



Exam	70-291
Title	Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure
Updated	01/03/2011
Product Type	Demo File = Become premium member to view complete file

QUESTION 1

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com that contains 200 Windows Server 2003 computers and 12,000 Windows XP Professional client computers.

You have been instructed to set up an extranet Web site that will be accessible to all internal ActualKey.com users as well as some of ActualKey.com's affiliates. You install Windows Server 2003, Web Server Edition on server named ACTUALKEY-SR78. You need to ensure that internal resources cannot be accessed from the Internet. You plan to accomplish this by only allowing HTTP traffic on ACTUALKEY-SR78.

What should you do?

A. Enable TCP/IP filtering on ACTUALKEY-SR78 and configure it to allow traffic only through TCP

port 80.

B. Enable TCP/IP filtering on ACTUALKEY-SR78 and configure it to allow traffic only through TCP port 110.

C. Enable TCP/IP filtering on ACTUALKEY-SR78 and configure it to allow traffic only through TCP port 21.

D. Enable TCP/IP filtering on ACTUALKEY-SR78 and configure it to allow traffic only through TCP port 143.

Answer: A

Explanation:

HTTP uses TCP port 80. Therefore, to allow only HTTP traffic we must enable TCP/IP filtering on ACTUALKEY-SR78 and allow traffic only through port 80.

Incorrect answers:

B: TCP port 110 is used for POP3 traffic, which is required to e-mail retrieval from an e-mail server. We do not want to allow POP3 traffic. We want to allow only HTTP traffic. HTTP uses TCP port 80. Therefore, we must allow traffic only through port 80.

C: TCP port 21 is used for FTP traffic but we do not want to allow FTP traffic. We want to allow only HTTP traffic. HTTP uses TCP port 80. Therefore, we must allow traffic only through port 80.

D: TCP port 143 is used for HTTPS traffic, which is secure HTTP. We do not want to allow HTTPS traffic. We want to allow only HTTP traffic. HTTP uses TCP port 80. Therefore, we must allow traffic only through port 80.

QUESTION 2

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. The ActualKey.com network contains 20 server computers and 2,500 client computers. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. All computers on the ActualKey.com network are configured with static IP addresses in the 10.20.30.0/8 network address range.

Due to growth in the ActualKey.com network you need to add another 20 server computers to the network. You deploy Windows Server 2003 to 20 new computers. You now want to configure static IP address for the new servers. You decide to use a batch file to manually configure the IP addresses.

What should you do?

A. Use the netsh interface ip set address command.

B. Use the rcp -interface command.

C. Use the netstat -s -p ip command.

D. Use the ipconfig /renew command.

Answer: A

Explanation:

The netsh interface ip set address command allows you to set the IP address on a network interface and can be used in a batch file.

Incorrect answers:

B: The rcp command is used to copy files between two computers. It is not used to set IP addresses.

C: The netstat -s -p ip command is used to display IP statistics for a network interface. It is not

used to set IP addresses.

D: The `ipconfig /renew` command allows you to renew the IP address leased from a DHCP server. However, the ActualKey.com network uses static IP addressing and does not use DHCP.

QUESTION 3

You work as the network administrator at ActualKey.com. ActualKey.com has its headquarters in New York. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. The ActualKey.com network contains 20 server computers and 2,500 client computers. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. All client computers on the ActualKey.com network receive their IP configuration from a DHCP Server named ACTUALKEY-SR24.

The ActualKey.com network is connected to the Internet via a 256 kbps ISDN modem.

ActualKey.com opens a new branch office in Chicago. You are instructed to install a separate network in the Chicago office. The Chicago network will contain 5 Windows Server 2003 computers named ACTUALKEY-SR51, ACTUALKEY-SR52, ACTUALKEY-SR53, ACTUALKEY-SR54, and ACTUALKEY-SR55. ACTUALKEY-SR51 will function as a Domain Name Service (DNS) server and ACTUALKEY-SR52 will serve as a default gateway to connect to the ActualKey.com network at headquarters. The Chicago office will also contain 1,000 Windows XP Professional client computers. All client computers will be desktop computers. You need to set the IP configuration for the client computers in the Chicago network as quickly as possible. You need to ensure that there are no IP address conflicts on the network. You also need to ensure that network traffic between the Chicago network and the New York network is kept at a minimum.

What should you do?

- A. Implement static IP addressing.
- B. Configure ACTUALKEY-SR55 as a DHCP server and configure the client computers at the Chicago office to receive their IP configurations from ACTUALKEY-SR55.
- C. Increase the lease duration on ACTUALKEY-SR24 to 14 days and configure the client computers at the Chicago office to receive their IP configurations from ACTUALKEY-SR24.
- D. Configure ACTUALKEY-SR52 as a DHCP Relay Agent and configure the client computers at the Chicago office to receive their IP configurations from ACTUALKEY-SR24.

Answer: B

Explanation:

Using a DHCP server to assign the IP configuration to the client computers would be the easiest and quickest. To keep network traffic at a minimum, you should install a DHCP server in the Chicago network.

Incorrect answers:

A: You can implement static IP addressing for the client computers but this will not ensure that there are no IP address conflicts on the network.

C, D: Using a DHCP server to assign the IP configuration to the client computers would be the easiest and quickest. To keep network traffic at a minimum, you should install a DHCP server in the Chicago network.

QUESTION 4

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. The ActualKey.com network contains a Dynamic Domain Name System (DDNS) server named ACTUALKEY-SR04 and a File Server

named ACTUALKEY-SR05. ACTUALKEY-SR04 uses the IP address 192.168.2.163/27 and ACTUALKEY-SR05 uses the IP address 192.168.2.165/27.

Your Windows XP Professional client computer is named ACTUALKEY-WS291. ACTUALKEY-WS291 is configured with the IP address 192.168.2.159/27 and a gateway address of 192.168.2.129/27. You are unable to connect to a ACTUALKEY-SR05. You need to access files on ACTUALKEY-SR05.

What should you do?

- A. Change the IP address on ACTUALKEY-SR04 to 192.168.2.165.
- B. Change the IP address on ACTUALKEY-WS291 to 192.168.2.158.
- C. Change the IP address on ACTUALKEY-SR05 to 192.168.2.129.
- D. Change the gateway address on ACTUALKEY-WS291 to 192.168.2.163.

Answer: B

Explanation:

The IP address on ACTUALKEY-WS291 should be changed to fit into the 192.168.2.128/27 network space. The ActualKey.com network is using a CIDR address space based on the class C IP address range. The default subnet mask for class C addresses is 24 bits long (255.255.255.0) but ActualKey.com has extended it to 27 bits (255.255.255.224) by borrowing 3 bits from the host name addresses (128+64+32=224). The value of the least significant bit is 32. Therefore the valid IP address ranges for hosts are 192.168.2.33-62; 192.168.2.65-94; 192.168.2.97-126; 192.168.2.129-158; etc. ACTUALKEY-SR04 and ACTUALKEY-SR05 are in the 192.168.2.129-158 address range while ACTUALKEY-013 is configured with the broadcast address for the 192.168.2.128/27 network. You should therefore change the IP address on ACTUALKEY-WS291 to 192.168.2.158.

Incorrect Answers:

A: ACTUALKEY-013 is configured with the broadcast address for the 192.168.2.128/27 network. You should therefore change the IP address of ACTUALKEY-WS291, not the IP address of the DDNS server or the File Server.

C: ACTUALKEY-013 is configured with the broadcast address for the 192.168.2.128/27 network. You should therefore change the IP address of ACTUALKEY-WS291, not the IP address of the DDNS server or the File Server.

D: ACTUALKEY-013 is configured with the broadcast address for the 192.168.2.128/27 network. You should therefore change the IP address of ACTUALKEY-WS291, not the gateway address.

Reference: Brian Barber, Chad Todd, Norris L. Johnson, Jr., & Robert J.

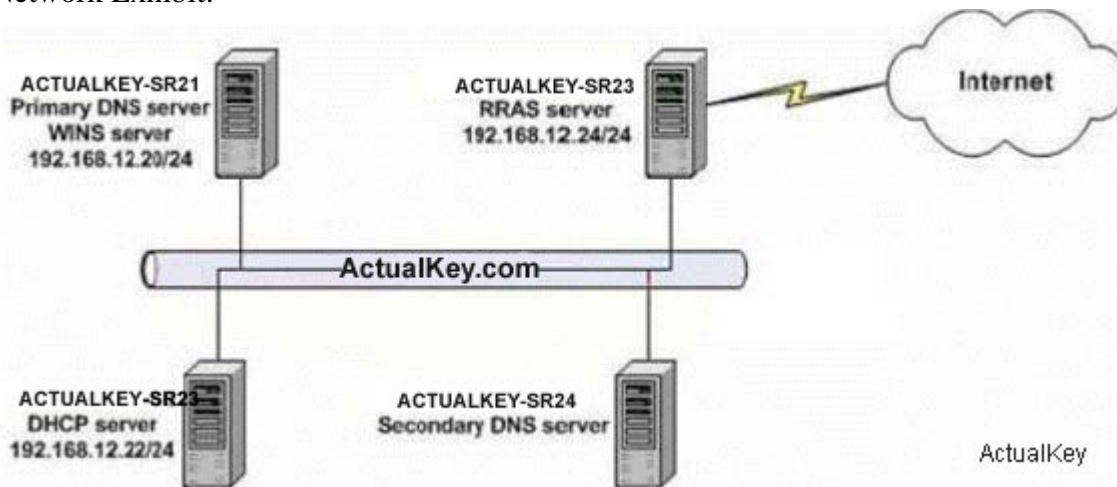
Shimonski, Configuring and Troubleshooting Windows XP Professional, Syngress Publishing, Rockland MA, 2001, p. 326

QUESTION 5

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. The ActualKey.com network contains a server named ACTUALKEY-SR21 that functions as a primary DNS server and as a WINS server; a server named ACTUALKEY-SR22 that functions as a DHCP server; and a server named ACTUALKEY-SR23 that functions as a RRAS server. ACTUALKEY-SR22 is configured with a DHCP scope of 192.168.12.25/24 through 192.168.12.254. All servers are configured with static IP addresses and all client computers are configured as DHCP clients. You add a new server named ACTUALKEY-SR24 to the network. You configure ACTUALKEY-SR24

to function as a secondary DNS server. The relevant portion of the ActualKey.com network is shown in the Network exhibit.

Network Exhibit:



You need to configure the TCP/IP configuration on ACTUALKEY-SR24 to ensure that it can communicate with the other computers on the ActualKey.com network as well as on the Internet. What should you do?

- A. Assign ACTUALKEY-SR24 a static IP address of 192.168.12.25, a subnet mask of 255.255.255.0, and a default gateway of 192.168.12.22.
- B. Assign ACTUALKEY-SR24 a static IP address of 192.168.12.22, a subnet mask of 255.255.0.0, and a default gateway of 192.168.12.20.
- C. Assign ACTUALKEY-SR24 a static IP address of 192.168.12.23, a subnet mask of 255.255.255.0, and a default gateway of 192.168.12.24.
- D. Assign ACTUALKEY-SR24 a static IP address of 192.168.12.24, a subnet mask of 255.255.0.0, and a default gateway of 192.168.12.20.

Answer: C

Explanation:

The ActualKey.com network uses a 24 bit subnet mask which equates to 255.255.255.0. We should use this as the subnet mask. ACTUALKEY-SR23 servers as the gateway to the Internet and has an IP address of 192.168.12.24. We should use this as the default gateway. The only available IP address that is excluded from the DHCP scope and is not in use is 192.168.12.23. We should use this as the IP address for ACTUALKEY-SR24.

Incorrect answers:

A: We cannot assign ACTUALKEY-SR24 a static IP address of 192.168.12.25 as this is part of the DHCP scope that is leased to client computers. Furthermore, ACTUALKEY-SR23 servers as the gateway to the Internet and has an IP address of 192.168.12.24. We should use this as the default gateway and not 192.168.12.22.

B: We cannot assign ACTUALKEY-SR24 a static IP address of 192.168.12.22 as this is the IP address used by ACTUALKEY-SR22. Furthermore, the ActualKey.com network uses a 24 bit subnet mask which equates to 255.255.255.0. We should use this as the subnet mask and not 255.255.0.0 which is a 16 bit subnet mask. Also, ACTUALKEY-SR23 servers as the gateway to the Internet and has an IP address of 192.168.12.24. We should use this as the default gateway and not 192.168.12.20.

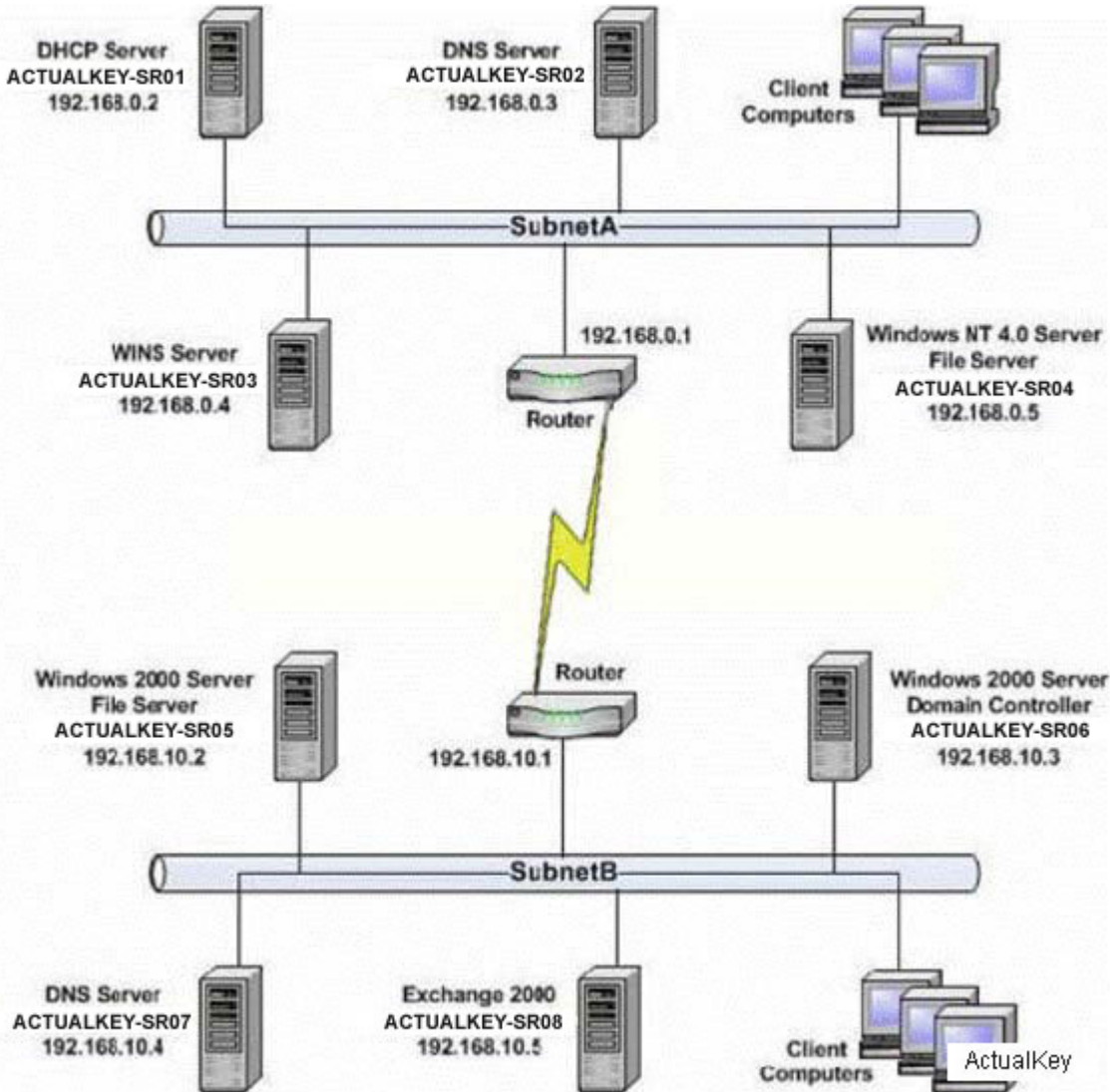
D: We cannot assign ACTUALKEY-SR24 a static IP address of 192.168.12.24 as this is the IP address used by ACTUALKEY-SR23. Furthermore, the ActualKey.com network uses a 24 bit

subnet mask which equates to 255.255.255.0. We should use this as the subnet mask and not 255.255.0.0 which is a 16 bit subnet mask. Also, ACTUALKEY-SR23 servers as the gateway to the Internet and has an IP address of 192.168.12.24. We should use this as the default gateway and not 192.168.12.20.

QUESTION 6

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. The ActualKey.com network contains two subnets named SubnetA and SubnetB. The relevant portion of the ActualKey.com network is shown in the Network exhibit.

Network Exhibit:



A user named Rory Allen tries to access several files that are located on ACTUALKEY-SR04, from his Windows XP Professional client computer named ACTUALKEY-WS123. ACTUALKEY-WS123 is located on Subnet A.

You confirm that Rory Allen is able to connect to all the other computers on the two subnets. You run `ipconfig /all` on ACTUALKEY-WS123, and the output displayed in the Ipconfig exhibit.

Ipconfig Exhibit:

```

C:\>ipconfig /all

Windows IP Configuration

    Host Name . . . . . : actualkey-ws123
    Primary Dns Suffix . . . . . : actualkey.com
    Node Type . . . . . : Mixed
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No
    DNS Suffix Search List. . . . . : actualkey.com

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix. . . : 
    Description . . . . . : Intel(R) 82540EM Network Connection
    Physical Address. . . . . : 00-04-23-B9-A8-32
    Dhcp Enabled. . . . . : No
    IP Address. . . . . : 192.168.10.26
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.10.1
    DNS Servers . . . . . : 192.168.10.4
                           : 192.168.0.3
    Primary WINS Server . . . . . : 192.168.1.4
  
```

You need to ensure that Rory Allen is able to access the required resources on ACTUALKEY-SR04. What should you do?

- A. Enable DHCP on ACTUALKEY-WS123.
- B. Change the IP address of the WINS server, named ACTUALKEY-SR03, on ACTUALKEY-WS123.
- C. Enable NetBIOS over TCP/IP on ACTUALKEY-WS123.
- D. Change the NetBIOS node type on ACTUALKEY-WS123.

Answer: B

Explanation:

For Rory Allen to access resources on the Window NT 4.0 Server, named ACTUALKEY-SR04, his computer must be able to resolve the server's NetBIOS name to its IP address. There are two ways of automatically resolving NetBIOS names:

Broadcast name queries WINS servers

Broadcast name queries will not be applicable in this scenario because ACTUALKEY-SR04 and ACTUALKEY-WS123 are located on different subnets. The only other reason could be that the IP address of the WINS server is incorrectly specified on ACTUALKEY-WS123, and should therefore be changed.

Incorrect Answers:

A: This could be a possibility because a DHCP server can be used to automatically provide client computers with suitable TCP/IP settings, which includes NetBIOS node type and the address of the WINS server. But since the scenario does not offer information about the DHCP settings, it is safer to assume that the IP address of the WINS server is incorrectly configured on ACTUALKEY-WS123.

C: If NetBIOS over TCP/IP was disabled, the ipconfig /all output would clearly indicate this fact. Also, the node type would be specified as Unknown.

D: According to the output of ipconfig /all, the NetBIOS node type is set to Mixed on ACTUALKEY-WS123. This indicates that ACTUALKEY-WS123 will first attempt to use broadcasts to resolve the NetBIOS name. In the event that this attempt is unsuccessful, it will then try WINS server. If the IP address of the WINS server was correctly specified on ACTUALKEY-WS123, then Rory Allen would be able to access the resources on ACTUALKEY-SR04.

Reference: Brian Barber, Chad Todd, Norris L. Johnson, Jr., & Robert J.

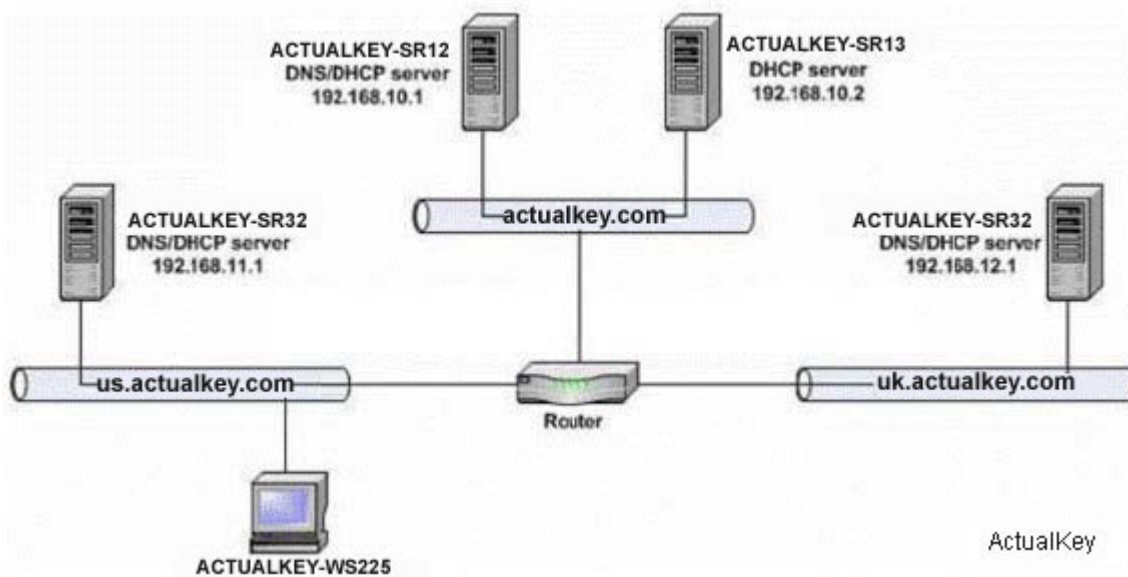
Shimonski, Configuring and Troubleshooting Windows XP Professional, Syngress Publishing, Rockland MA, 2001, p. 327

QUESTION 7

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of three Active Directory domains named ActualKey.com, us.actualkey.com, and uk.ActualKey.com. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. The ActualKey.com network contains four DHCP servers named ACTUALKEY-SR12, ACTUALKEY-SR13, ACTUALKEY-SR22, and ACTUALKEY-SR32. All servers are configured with static IP addresses and all client computers are configured as DHCP clients. The client computers are assigned the appropriate DNS suffix by DHCP.

A newly hired ActualKey.com user named Clive Wilson is assigned a client computer named ACTUALKEY-WS225 that was configured by a network technician named Rory Allen. ACTUALKEY-WS225 is located in the us.ActualKey.com domain. The relevant portion of the network is shown in the Network exhibit.

Network Exhibit:



Clive Wilson complains that he cannot access resources in the us.ActualKey.com domain but can access resources in the uk.ActualKey.com domain. You suspect that ACTUALKEY-WS225 was not configured correctly. You want to register the fully qualified domain name (FQDN) for ACTUALKEY-WS225 with DNS and you want to ensure that unqualified domain name queries are performed in the ActualKey.com domain and the domain to which the querying client computer belongs.

What should you do? To answer, configure the Advanced TCP/IP configuration for ACTUALKEY-WS225 in the work area.

Configurations,
select from these

192.168.10.1

192.168.10.2

192.168.11.1

192.168.12.1

actualkey.com

us.actualkey.com

uk.actualkey.com

Work Area

Advanced TCP/IP Settings

IP Settings | **DNS** | WINS | Options

DNS server addresses, in order of use:

[Empty list box]

[Add] [Edit] [Remove]

The following three settings are applied to all connections with TCP/IP enabled. For resolution of unqualified names:

☐ Append primary and connection specific DNS suffixes

☐ Append parent suffixes of the primary DNS suffix

☐ Append these DNS suffixes (in order):

[Empty list box]

[Add] [Edit] [Remove]

DNS suffix for this connection: [Empty text box]

☐ Register this connection's addresses in DNS

☐ Use this connection's DNS suffix in DNS registration

ActualKey

[OK] [Cancel]

QUESTION 8

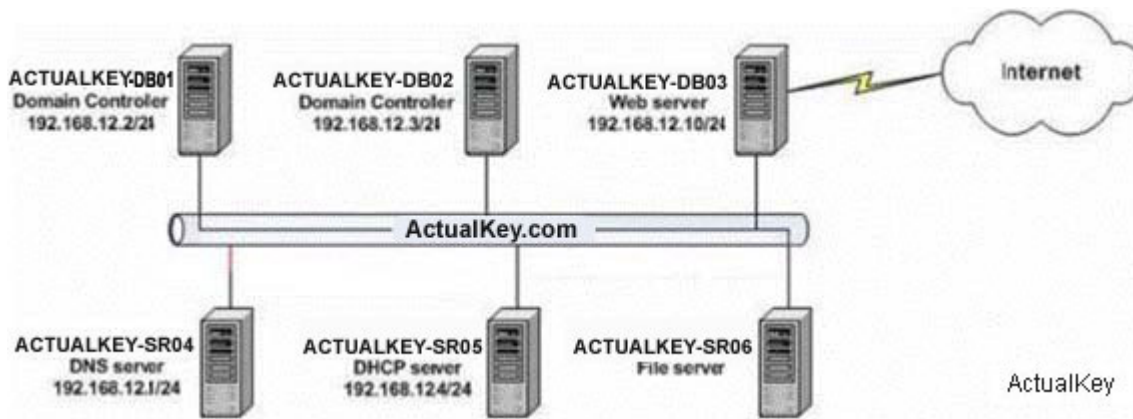
You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. The ActualKey.com network contains domain controllers named ACTUALKEY-DB01 and ACTUALKEY-DB02, a DNS server named ACTUALKEY-SR03, a DHCP server named ACTUALKEY-SR04, and a Web server named ACTUALKEY-SR05. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. All servers are configured with static IP addresses and all client computers are configured as DHCP clients.

ACTUALKEY-SR04 hosts a standard primary DNS zone for the ActualKey.com domain as well as a reverse lookup zone for the 192.168.12.0/24 subnet. ACTUALKEY-SR05 is configured with a DHCP scope for the 192.168.12.0/24 subnet. ACTUALKEY-SR05 also has a DHCP exclusion range of 192.168.12.1 through 192.168.12.10 for servers with statically assigned IP addressing.

You add a new UNIX server named ACTUALKEY-SR06 to the ActualKey.com network.

ACTUALKEY-SR06 will be used as a file server. The relevant portion of the ActualKey.com network is shown in the Network exhibit.

Network Exhibit:



You need to set the TCP/IP configuration for ACTUALKEY-SR06. You need to ensure that all computers on the ActualKey.com network can access ACTUALKEY-SR06 by host name and can resolve its IP address to its host name.

What should you do? To answer, select the appropriate IP address for ACTUALKEY-SR05 and configure the appropriate settings in the work area.

Configurations, select from these

192.168.12.0

192.168.12.5

192.168.12.12

192.168.12.65

192.168.12.255

Work Area

New Host

Name (uses parent domain name if blank):
ACTUALKEY-SR05

Fully qualified domain name (FQDN):
ACTUALKEY-SR05.actualkey.com

IP address:
[]

☐ Create associated pointer (PTR) record

☐ Allow any authenticated user to update DNS records with the same owner name

Add Host Cancel ActualKey

QUESTION 9

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. The ActualKey.com network contains a print server named ACTUALKEY-PR01 that has a built-in network interface.

A ActualKey.com user named Andy Reid is a member of the Research and Development department. Andy Reid complains that he cannot print to a print device attached to ACTUALKEY-PR01. You have received instruction to ensure that Andy Reid can print to the print device. First you verify that the IP address for ACTUALKEY-PR01 is correct and that the latest drivers for the print device are installed. You now want to verify that the print jobs are being sent to the correct MAC address for ACTUALKEY-PR01.

What should do?

- A. On ACTUALKEY-PR01, run the net session command.
- B. On ACTUALKEY-PR01, run the netstat command.
- C. On ACTUALKEY-PR01, run the netsh command.
- D. On ACTUALKEY-PR01, run the netcap command.

Answer: D

Explanation:

Netcap.exe is a command line tool that could be used to capture the network traffic. A filter can be created to be used during the capture to determine the MAC address the print jobs are being sent to. The Network Monitor Capture Utility (Netcap.exe) can be used to capture network traffic in Network Monitor. Netcap provides capture abilities only from a command prompt; to open the resulting capture (.cap) files, you must use the full Network Monitor interface. Netcap is installed when you install the Support tools that are on the Windows XP CD-ROM. Netcap provides capture abilities that are similar to the version of Network Monitor that is included with the Windows Server products; however, you must use Netcap at a command prompt. Netcap installs the Network Monitor driver and binds it to all adapters when you first run the Netcap command.

Incorrect Answers:

A: The net session command can be used to view the computer names and user names of users on a server, to see if users have files open, and to see how long each user's session has been idle. Net session manages server computer connections - used without parameters, net session displays information about all sessions with the local computer. B: The netstat command is not a utility to use when troubleshooting NetBIOS names, but is used to display TCP/IP and port information.

C: The Network Shell utility (Netsh.exe) can perform a wide range of system configuration tasks. You can use commands in the Netsh Interface IP context to configure the TCP/IP protocol (including addresses, default gateways, DNS servers, and WINS servers) and to display configuration and statistical information.

Reference: Microsoft Knowledge Base: 306794: How to

Install the Support Tools from the Windows XP CD-ROM Network Monitor is provided with Windows Server products and Microsoft Systems Management Server (SMS). Microsoft Corporation, 2004 Deborah Littlejohn Shinder, Dr. Thomas W. Shinder, Chad Todd & Laura Hunter, MCSA/MCSE: Exam 70-291: Implementing, Managing, and Maintaining a Windows Server 2003 Network Infrastructure Guide & DVD Training System, pp. 686, 854-856, 926

QUESTION 10

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of two subnets. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. All servers are located in a central data center that uses a single IP subnet and all client computers are located in one subnet.

The data center contains two routers named ACTUALKEY-SR01 and ACTUALKEY-SR02, two domain controllers named ACTUALKEY-DC01 and ACTUALKEY-DC02, and two file servers named ACTUALKEY-SR03 and ACTUALKEY-SR04. The IP addresses of these servers are indicated in the table below.

Host name	IP address
ACTUALKEY-DC01	10.10.10.1
ACTUALKEY-DC02	10.10.10.2
ACTUALKEY-SR01	10.10.1.1
ACTUALKEY-SR02	10.10.1.2
ACTUALKEY-SR03	10.10.11.1
ACTUALKEY-SR04	10.10.11.2

You have received instruction from the CIO to install a new database server in the data center. You install Windows Server 2003 on a new server computer named ACTUALKEY-DB01 and hand it over to a database administrator named Dean Austin. Dean Austin installs Microsoft SQL Server 2005 and makes some changes to the TCP/IP settings on ACTUALKEY-DB01 as shown in the following table.

Parameter	Value
IP address	10.10.1.3
Subnet mask	255.255.255.0
Default gateway	10.10.1.2 ActualKey

Later, Dean Austin complains that ACTUALKEY-DB01 cannot communicate with the other servers in the data center. All other servers in the data center can communicate with the other servers as well as the client computers. You log on to ACTUALKEY-DB01 and attempt to ping ACTUALKEY-DC01 but you receive the following error message: "Destination host unreachable". What should you do to ensure that ACTUALKEY-DB01 can communicate with the other computers in the ActualKey.com network?

- A. Configure ACTUALKEY-DB01 with a default gateway of 10.10.1.1.
- B. Configure ACTUALKEY-DB01 with a subnet mask of 255.255.0.0.
- C. Configure ACTUALKEY-DB01 with an IP address of 10.10.10.3.
- D. Configure ACTUALKEY-DB01 with an IP address of 10.10.11.3.

Answer: B

Explanation:

Large networks are subdivided to create smaller subnetworks to reduce overall network traffic by keeping local traffic on the local subnet and sending all nonlocal traffic to the router. In order to create a subnetwork, we need to have a system for addressing that allows us to use the network ID and host ID within the class-based system. This is accomplished through the use of a subnet mask. To determine the appropriate custom subnet mask (typically referred to simply as subnet mask) for a network, you must first: Determine the number of host bits to be used for subnetting. Determine the new subnetted network IDs. Determine the IP addresses for each new subnet. Determine the appropriate subnet mask.

Incorrect Answers:

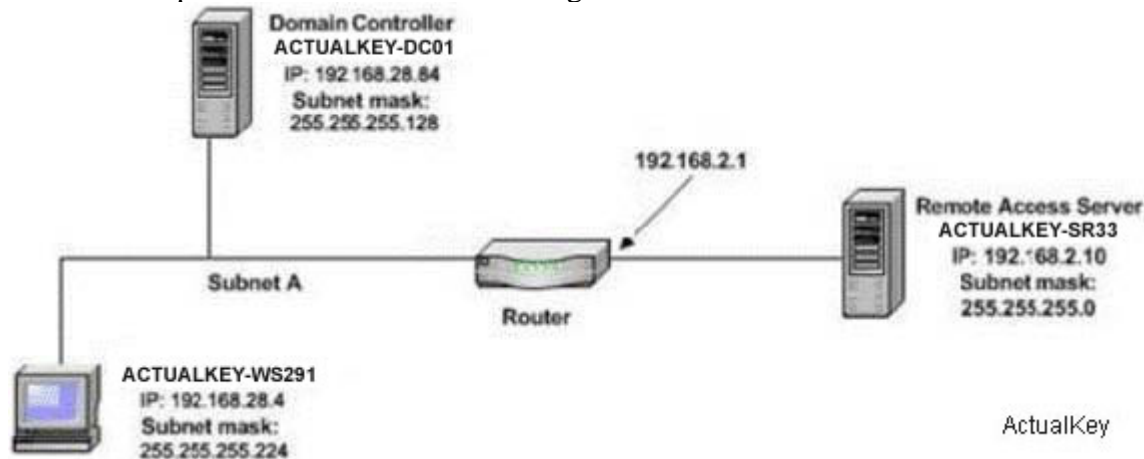
- A: You need to assign the correct subnet mask to ensure connectivity.
- C: The problem in this scenario is not a faulty IP address. It is the appropriate subnet mask that has to be determined to enable connectivity.
- D: The problem in this scenario is not a faulty IP address. It is the appropriate subnet mask that has to be determined to enable connectivity.

Reference: Deborah Littlejohn Shinder, Dr. Thomas W. Shinder, Chad Todd and Laura Hunter,

MCSA/MCSE: Exam 70-291: Implementing, Managing, and Maintaining a Windows Server 2003 Network Infrastructure Guide & DVD Training System, p. 57

QUESTION 11

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of two subnets named Subnet A and Subnet B. Subnet A and Subnet B are connected by a router. All computers on the ActualKey.com network are configured with static IP addresses. All network servers run Windows Server 2003 and all client computers run Windows XP Professional. ActualKey.com hires a new Sales manager named Amy Wilson. You install a new client computer named ACTUALKEY-WS291 for Amy Wilson. You then add ACTUALKEY-WS291 to Subnet A. The relevant portion of the network is configured as shown in the exhibit.



However, Amy Wilson complains that ACTUALKEY-WS291 cannot communicate with other hosts on the network.

What should you do to ensure that ACTUALKEY-WS291 can communicate with all local and remote computers on the ActualKey.com network?

- A. Configure ACTUALKEY-WS291 with a default gateway of 192.168.28.84.
- B. Configure ACTUALKEY-WS291 with a default gateway of 192.168.2.1.
- C. Configure ACTUALKEY-WS291 with a subnet mask of 255.255.255.128.
- D. Configure ACTUALKEY-WS291 with a subnet mask of 255.255.255.192.

Answer: C

Explanation:

It is evident from the exhibit that the file server and ACTUALKEY-WS291 have a different subnet mask. This is the reason why they cannot communicate with each other. You must therefore change the subnet mask of ACTUALKEY-WS291 to 255.255.255.128.

Incorrect Answers:

- A: The problem is not the gateway IP address that is faulty, but rather the subnet mask.
- B: The problem is not the gateway IP address that is faulty, but rather the subnet mask.
- D: This option suggests the correct object that has to be changed, but it gives the wrong subnet mask.

Reference: Deborah Littlejohn Shinder, Dr. Thomas W. Shinder, Chad Todd and Laura Hunter, MCSA/MCSE: Exam 70-291: Implementing, Managing, and Maintaining a Windows Server 2003 Network Infrastructure Guide & DVD Training System, p. 57

QUESTION 12

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a

single Active Directory domain named ActualKey.com. ActualKey.com has its headquarters in Chicago and branch offices in Dallas and Miami. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. You work in the Miami branch office.

The network at the Miami branch office consists of 25 different subnets, each with a maximum of six computers. The network administrator at headquarters has allocated the 192.168.3.0/24 network address to the Miami branch office.

You install a new server named ACTUALKEY-SR21 in the Miami branch office. You need to configure the Internet Protocol (TCP/IP) properties for ACTUALKEY-SR21.

You configure ACTUALKEY-SR21 with an IP address of 192.168.3.44. What subnet mask should you use?

- A. A subnet mask of 255.255.255.0.
- B. A subnet mask of 255.255.255.128.
- C. A subnet mask of 255.255.255.192.
- D. A subnet mask of 255.255.255.240.
- E. A subnet mask of 255.255.255.248.

Answer: E

Explanation:

The network address is: 192.168.2.0/24, which means 11111111.11111111.11111111.0 in binary. Therefore, you can use the last octet to configure the 30 subnets and 6 hosts in each subnet. You need only six host PCs. When you convert to binary, it is: 00000111. As a result, you use 3 bits.

This leaves 5 bits for the subnets 11111000 converted to decimal: $128+64+32+16+8=248$, therefore the subnet mask will be: 255.255.255.248.

Reference:

Deborah Littlejohn Shinder, Dr. Thomas W. Shinder, Chad Todd and Laura Hunter, MCSA/MCSE: Exam 70-291: Implementing, Managing, and Maintaining a Windows Server 2003 Network Infrastructure Guide & DVD Training System , p.57

QUESTION 13

You work as the network administrator at ActualKey.com, who has its headquarters in Chicago and a branch office in Dallas. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. You work in the Dallas branch office.

The network at the Dallas branch office consists of a single subnet that contains 150 client computers and 12 servers. The network administrator at headquarters has allocated the 10.10.0.0/16 network address to the Dallas branch office.

You have received instruction from your manager to place all servers at the Dallas branch office into a separate subnet that uses the 192.168.10 public addressing scheme. Your manager asks you to make allowance for a maximum of 30 servers in the new subnet.

Which subnet mask should you use for the new subnet?

- A. 255.255.255.224
- B. 255.255.255.240
- C. 255.255.255.248
- D. 255.255.255.252
- E. 255.255.255.254

Answer: A

Explanation:

A 255.255.255.224 subnet mask gives five host address bits, so the maximum number of host addresses is $2^5 - 2 = 30$ host addresses. Thus 255.255.255.224 is the only subnet mask that will allow for sufficient IP addresses in case of further growth, whilst still conserving as many current addresses as possible.

Reference :

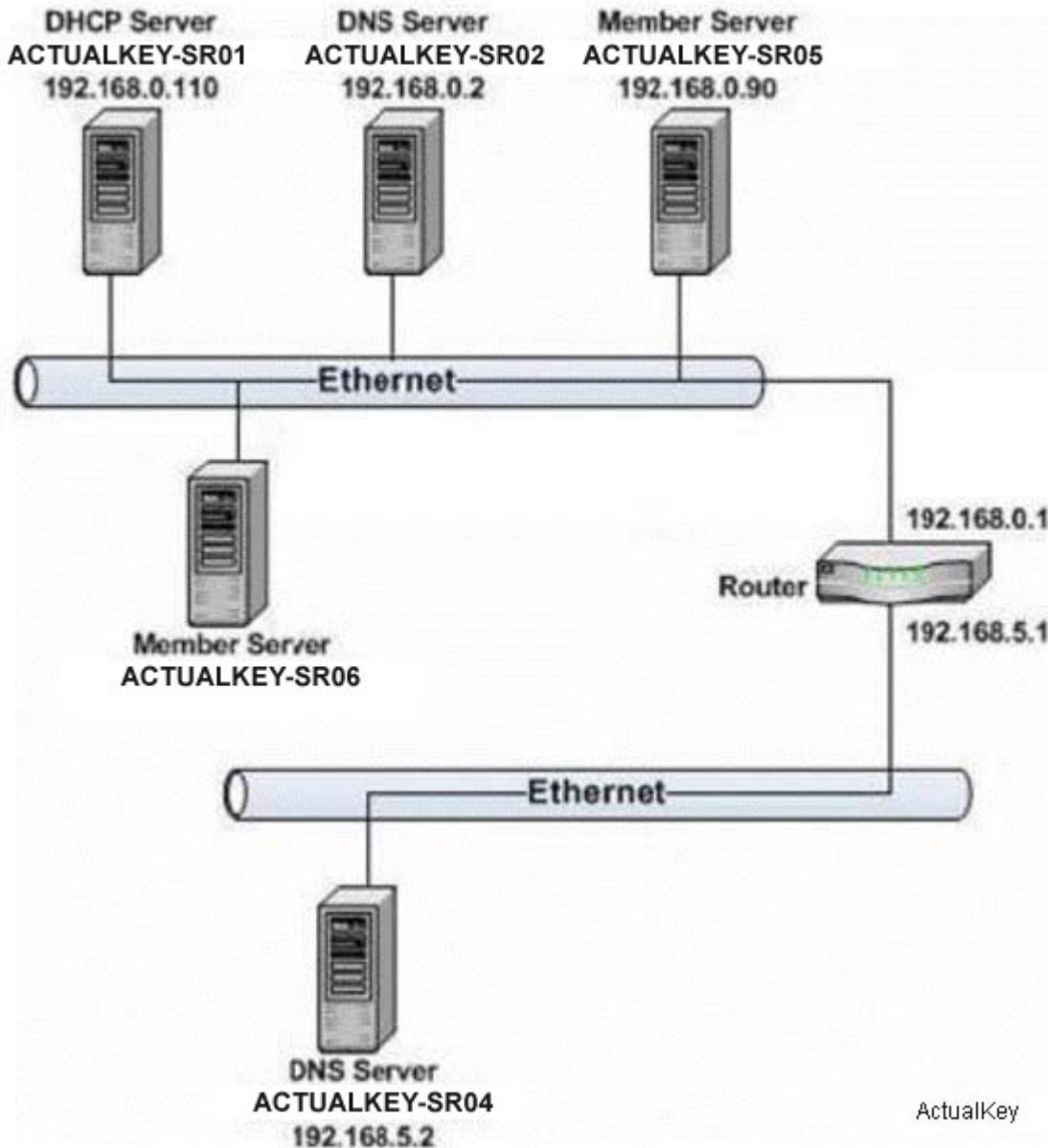
Deborah Littlejohn Shinder, Dr. Thomas W. Shinder, Chad Todd and Laura Hunter, MCSA/MCSE: Exam 70-291: Implementing, Managing, and Maintaining a Windows Server 2003 Network Infrastructure Guide & DVD Training System , p. 62

QUESTION 14

DRAG DROP

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional.

You have installed a new server named ACTUALKEY-SR06 on the network as shown in the exhibit.



You are required to configure ACTUALKEY-SR06 with a valid static IP configuration, while ensuring that ACTUALKEY-SR06 is able to communicate with all hosts on the ActualKey.com network and on the internet. Furthermore, you should configure ACTUALKEY-SR06 to use the DNS server on the local subnet for name resolution and also configure redundancy for name resolution.

Which of the following options would you choose to configure ACTUALKEY-SR06?
To answer drag the appropriate IP addresses and Subnet masks to the appropriate places.

Select from these**IP Addresses**

- 192 . 168 . 0 . 1
- 192 . 168 . 0 . 2
- 192 . 168 . 0 . 130
- 192 . 168 . 0 . 110
- 192 . 168 . 5 . 2
- 192 . 168 . 5 . 130

Subnet Masks

- 255 . 255 . 0 . 0
- 255 . 255 . 240 . 0
- 255 . 255 . 255 . 0
- 255 . 255 . 255 . 224

Place here

Internet Protocol (TCP/IP) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☒ Obtain an IP address automatically

☐ Use the following IP address:

IP address:

Subnet mask:

Default gateway:

☒ Obtain DNS server address automatically

☐ Use the following DNS server addresses:

Preferred DNS server:

Alternate DNS server:

Advanced...

OK Cancel

Answer:

Select from these**IP Addresses**

- 192 . 168 . 0 . 1
- 192 . 168 . 0 . 2
- 192 . 168 . 0 . 130
- 192 . 168 . 0 . 110
- 192 . 168 . 5 . 2
- 192 . 168 . 5 . 130

Subnet Masks

- 255 . 255 . 0 . 0
- 255 . 255 . 240 . 0
- 255 . 255 . 255 . 0
- 255 . 255 . 255 . 224

Place here

Internet Protocol (TCP/IP) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☒ Obtain an IP address automatically

☐ Use the following IP address:

IP address:

Subnet mask:

Default gateway:

☒ Obtain DNS server address automatically

☐ Use the following DNS server addresses:

Preferred DNS server:

Alternate DNS server:

Advanced...

OK Cancel

QUESTION 15

You work as the network administrator at ActualKey.com. The ActualKey.com network consists of a single Active Directory domain named ActualKey.com. All servers on the ActualKey.com network run Windows Server 2003 and all client computers run Windows XP Professional. ActualKey.com has its headquarters in Chicago and branch offices in Dallas and Miami. You work in the Miami branch office.

The Miami branch office has a file server named ACTUALKEY-SR25 that hosts critical documents. ACTUALKEY-SR25 is configured with a DHCP client reservation. ActualKey.com users from all three offices download documents from ACTUALKEY-SR25.

One day ActualKey.com users complain that they cannot access the documents on ACTUALKEY-SR25. You discover that the DHCP server has failed. The DHCP server is located at headquarters.

You have received instruction from the CIO to ensure that ACTUALKEY-SR25 is available even if it is unable to obtain or renew a lease from the DHCP server.

How could you accomplish this task?

- A. On the DHCP server, increase the DHCP lease period.
- B. Configure alternate IP settings for ACTUALKEY-SR25 on the Alternate Configuration tab of the Internet Protocol (TCP/IP) properties.
- C. Configure the DHCP scope in the 169.254.0.1 - 169.254.255.254 range.
- D. On the DHCP server, configure the DHCP 001 Resource Location Servers reservation option for ACTUALKEY-SR25.

Answer: B

Explanation:

Windows Server 2003 includes the Alternate Configuration feature. The Windows Server 2003 servers can be configured to use an alternate static IP configuration if a DHCP server is unavailable. When a DHCP client determines that the DHCP server is unavailable, it will automatically change over and also configure the TCP/IP stack with the static address information specified on the Alternate Configuration tab of the Internet Protocol (TCP/IP) properties.

Incorrect Answers:

A: Increasing the lease period would result in DHCP clients requesting leases less frequently, but won't guarantee that ACTUALKEY-SR25 will be available when the DHCP server is down.

C: Modifying the DHCP scope to the 169.254.0.1 - 169.254.255.254 range will still be reliant on the DHCP server.

D: Configuring the DHCP 001 Resource Location Servers reservation option for ACTUALKEY-SR25 on the DHCP server will not ensure that ACTUALKEY-SR25 will receive an IP address or have the IP address renewed.