.
E. Specify one node as the preferred owner of the application. Verify that the application fails back to the preferred owner after a failover.

Answer: B, C
Explanation: To test the application on the server and cluster you will need to first install the application on both cluster nodes, and install the application data files on the cluster disk. These steps allows the application to function on the cluster. It is now time to test the application for failover and how the client react.

Incorrect answers:
A. The data files must be installed on the cluster disks and not on the nodes.
D. This will not confirm the applications functionality on the cluster.
E. This is not a required step to test the application.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 156-158.

Question No: 77
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You need to configure three servers before installing the cluster service. You need to install disk controller cards and array controller cards in both servers.
The servers will share an external storage subsystem that will be connected with fibre-optic cable. You need to configure the servers so that each Server contains three hard disks of equal size. You need to configure these hard disks so that the servers can tolerate the failure of any one disk in either Server.
To ease maintenance task, company policy requires that the cluster nodes be configured identically.
To answer click the Select and Place button, and then drag the appropriate disk controller cards and array controller cards to the appropriate slots in the two servers.

Availabe Disk Controllers Cards

Fibre Channel	EIDE	SCSI RAID

Answer:

Availabe Disk Controllers Cards

Fibre Channel	EIDE	SCSI RAID

Explanation: The Fibre Channel cards are need to connect to the fibre-optic cable. These cards need to be put into a PCI slot and as the server need to be identical they will both be put in the top slot. SCSI RAID is required for fault tolerance and must be connected in the EISA slots.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 23-24.

Question No: 78
You are the administrator of a Windows 2000 Advanced Server computer named Cluster1. The cluster is composed of two nodes that are designated NodeA and NodeB. Both nodes act as file servers and provide failover for each other.
The cluster is configured to have two resource groups. The first group, named GroupA, contains the File Share resources used by NodeA. The second group, named GroupB, contains the File share resources used by NodeB.

The cluster is configured to have two IP Address resources. The first IP address resource, named AddressA, uses the IP address 172.17.22.53. The second IP address named AddressB, uses the IP address 172.17.22.54. AddressA is included in GroupA, and AddressB is included in GroupB.
You need to configure NodeA to be the only active node in the cluster. You need to configure NodeB to provide failover for NodeA. You want to configure the two nodes while maintaining client computer access to the resources on NodeB.
Which command should you run?

A. CLUSTER Cluster1 GROUP GroupB/DELETE
B. CLUSTER Cluster1 RESOURCE AddressB/DELETE
C. CLUSTER Cluster1 GROUP GroupB/MOVETO:NodeA
D. CLUSTER Cluster1 GROUP GroupB/OFFLINE/WAIT:10
E. CLUSTER Cluster1 GROUP GroupB/SETOWNERS:NodeA
F. CLUSTER Cluster1 RESOURCE AddressB/MOVETO:GroupA

Answer: C
Explanation: Currently there are two active nodes in the cluster: NodeA and NodeB. We want to use NodeA as the single active node. We need to transfer Group B from NodeB to NodeA. We should use the *cluster GROUP "Cluster Group" /MOVE:TargetNode*. In this particular scenario we should use the following command:

CLUSTER Cluster1 GROUP GroupB/MOVETO:NodeA

Incorrect answers:
A. This command would delete GroupB.
B. This command can not be used to delete address.
D. This command would timeout the group for 10 seconds.
E. We are not required to set the ownership of GroupB.
F. There is no RESOURCE group in this question.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, Moving A Resource Group to Another Node, page 93.

Question No: 79
You are the administrator of a Windows 2000 Advanced Server cluster. The cluster is composed of two nodes that are designated NodeA and NodeB. NodeB experiences a hardware failure. You use the Cluster Administrator to evict NodeB from the cluster.
You repair the failed hardware on NodeB. When you restart the Server, however, the cluster services do not start. You examine the event log on NodeB and find the

following error entry. "Microsoft Cluster Service could not join an existing cluster and could not form a new cluster. Microsoft Cluster Server has terminated."
You need to join NodeB to the cluster. What should you do?

A. Remove and then reinstall the Cluster service on NodeB.
B. Use the Cluster Administrator on NodeA to join NodeB to the cluster.
C. Delete the cluster database information files on NodeB. Manually restart the Cluster service on NodeB.
D. Stop the Cluster service on NodeA. Manually start the Cluster service on NodeB. Manually start the Cluster service on NodeA.

Answer: A
Explanation: As you repaired a Node on a cluster you most likely made changes that change network configuration. As a result, you will need to remove and then reinstall the Cluster service on NodeB.

Incorrect answers:
B. As you made changes to NodeB, you will be unable to use the Cluster Administrator on NodeA to join NodeB to the cluster.
C. Restarting the clustering service manually will not allow Node B to join the cluster.
D. The only way for a node to join a cluster after it has been remove is to remove and reinstall Clustering Service.

Microsoft Windows 2000 Advance Server Clustering Services Training Kit, pages 219-221.

Question No: 80
You are the administrator of two Windows 2000 Advanced Server computers named Server1 and Server2. You want to install the Cluster service on both servers. You set up two shared disks on a shared SCSI bus between the two servers. The SCSI bus is terminated correctly.
When you attempt to install the Cluster service on Server1, the Cluster Service Configuration Wizard does not detect the shared disks.
You want to ensure that both shared disks are detected. Which two actions should you take? (Choose Two)

A. Revert the shared disks to Basic disks.
B. Convert the shared disks to Dynamic disks.
C. Format the shared disks by using FAT.
D. Format the shared disks by using NTFS.
E. Assign the lowest SCSI identification number to the quorum disk.

Answer: A, D
Explanation: Other than hardware requirements there are a number of other requirements when selecting a shared drive for a cluster: all drives must be physical connected, shared drives must be accessible from each of the nodes, unique SCSI Ids, disk configured as Basic, and all partitions must be configured on NTFS.

Incorrect answers:
B. All disk must be configured as Basic disks and not Dynamic.
C. The shared drive must be formatted NTFS and not FAT.
E. The quorum disk does not require the lowest SCSI ID.

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