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Case Study #1: Wood grove Bank

Overview:

Wood grove Bank provides business banking and financial services throughout the world. The company is centrally administered from a main office in New York City.

Physical Locations:

The company has 20 branch offices throughout the world. Each branch office belongs to one of six regions. No region contains more than four branch offices. Each branch office has 800 users. The main office has 1,000 users. Many users work from home after business hours. They access e-mail by using a Web interface.

Planned Changes:

The company currently uses an outsourced Web-based messaging system. They are implementing Exchange Server 2003. Messages from the old messaging system will not be migrated. There is no existing internal messaging environment.

Directory Services:

- The company has a single Active Directory domain.
- Each branch office has a single domain controller, which is configured as a global catalog server.
- Each office connects directly to the Internet. The Internet connection in each office uses a perimeter network.
- The internal firewall on the perimeter network in each branch office is configured so that domain member servers can be placed on the perimeter network.

Administration:

- The IT staff at the main office will control all new Exchange servers.
- However, each region also has a server technician who must be able to modify the Exchange configuration on the server that contains mailboxes for that region.

Security:

- All servers that provide services to Internet users must be located in a perimeter network. Other servers are not permitted in the perimeter networks.
- The company requires end-to-end encryption when users access their e-mail by using the Internet.
- All inbound e-mail must be scanned for viruses.

Interviews: Chief

Executive Officer:

- I know that the antivirus software for the Exchange system is purchased on a server-by-server basis.
- I want to minimize the number of servers on which we must install the software.
- We need to ensure that the failure of a single Microsoft Outlook Web Access server does not prevent our users from accessing their e-mail when they work from home.
- We also need to ensure that the failure of any server will only have a minimal impact on the ability of users, in each branch office, to send and receive e-mail while they are in the office.

Messaging Infrastructure:

- All user e-mail messages must be backed up daily.
- If a failure occurs, as much data as possible must be recovered.
- However, several mailboxes support customer service operations.
- Messages sent to these mailboxes do not need to be backed up and they do not need to be recovered if a failure occurs.
- Users who work from home will access e-mail by using their home Internet connections.
- They will connect to a Microsoft Outlook Web Access server that is hosted at their local branch office.
- All Outlook Web Access servers will be configured to require SSL-encrypted connections.

E-Mail Clients:

A. Users will use Microsoft Outlook to access e-mail in the new Exchange Server 2003 environment.

Case Study #1, Wood grove Bank (6 Questions)

Questions: 1

You need to design a storage strategy that meets all business and technical requirements. What should you do?

- A. Create a storage group for each office. Within each storage group, create a single database.
- B. Create a storage group for each region. Within each storage group, create a single database.
- C. Create a storage group for each region. Within each storage group, create separate databases for each office in that region.
- D. Create a single storage group. Within that storage group, create a separate database for each office.

Answer: C

Explanation: : Requirements

All user e-mail messages must be backed up daily, so that in the event of a failure occurring, as much data as possible is recovered. The company has 20 branch offices throughout the world. Each branch office belongs to one of six regions. No region contains more than four branch offices. Each branch office has 800 users and has a single domain controller, which is configured as a global catalog server. Each Exchange server can contain 4 storage groups, in which you can include 5 databases. In total you can split your users into 20 databases, which speeds up the recovery of any Exchange that crashes, by using a new Exchange feature called Recovery Storage Group. They tell you that users will connect to a Microsoft Outlook Web Access server and that this server will be hosted at their local branch office. They have one central office, 6 regions and each branch contains no more than 4 offices. This means that you require 7 Exchange servers 1 Server in the Central site and 1 per region; 4 storage groups per server; 1 Database per group and 20 Data Bases 1 per office in each region storage office

Storage group configuration

An Exchange 2003 server supports up to four storage groups. Each one has its own set of transaction log files and supports up to five databases. How you configure your storage groups affects Exchange performance, including how long it takes to back up and restore Exchange databases. To achieve better performance, you should consider minimizing the total number of databases on each server. You should also maximize the total number of databases (five) per storage group, before creating any additional storage groups. To increase the time it takes to back up and restore Exchange, consider limiting the size of each of your Exchange databases so that you can recover each database in a reasonable amount of time.

Storage Group Configuration

The Exchange store uses two types of databases: mailbox stores and public folder stores. These stores are organized into storage groups. All of the databases in a storage group share a single set of transaction log files, a single backup schedule and a single set of logging and backup-related settings.

Reference :

MS white paper Exchange Server 2003 High Availability Guide MS white paper Exchange Server Using Exchange Server 2003 Recovery Storage Groups.doc
<http://go.microsoft.com/fwlink/?LinkId=23233>

Questions: 2

You need to design an administrative model that meets all business and technical requirements. What should you do?

- A. Place the mailboxes for each region on a separate server. Create an administrative group for each region. Assign each regional technician Exchange Full Administrator permission over that region's administrative groups. Assign the main office IT staff Exchange Full Administrator permission over each administrative group.
- B. Place the mailboxes for each region on a separate server. Create an administrative group for each region. Assign each regional technician Exchange Full Administrator permission over all administrative groups. Assign the main office IT staff Exchange Full Administrator permission over each administrative group.
- C. Place the mailboxes from multiple regions on each server. Create an administrative group for each server. Assign each regional technician Exchange Full Administrator permission over the administrator groups that contain servers that hold mailboxes for that region. Assign the main office IT staff Exchange Full Administrator permission over each administrative group.
- D. Place the mailboxes from multiple regions on each server. Create a single administrative group for all servers. Assign each regional technician and the main office IT staff Exchange Full Administrator permission over the administrative group.

Answer: A

Explanation:

They tell you that the IT staff at the main office will control all new Exchange servers. However, each region also has a server technician who must be able to modify the Exchange configuration on server that contains mailboxes for that region although they tool us that must be able to modify the configuration they do not tell us if they need to be able to modify the permissions When you assign a user or a group Exchange Full Administrator permissions, the user or the group can fully administer Exchange Server computer information and modify permissions. Administrators, who have Exchange Full Administrator permission can install, upgrade, remove, and perform disaster recovery on servers in that Administrative Group.

Incorrect Answers

- B.** Too much permission for Regional Technician over other Admin Groups is not a required question
- C, D.** These places multiple regions on each server, this cannot achieve the requirements and require more administrative effort

Reference :

Overview of Exchange Administrative Role Permissions in Exchange 2003 KB article 823018

Questions: 3

- A. Create a separate storage group and database to contain the customer service mailboxes. Enable circular logging for this storage group.
- B. Create a separate storage group and database to contain the customer service mailboxes. You need to design a strategy for managing the messages that are sent to the customer service mailboxes. Set the deleted item retention period for this database to zero.
- C. Place the customer service mailboxes on a new mailbox store in the storage group that contains the main office user mailboxes. Enable circular logging for this storage group.
- D. Place the customer service mailboxes on a new mailbox store in the storage group that contains the branch office user mailboxes. Set the deleted item retention period for this database to zero.

Answer: A

Explanation:

Since the requirement is: messages sent to the database of "Customer Service", which does not need to be backed up and recovered, letter A is the best choice. When circular logging is on, Exchange writes transaction logs as usual; however, after the checkpoint (Edb.chk) file has been advanced, the inactive portion of the transaction log is discarded and overwritten.

Reference :

XADM: How Circular Logging Affects the Use of Transaction Logs KB article 147524

Question: 4

You need to design the Exchange 2003 server configuration for remote e-mail access. What should you do?

- A. Configure the front-end servers in each branch office to be members of a new Active Directory site.
- B. Configure the back-end servers to have server encryption certificates issued by a commercial certification authority (CA).
- C. Configure two back-end servers to be members of a Network Load Balancing cluster. Configure Network Load Balancing for inbound RPC connections.
- D. Configure multiple front-end servers in each branch office to be members of a Network Load Balancing cluster. Configure Network Load Balancing for inbound HTTPS connections.

Answer: D

Explanation:

Based on information gathered from the CEO, we need to ensure failure tolerance, which is provided by configuring multiple front-end servers. CIO is concerned about spending too much in antivirus licenses but CIO requests an OWA system with fault tolerance in the whole organization. The only way to achieve this with the given answers; is with answer D.

Question: 5

do?

- A. Install the antivirus software on each mailbox storage server.
- B. Install the antivirus software on each Outlook Web Access server.

- C. Install the antivirus software on one Outlook Web Access server at each office.
- D. Install the antivirus software on a back-end server that contains no mailboxes.

Answer: A

Explanation:

They do not offer an infrastructure using SMTP in and out connector to access Exchange server. If the requirement of the CIO is to reduce the numbers of servers that will have AV installed and also to protect the external and internal system, the AV should be installed in the Mailbox server. Front end servers do not have mail enabled recipients.

Reference :

MS white paper Slowing and Stopping E-Mail Transmitted Viruses in an Exchange 2003 Environment

Question: 6

You need to design access to e-mail by Internet users. What should you do?

- A. Configure front-end servers to use HTTP to communicate with back-end servers.
- B. Configure the internal firewall to allow IPSec traffic between front-end and back-end Exchange servers.
- C. Require all users to encrypt all outbound e-mail messages.
- D. Issue digital certificates to all remote users. Require the certificates to be used when authenticating to Outlook Web Access.

Answer: B

Overview

Fourth Coffee is an international company that operates 24 hours a day and supplies coffee to retailers around the world.

Case Study #2: Fourth Coffee

Physical Locations

The company has a main office and seven branch offices. The main office is located in Sydney. The branch offices are located in

- Auckland
- San Paulo
- Johannesburg
- London
- Helsinki
- Seattle
- New York

Planned Changes

The Company plans to upgrade from Exchange Server 5.5 to Exchange Server 2003.

Existing Messaging Environment:

Administrative Structure

- The current Exchange Server 5.5 environment contains eight sites. Each office is configured as a separate site.
- A centralized administrative model is used in the organization. All the Exchange administration and configuration take place at the main office.
- Exchange administrators are responsible for the creation of mailboxes and configuration of the Exchange servers. The Exchange administrators do not have Domain Admin rights.
- Domain administrators are responsible for daily administration and networking tasks.

Messaging Infrastructure

- The name of the existing Exchange Server 5.5 organization is Fourth Coffee. The organization contains an SMTP address of @fourthcoffee.com.
- The Exchange Server 5.5 routing topology was created by using X.400 connectors.
- The main office has two dedicated Internet Mail Connectors that are responsible for sending and receiving e-mail messages from the Internet.

E-mail Clients

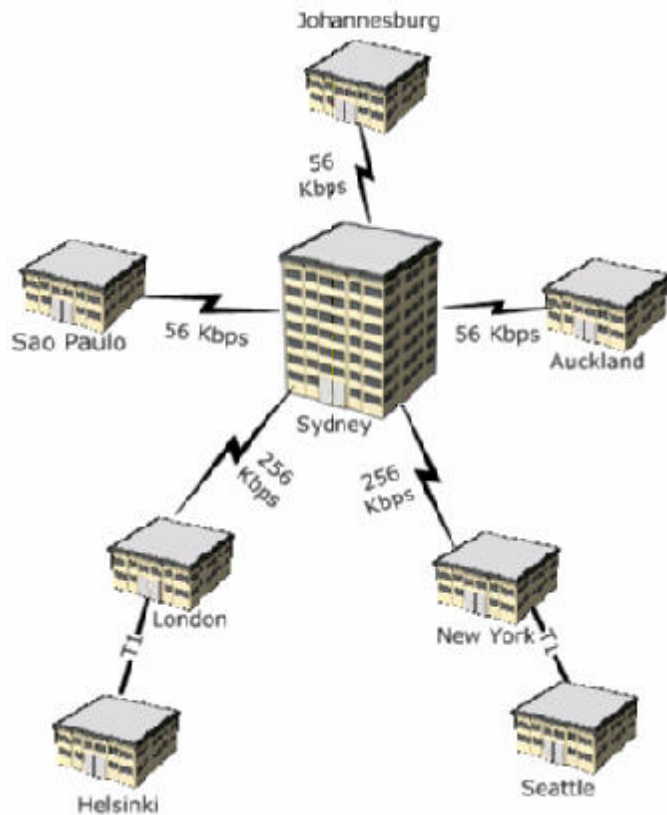
- Fourth Coffee uses Microsoft Outlook 2002 as its e-mail client.
- The network currently supports MAPI, HTTP, HTTPS, and SMTP.

Directory Services

- Fourth Coffee is in the process of migrating to a single-domain forest named fourthcoffee.com
- The functional level of the domain and the forest is Windows Server 2003.
- On the network, domain controllers are named DC1, DC2, etc., and global catalog servers are named GC1, GC2, etc.

Network Infrastructure

- The existing network infrastructure is shown in the following diagram. (The diagram also can be viewed by clicking the Case Study Exhibit button.)



Security

- The company requires that all users use Outlook Web Access or Microsoft Outlook 2003. The company requires remote users to use encryption for remote connections.

Interviews

Chief Executive Officer:

- Sales personnel need to be able to read and send email messages and schedule meetings while they are offline.
- E-mail messages and meeting requests should be sent automatically when the sales personnel connect to the Exchange servers from remote locations.

Chief Information Officer:

- Due to competitive pressures, we want to change the name of our Exchange organization but still keep our SMTP namespace.
- There is no budget for additional migration tools or external consultants.
- During the migration process, managers must still be able to schedule meetings and view the calendars of other managers.

Exchange Administrator:

- As part of the design and migration strategy, we want to consolidate the Exchange Server 5.5 servers.
- We want to be able to migrate mailbox directory information and populate Active Directory with account information.

End User:

- The public folder server is constantly unavailable.

- We need to be able to access public folders on a regular basis.

Messaging Infrastructure

- Two connectors will be used to send and receive e-mail messages from the Internet.
- The company wants all inbound Internet e-mail messages to flow through EX1. If EX1 is not available, the company wants the e-mail messages to flow through EX3. EX1 and EX3 are located at the main office.
- The new environment must coexist with the existing Exchange Server 5.5 environment, including the public folders.
- The company plans to install and configure Exchange Server 2003 on new computers.
- All SMTP mail from the Internet for the fourthcoffee.com namespace must be delivered to the Exchange Server 2003 computers.
- The company plans to use Microsoft Internet Security and Acceleration (ISA) Server, Enterprise Edition, to create a perimeter network. The server will be named ISA1.

Supporting Infrastructure

- Users need to be able to access the online global address list in the case of a failure of a WAN connection or single server.
- You must use the minimum number of global catalogs possible to ensure logon and global address list functionality without excessively burdening the network.
- You also need to minimize the number of DNS lookups for mail delivery and ensure that DNS lookups take place on only the servers in the main office.
- Shared resources in the existing Microsoft Windows NT domain must be accessible by users in both the new Active Directory domain and the Windows NT domain.

E-mail Client Infrastructure

- The e-mail clients on desktop computers will be upgraded to use Outlook 2003 exclusively.
- Client computers that connect to the Outlook Web Access servers use Internet Explorer 5.5 with SP2 or a more recent version.
- The company wants MAPI, HTTPS, and SMTP to be the only protocols that are supported.

Case Study #2, Fourth Coffee (6 Questions)

Question: 1

You need to design a migration path for migrating user accounts and mailboxes to the new environment. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Use the Migration Wizard to create and migrate mailboxes to Exchange Server 2003.
- B. Use Active Directory Users and Computers to move user accounts and mailboxes to the new environment.
- C. Use Microsoft Identity Integration Server (MIIS) to synchronize user accounts with the new environment.
- D. Use the Active Directory Migration Tool (ADMT) to clone user accounts in Active Directory.
- E. Use ClonePrincipal to migrate user accounts to the new environment.

Answer: A, D

Explanation:

They ask that the new environment must coexist with the existing Exchange Server 5.5 environment, including the public folders. They also tell to you that Fourth Coffee is in the process of migrating to a single-domain forest named fourthcoffee.com and that the functional level of the domain and the forest is Windows Server 2003. With Exchange 2003 SP1 you can use Exchange migration wizard to move mailbox in different sites to a new Exchange Organization.

You will need to use ADMT v 2.2 to perform the migration, because you are not just migrating a user, but a user mailbox enabled in an Exchange Organization from different sites, because ADMT supported the security translation of Exchange 5.5 mailboxes. Also with the new beta ADMT v.3, new functionality enables you to perform interforest migrations of user mailboxes from a source domain to a target domain - also you need shared resources in the existing Microsoft Windows NT domain to be accessible by users in both the new Active Directory domain and the Windows NT domain.

Reference 1

Exchange 2003 Deployment Guide - page 82

<http://www.microsoft.com/technet/prodtechnol/exchange/2003/library/depguide.msp>

How to Set Up ADMT for a Windows NT 4.0-to-Windows Server 2003 Migration

<http://support.microsoft.com/default.aspx?scid=kb;en-us;325851>

Migration Tool (ADMT) Version 3 release notes

Chapter 10 - Determining Domain Migration Strategies

<http://www.microsoft.com/technet/prodtechnol/windows2000serv/deploy/cookbook/cookchp4.msp>

X

Question: 2

You need to design a migration strategy to migrate public folders from the existing Exchange Server 5.5 environment to the Exchange Server 2003 environment. What should you do?

- A. Install and configure the Exchange utility. Use the utility to migrate and import all calendar information into each new mailbox.
- B. Install and configure the InterOrg Replication Utility. Use the utility to migrate public folder information from Exchange Server 5.5 to Exchange Server 2003.
- C. Install and configure a public folder connection agreement. Use this agreement to migrate the public folder information from Exchange Server 5.5 to Exchange Server 2003.
- D. Run the pfmigrate command to migrate the public folder information from Exchange Server 5.5 to Exchange Server 2003.

Answer: B

Question: 3

You need to ensure that SMTP e-mail messages can be delivered when the messages are sent to addresses that end with @fourthcoffee.com and are intended for the Exchange Server 5.5 environment. Which three courses of action should you perform? (Each correct answer presents part of the solution. Choose three.)

- A. Create mail-enabled contacts in the fourthcoffee.com domain for each Exchange Server 5.5 recipient. Establish the e-mail address to have an address that ends with @oldmail.fourthcoffee.com.
- B. Create mail-enabled contacts in the fourthcoffee.com domain for each Exchange Server 5.5 recipient. Establish the e-mail address to have an address that ends with @fourthcoffee.com.
- C. Configure each Exchange Server 5.5 recipient to have an additional e-mail address that ends with @oldmail.fourthcoffee.com. Set the @oldmail.fourthcoffee.com address to be the default reply address.
- D. Configure each Exchange Server 5.5 recipient to have an additional e-mail address that ends with @oldmail.fourthcoffee.com. Set the @fourthcoffee.com address to be the default reply address.
- E. Configure each Exchange Server 5.5 recipient to use a single SMTP address that ends with @oldmail.fourthcoffee.com.
- F. Configure an SMTP connector between the Exchange Server 2003 routing group at the Sydney office and the Exchange Server 5.5 site at the Sydney office. Configure the connector namespace to be oldmail.fourthcoffee.com.

Answer: A, D, F

Reference: Configure an SMTP connector between the Exchange Server 2003 routing group at the Sydney office and the Exchange Server 5.5 site at the Sydney office. Configure the connector HOW TO: Use Recipient Policies to Control E-mail Addresses in Exchange 2000 namespace to be fourthcoffee.com.
How to Share Simple Mail Transfer Protocol Address Spaces in Exchange 2003
<http://support.microsoft.com/default.aspx?kbid=822943&product=exch2003>

Question: 4

You need to configure the DNS server to allow delivery of e-mail messages. Which four actions should you perform? (Each correct answer presents part of the solution. Choose four.)

- A. Create a host (A) resource record for EX1.fourthcoffee.com on the internal DNS Server.
- B. Create a host (A) resource record for EX1.fourthcoffee.com on the external DNS Server.
- C. Create a host (A) resource record for EX3.fourthcoffee.com on the internal DNS Server.
- D. Create a host (A) resource record for EX3.fourthcoffee.com on the external DNS Server.
- E. Create a mail exchanger (MX) resource record for EX1.fourthcoffee.com on the external DNS server. Set the preference to 10.
- F. Create a mail exchanger (MX) resource record for EX1.fourthcoffee.com on the internal DNS server. Set the preference to 10.
- G. Create a mail exchanger (MX) resource record for EX3.fourthcoffee.com on the external DNS server. Set the preference to 20.
- H. Create a mail exchanger (MX) resource record for EX3.fourthcoffee.com on the internal DNS server. Set the preference to 20.

Answer: B, D, E, G

Explanation:

You need two kinds of records in the DNS, MX and A.

The company wants all inbound Internet e-mail messages to flow through EX1. If EX1 is not available, the company wants the e-mail messages to flow through EX3. This means two MX records with different cost. Secondly, to be able to recognize what host matches with your MX record; you need two A records, one for each host

Question: 5

You need to design a migration strategy to migrate the Exchange Server 5.5 mailboxes. What should you do?

- A. Create and configure a one-way recipient connection agreement from Active Directory to Exchange Server 5.5.
- B. Create and configure a configuration connection agreement between Exchange Server 5.5 and Active Directory.
- C. Create and configure an inter-organizational recipient connection agreement from Exchange Server 5.5 to Active Directory.
- D. Create and configure a two-way recipient connection agreement between Exchange Server 5.5 to Active Directory.
- E. Use Microsoft Identity Integration Server (MIIS) to synchronize objects between Exchange Server 5.5 and Active Directory.

Answer: C

Explanation: :

As we are creating a new Organization, we need to use the Active Directory Connector and create an "Inter-Organizational CA".

Reference :s:

Exchange 2003 Deployment Guide – page 89.

<http://www.microsoft.com/technet/prodtechnol/exchange/2003/library/depguide.mspx>

Chapter 3 - Deploying the Active Directory Connector

http://www.microsoft.com/technet/prodtechnol/exchange/2000/deploy/upgrademigrate/series/deploymentguide/d_03_tt1.mspx

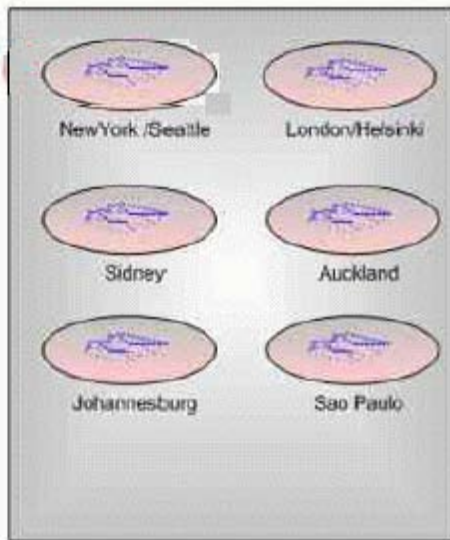
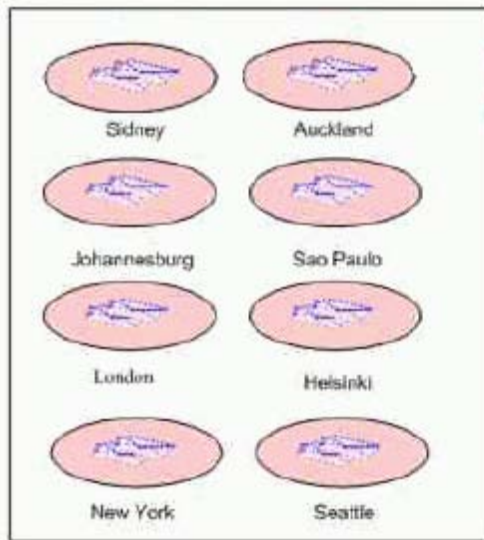
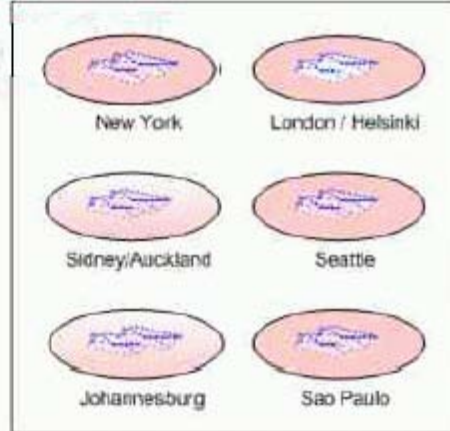
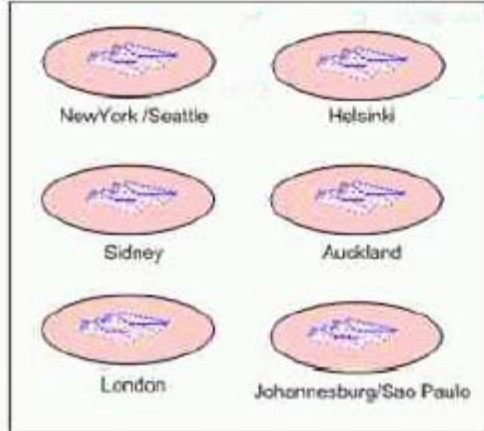
Understanding Connection Agreements in Exchange

Question: 6

You need to minimize the amount of bandwidth that users use to access public folders. Which routing groups should you create? To answer, select the appropriate set of routing groups in the answer area.



Answer:



Physical Locations

The company has a main office and seven branch offices. The main office is located in Sydney. The branch offices are located in Auckland, San Paulo, Johannesburg, London, Helsinki, Seattle, and New York.

- The WAN connection between the Seattle and New York offices is 10 percent utilized.
- The WAN connection between the **Helsinki and London** offices is also 10 percent utilized.
- All the other WAN connections are approximately 65 percent utilized.
- The company wants all inbound Internet e-mail messages to flow through EX1. If EX1 is not available, the company wants the e-mail messages to flow through EX3.
- EX1 and EX3 are located at the main office. In order to keep network traffic at a minimum, you need to configure the replication times based on your available bandwidth

Overview

Lucerne Publishing employs staff writers, editors, and production specialists, as well as contract writers. The company provides messaging services to employees 24 hours a day, seven days a week.

Case Study #3: Lucerne Publishing

Physical Locations

The main office includes 2,500 users. A total of 50 users work from remote locations and connect to company resources by using various ISP5.

Planned Changes

The company currently uses an outsourced e-mail service and is implementing Exchange Server 2003 to replace that service. E-mail messages from the service will not be migrated to Exchange.

The existing messaging infrastructure is outsourced.

Directory Services

- The company network consists of a single Active Directory domain.
- All users have accounts in the Active Directory domain.

Administrative Structure

- The company has a central Information Technology (IT) staff at the main office.
- One group of administrators is in the default Domain Admins group and is responsible for all Active Directory administration.
- Another group of administrators is in a domain user group named Server Admins and is responsible for managing server and client hardware, operating systems, and applications.

Network Infrastructure

- The main office has a high-speed connection to the Internet.
- The main office network includes a perimeter network that connects the internal network to the Internet.
- The network configuration of the main office is shown in the following diagram.



Security

- All users must be able to send digitally signed messages no matter how they are accessing their e-mail.
- E-mail servers must be protected from external threats; however, requirements for configuring the firewalls must be minimized.
- Members of the Server Admins group must not be required to have administrative permissions in Active Directory. However, they must be able to back up operating system files and shut down the operating system on Exchange Server 2003 computers.

Interviews

Chief Executive Officer:

- We must have the most up-to-date and accurate backups of our e-mail.
- We want to minimize the impact of this requirement on Exchange performance.
- We want to use Windows-compatible backup software.

- This limit must be the default for new mailboxes so that configuration management is minimized.
- However, executive mailboxes must have a size limit of 500 MB.
- This limit can be applied after the mailbox is created.
- We also need to create the simplest possible storage configuration on the Exchange servers.
~~All non-executive mailboxes must have a size limit of 250 MB.~~

Chief Information Officer:

- We plan to have one or more Exchange servers running Microsoft Outlook Web Access.
- For both internal and remote users, we must minimize the impact of a single hardware failure in the messaging system.
- However, we want to minimize the number of total servers used to run Exchange.
- We want no more than 1,500 mailboxes on a single Exchange mailbox server.

Messaging Infrastructure

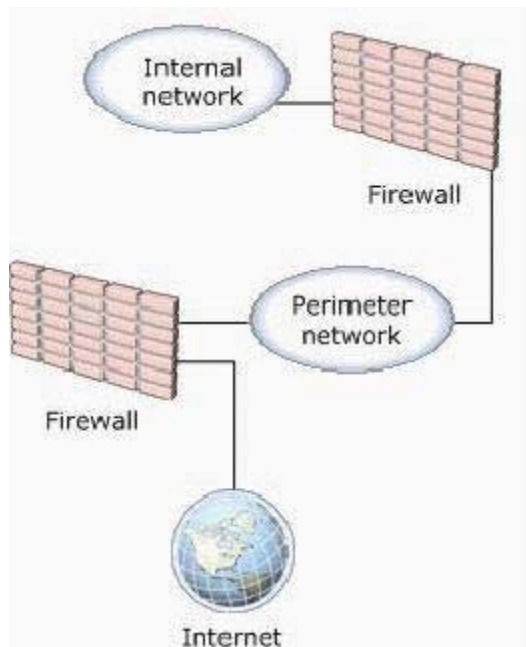
- The company will deploy Exchange Server 2003 as the new messaging platform.

Supporting Infrastructure

- Network traffic between the Exchange servers must be minimized.

E-mail Client Infrastructure

- All client computers at the main office run Microsoft Outlook 2003.
- The company will run Outlook Web Access to give remote users access to email.
- Remote users will use Internet Explorer 6.0 or later to access e-mail.

Network Infrastructure**Case Study #3, Lucerne Publishing (7 Questions)****Question: 1**

You need to design a configuration for the mailbox servers. What should you do?

- A. Create two Exchange Server 2003 computers. Place the mailboxes for main office users on one server, and place the mailboxes for remote users on the other server.
- B. Create a Network Load Balancing cluster that contains two Exchange Server 2003 computers. Place half of the user mailboxes on one server, and place half of the user mailboxes on the other server.
- C. Create a Microsoft Cluster Server cluster that contains two Exchange Server 2003 computers. Place all of the user mailboxes on one server, and configure the other server as a failover node.
- D. Create a Microsoft Cluster Server cluster that contains two Exchange Server 2003 computers. Place half of the user mailboxes on one server, and place half of the user mailboxes on the other server.

Answer: D

Explanation:

They tell you that they do not want more than 1,500 mailboxes on a single Exchange mailbox server. The best failover configuration with 2500 users is an active/passive configuration. Active/active configurations may suffer from Virtual Memory Fragmentation. MS advises you to avoid active /active configurations in Exchange as much as possible due to Virtual memory (VM) fragmentation.

Incorrect Answers: A For both internal and remote users, we must minimize the impact of a single hardware failure in the messaging system **B** Front end servers do not must run mailbox store **C** Passive/active configuration needs to run more users in a single node than they want.

Exchange 2003 Server Cluster design specifications per deployment

	Regional	Headquarters	Level B Test
Number of four-processor Active Nodes	3	4	1
Number of four-processor Primary Passive Nodes	1	1	1
Number of two-processor Alternate Passive Nodes	1	2	0
Number of SGs per Active Node	4	4	4
Number of	2,7	4,00	5,00

• **Regional Design.** The server specification for the regional cluster implementation consists of one SAN enclosure per cluster, with three active nodes, one primary passive node, and one alternate passive node (designated as AAPp).

• **Headquarters Design.** The headquarters clustered implementation is similar in design. It consists of two SAN enclosures, four active nodes, one primary passive node, and two alternate passive nodes (designated as AAAApp).

- **Level B Test Forest Design.** The Level B Test server specification is similar to the regional cluster in design but with greater mailbox capacity. It consists of one SAN enclosure, one active node, and one primary passive node (designated as AP).

Reference :

MS white paper Exchange Server 2003 High Availability Guide Clustering Microsoft Exchange Server 2003 <http://support.microsoft.com/default.aspx?scid=kb;EN-US;816893>

IT Solutions

Exchange 2003 Design and Architecture

Exchange Server

Chapter 2 - Scaling Exchange Server 2003

Question: 2

You need to design a configuration for Exchange Server storage that meets the business and technical requirements. What should you do?

- A. Create a single storage group. Create one database for all users.
- B. Create two storage groups. In each storage group, create one database. Place mailboxes for remote users in one storage group database, and place all other mailboxes in the other storage group database.
- C. Create two storage groups. In each storage group, create one database. Place executive mailboxes in one storage group database, and place all other mailboxes in the other storage group database.
- D. Create two storage groups. In one storage group, create a database, and place all mailboxes for remote users and executives in the database. In the other storage group, create a database for all other mailboxes.

Answer: C

Explanation:

The only possible solution is C. Executive and all other Non-Executive users have different storage limits and backup requirements.

Incorrect Answers A, B and D do not take care about executive backup requirements

Reference :

MS white paper Exchange Server 2003 High Availability Guide MS white paper Exchange Server Using Exchange Server 2003 Recovery Storage Groups.doc
<http://go.microsoft.com/fwlink/?LinkId=23233>

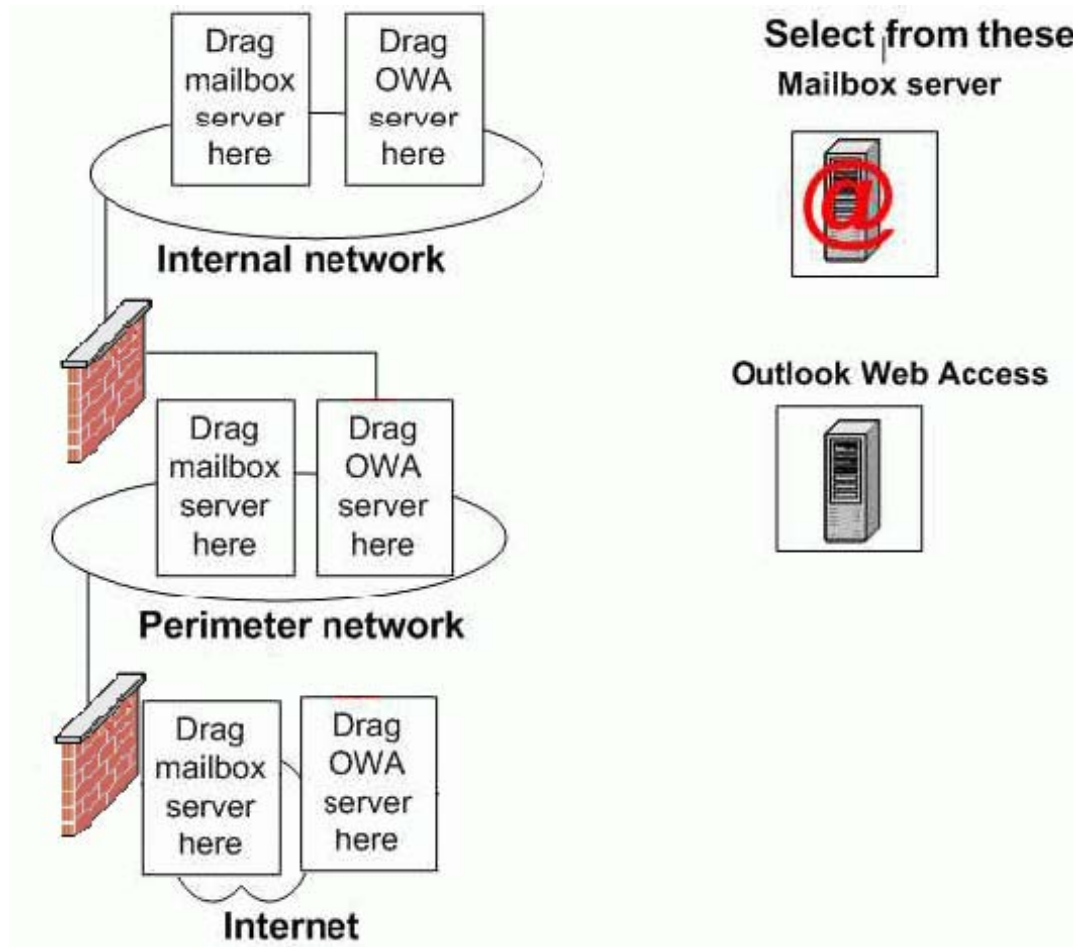
Question: 3

You need to design a configuration for the Microsoft Outlook Web Access servers. What should you do?

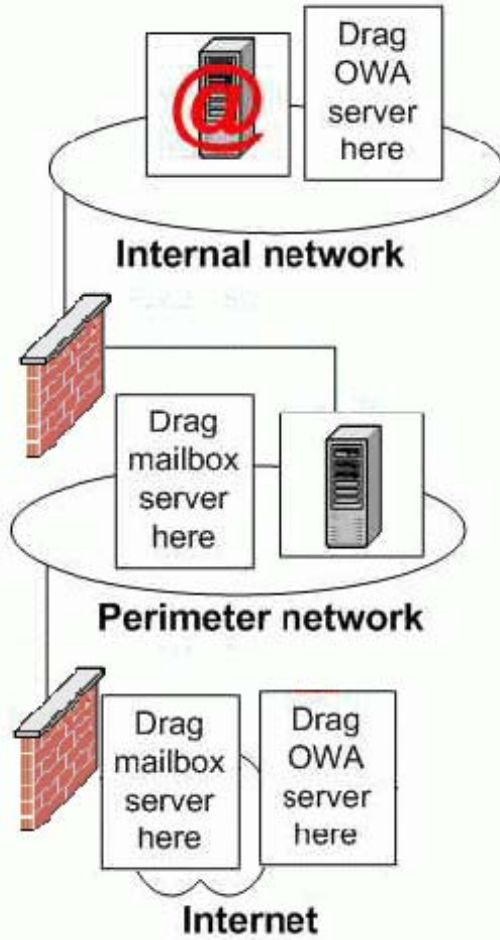
- A. Create a Network Load Balancing cluster that contains the Outlook Web Access servers.
- B. Create a Microsoft Cluster Server cluster that contains the Outlook Web Access servers.
- C. Create public DNS host (A) resource records for each Outlook Web Access server. Instruct each user to connect to the server that contains his or her mailbox.
- D. Install Microsoft Application Center 2000 on the Outlook Web Access servers. Create a Web cluster that contains all of the Outlook Web Access servers.

Answer: A

You need to design the network locations for the mailbox servers and Outlook Web Access servers. What should you do? To answer, drag a mailbox server to the correct location or locations in the answer area.



Answer
:



Select from these
Mailbox server



Outlook Web Access



Question:
5

You need to design access to Microsoft Outlook Web Access for remote users. What should you do?

- A. Place all user mailboxes on back-end servers. Deploy Outlook Web Access on three front-end servers that are members of the Network Load Balancing cluster.
- B. Place all user mailboxes on back-end servers that are members of a Network Load Balancing cluster. Deploy Outlook Web Access on the back-end servers.
- C. Place mailboxes for remote users on one back-end server and place all mailboxes for main office users on another back-end server. Deploy Outlook Web Access on the backend server that contains the mailboxes for remote users.
- D. Place all user mailboxes on two back-end servers that are members of a Network Load Balancing cluster. Place mailboxes for remote users and mailboxes for main office users into separate storage groups. Deploy Outlook Web Access on three front-end servers. Configure the front-end servers to access only the back-end Network Load Balancing cluster.

Answer: A

Explanation: :

To deploy Microsoft Outlook Web Access, with single hardware failure in the messaging system, they need at least two front end servers running OWA, because the main office includes 2,500 users and a total of 50 users work from the remote locations and connect to the company

Incorrect Answers B, C These would put OWA on the BACK END, which does not meet the scenario requirements. **D** This has us putting the mailboxes on a backend NLB cluster, NOT resources by using various ISPs. Backend server will be part of a Microsoft Cluster, not part of a Microsoft Cluster Service Network Load Balancing cluster. The only valid answer is A they need to separate the executives not the remote users

Question: 6

You need to design a security strategy for a remote e-mail access. What should you do?

- A. Require remote users to access e-mails by using Outlook Mobile Access.
- B. Require Outlook Web Access users to install the secure MIME ActiveX-Control and to encrypt all messages.
- C. On Outlook Web Access servers that accept connections from the Internet configure IIS to require SSL for all connections.
- D. On Outlook Web Access servers that accept connections from the Internet configure IIS to require Integrated Windows Authentication.

Answer: C

Explanation:

It would require less administrative effort to provide access over https for OWA access. They also require being able to send digitally signed messages and encrypted messages so that they can use a PKI infrastructure by using public certificates or to use an S/MIME. And this needs to be secure in this case over SSL To enable S/MIME connectivity for Outlook Web Access by downloading and installing the S/MIME ActiveX control. S/MIME provides two security services: Digital signatures and Message encryption Message encryption makes the text of a message unreadable by performing an encryption operation on it when it is sent. When the message is received, the text is made readable again by performing a decryption operation when the message is read. The encryption operation that is performed when the message is sent captures the e-mail message and encrypts it using information that is specific to the intended recipient. The encrypted message replaces the original message, and then the message is sent to the recipient.

Reference :

Quick Start for SMIME in Exchange Server 2003

<http://www.microsoft.com/technet/prodtechnol/exchange/2003/library/qssmimes.mspx>

Exchange Server 2003 Message Security Guide.

<http://www.microsoft.com/technet/prodtechnol/exchange/2003/library/exmessec.mspx>

Question: 7

You need to design an administrative model that meets the business and technical requirements. What should you do?

- A. Assign permissions to manage Mailbox and Exchange Server configuration to the Serveradmins group.
- B. Assign permissions to manage Mailbox and Exchange Server configuration to the domain-admins group.
- C. Assign permissions to manage Mailboxes to the server-admins group. Assign permissions to manage Exchange Servers configuration to the domain-admins group.
- D. Assign permissions to manage Mailboxes to the domain-admins group. Assign permissions to manage Exchange Servers configuration to the server-admins group.

Answer: D

Explanation:

The only answer that matches security and business requirements is D. Members of the server-admin group must be able to manage and shutdown Exchange servers or backup without permissions to Active Directory. The Exchange Administration Delegation Wizard applies the standardized security roles at either the organization level or the administrative group level in Exchange System Manager . By using the wizard, you can set all the permissions on the Exchange objects in both Active Directory and the IIS metabase with several clicks. You can set permissions using the Exchange Delegation Wizard and apply these settings to a whole Exchange organization or to a specific administrative group. Because permissions are inherited, these permissions control who can view or modify settings at the server level. By default, these permissions are configured to support the standard Exchange administrator types (Exchange View Only Administrator, Exchange Administrator, and Exchange Full Administrator)

Reference :

Exchange Server 2003 Administration Guide

<http://www.microsoft.com/technet/prodtechnol/exchange/2003/library/admingde.mspx>

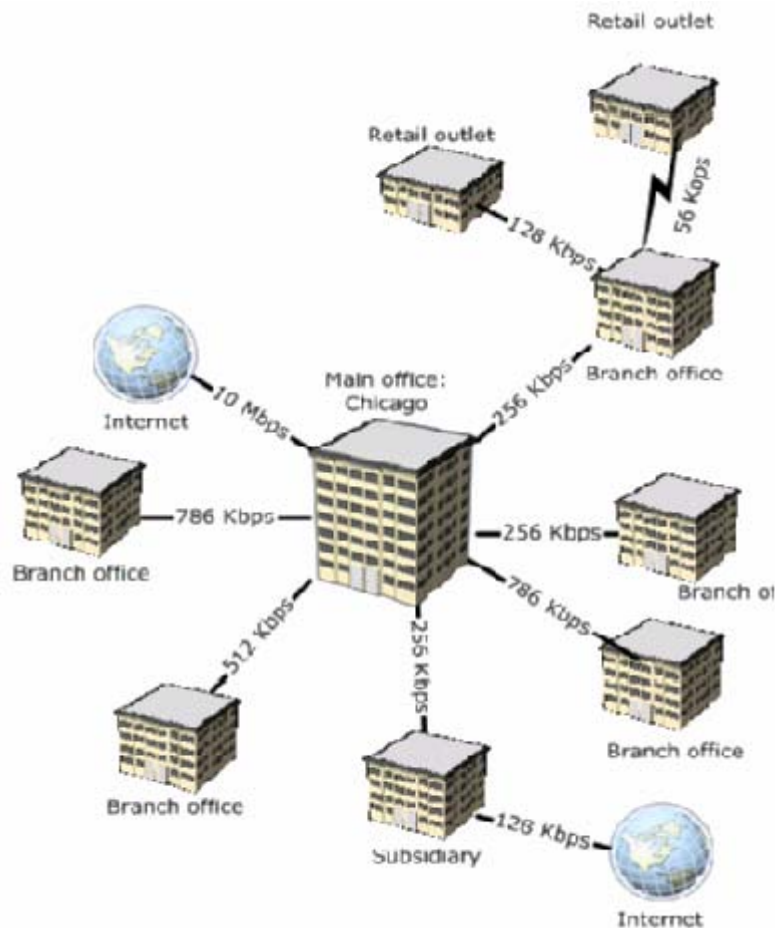
Overview

City Power & Light is a utilities company that operates throughout the United States.

Physical Locations

Case Study # 4: City Power and Light

The main office for City Power & Light is located in Chicago. In addition, the company has five branch offices, 200 retail outlets, and one subsidiary location. The company locations and WAN connections are shown in the following diagram.



The number of users in each location is shown in the following table.

Office Location	Number of Users
Main office	1,400
Branch offices	25 in each office
Retail outlets	3 to 7 per retail outlet
Subsidiary	50

Planned Changes

- City Power & Light uses Exchange Server 5.5 computers for all of its messaging services.
- The company plans to upgrade to Exchange Server 2003.

- The subsidiary will be closed over the next year, and all users will be moved to one of the existing company locations.
- The subsidiary also uses Exchange 5.5 servers in a separate organization.

Problem Statements

Information Technology (IT)

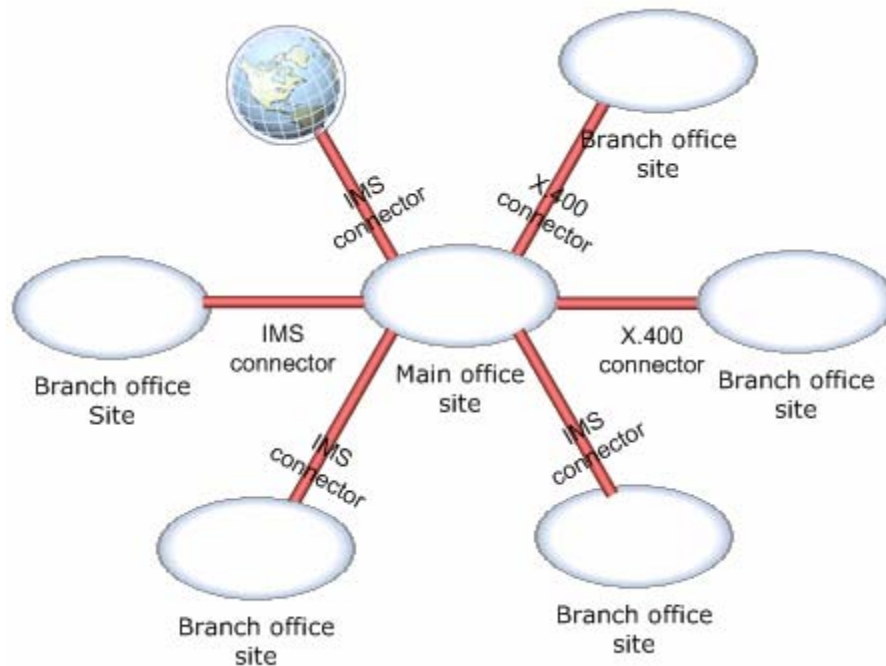
- Administration at City Power & Light is decentralized.
- A primary goal is to centralize IT administration.

Administrative Structure

- Each branch office has at least one user who is a member of the Domain Admins group.
- In total, there are about 75 users in the Domain Admins group, which has full control of the Exchange organization.

Messaging Infrastructure

The existing Exchange 5.5 site configuration is shown in the following diagram.



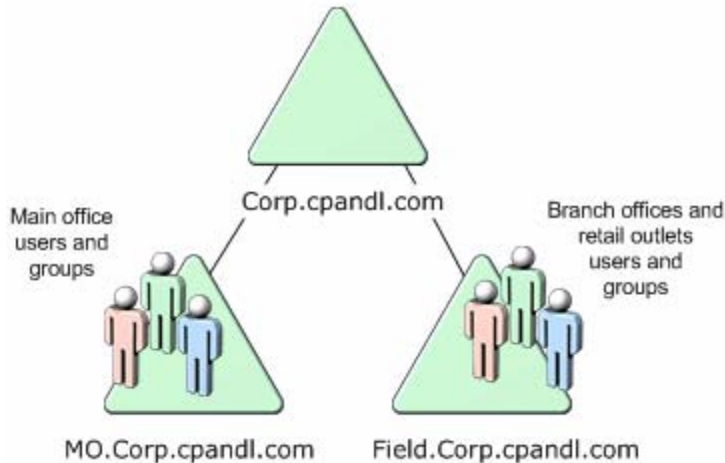
- The main office contains three Exchange 5.5 servers.
- One of the main office servers is a bridgehead server that is dedicated for connections to the Internet and the other sites.
- The other two servers at the main office are mailbox servers.
- Each branch office contains one Exchange 5.5 server.
- City Power & Lights uses public folders extensively.
- The public folder hierarchy is complicated, and permissions are assigned by using individual mailboxes and distributed lists throughout the public folder tree.
- All public folders are replicated to each Exchange server in each office.
- The company is trying to eliminate the practice of using individual mailboxes for public folder permissions.
- At least 100 distribution lists have been created just to manage permissions on the public folders.
- The distribution lists include members from multiple domains.

E-mail Clients

- All users at the main office and branch offices use either Microsoft Outlook 2000 or Microsoft Outlook 2003.
- Users at the retail outlets use Microsoft Outlook Express configured with POP3 accounts.
- The users connect to the Exchange server located in the nearest branch office.

Directory Services

City Power & Light has completed the migration to Microsoft Windows Server 2003 Active Directory. The Active Directory domain configuration is shown in the following diagram.



- The Corp domain is running at Windows Server 2003 functional level.
- The MO and Field domains were created by upgrading Windows NT 4.0 domains to Windows Server 2003 Active Directory.
- Both domains still contain Windows NT 4.0 backup domain controllers.
- The subsidiary runs a single Windows NT 4.0 domain.

Network Infrastructure

- The company recently upgraded the WAN connections between company locations.
- No additional WAN upgrades are planned.

Administration

- Each time the domain controllers and Exchange servers are removed from the branch offices, the company needs to remove the branch office administrators from the domain-level administration groups.

Security

- The company is concerned about users at the retail outlets accessing their email messages across the Internet.
- The client connection to the mailbox servers must be encrypted from the client computers to the mailbox server that hosts each user's mailbox.
- The company has a perimeter network for all servers that are accessed from the Internet.

Interviews

Chief Information Officer:

- We need to reduce the number of Exchange servers as much as possible.
- By the end of the project, we must have only Exchange 2003 servers deployed.
- The exception is the subsidiary. We are phasing out the Exchange 5.5 server over the next year.
- We also have a long-term strategy to eliminate the Field.Corp.cpandl.com domain.
- Although we will not be able to do this for a while, your implementation efforts should support that long-term strategy

Network Administrator:

- We want to reduce the number of users in the Domain Admins group to fewer than five.
- We also need to restrict who can manage the Exchange 2003 servers.
- We want only the Domain Admins group and a Messaging Admins group to manage all the Exchange servers.
- The Messaging Admins group should be able to administer the Exchange organization, but it should not be able to assign anyone else permission to manage the servers.
- In addition, we want one administrator in each office that contains an Exchange server to be able to create mailboxes on the Exchange server in that office.
- The administrator should not be able to modify any Exchange settings and should not be able to create mailboxes on an Exchange server in any other office.
- We also want to configure some policies – such as an IPSec policies – on the Exchange servers without affecting other servers in the environment.
- The Windows NT backup domain controllers are running old applications.
- We cannot remove these servers as part of the project.

Messaging Administrator:

- We want to delegate the task of moving user mailboxes to the group that administers Active Directory user accounts.
- They are trained on how to use the Active Directory administration tools, but they should not use any Exchange administration tools.

Project Manager:

- We will be cleaning up the subsidiary location over the next year.
- We will be moving a few users each week to existing company locations.
- We want the subsidiary user accounts to be displayed in our global address list (GAL) before and after the users move.
- We also want the corporate user accounts to be displayed in the GAL at the subsidiary.
- We want to make sure that no changes are made either to GAL by synchronization process until after an administrator reviews the changes.

Messaging Infrastructure

- All e-mail messages that are sent between the main office and the subsidiary must cross the WAN connection between the company locations.
- All Internet e-mail messages sent to or from the subsidiary location need to use the existing Internet Mail Service connector at the subsidiary.

Supporting Infrastructure

- The network configuration for the retail outlets will change.
- The business application used by the retail outlets has been converged into a Web application.
- The retail outlets need only an Internet connection to access the application.
- As a result, all WAN connections to the retail outlets are being replaced with an Internet connection.

E-mail Client Infrastructure

- The users at the retail outlets need to be able to access their mailboxes, public folders and calendars when they are in the office.
- They do not need to be able to access their e-mail when the Internet connection is down.
- The retail offices do not have local network administrators, and therefore the client configuration for the retail offices needs to be as simple as possible.
- All mailboxes for users in the retail outlets will be centralized on one of the Exchange 2003 servers at the main office.
- The company is undecided on which Exchange servers will be replaced in the branch office.
- The company is prepared to accept a decrease in e-mail client performance for users in the branch offices, when the Exchange servers are removed.
- The company had decided that Exchange 5.5 server will be replaced with an Exchange 2003 server in offices where they are more than 30 mailboxes in the office or the WAN connection to the main office is 640 Kbps or less.

Case Study #4, City Power & Light (6 Questions)

Question: 1

You need to create an administrative design that will enable the organization to centralize the management of the Exchange Server 2003 computers. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Create a new domain named Exchange.Corp.cpandl.com and locate all the Exchange servers in the domain.
- B. Create a new organizational unit (OU) named Exchange OU and move all the Exchange servers into the OU.
- C. Create a new organizational unit (OU) for each office that contains an Exchange server. Locate the Exchange server in that office in this OU.
- D. Assign Full Exchange Administrator rights to the Domain Admins group and to the Exchange Admins group at the organization level. Assign View Only Exchange Administrator rights to the administrator in each office at the appropriate administrative group level.
- E. Assign Full Exchange Administrator rights to the Domain Admins group. Assign Exchange Administrator rights to the Exchange Admins group. Assign View Only Exchange Administrator rights to the administrator in each office at the appropriate administrative group level.
- F. Assign Full Exchange Administrator rights to the Domain Admins group. Add the Exchange Admins group to the Administrators group on each Exchange server. Assign the administrator in each office to the Administrators group on each Exchange server.

Answer: B, E

Explanation:

You need to manage business and administrator requests, by creating a new organizational unit (OU) for each office that contains an Exchange Server and placing each Exchange server for that office in their OU. This will enable you to apply central policies for each office. **Also**, they want a Domain Admins group and a Messaging Admins group to manage all the Exchange servers exclusively and they want only one administrator in each office that contains an Exchange server able to create mailboxes on the Exchange server in that office and that the administrator should not be able to modify any Exchange settings or create mailboxes on an Exchange server in any other office. By assigning Full Exchange Administrator rights to the Domain Admins group and to the Exchange Admins group at the organizational level, you take care of all requirements.

Exchange Full Administrator

When you assign a user or a group Exchange Full Administrator permissions, the user or the group can fully administer Exchange Server computer information and modify permissions.

Exchange Administrator

When you assign a user or a group Exchange Administrator permissions, the user or the group can fully administer Exchange Server computer information.

Exchange View Only Administrator

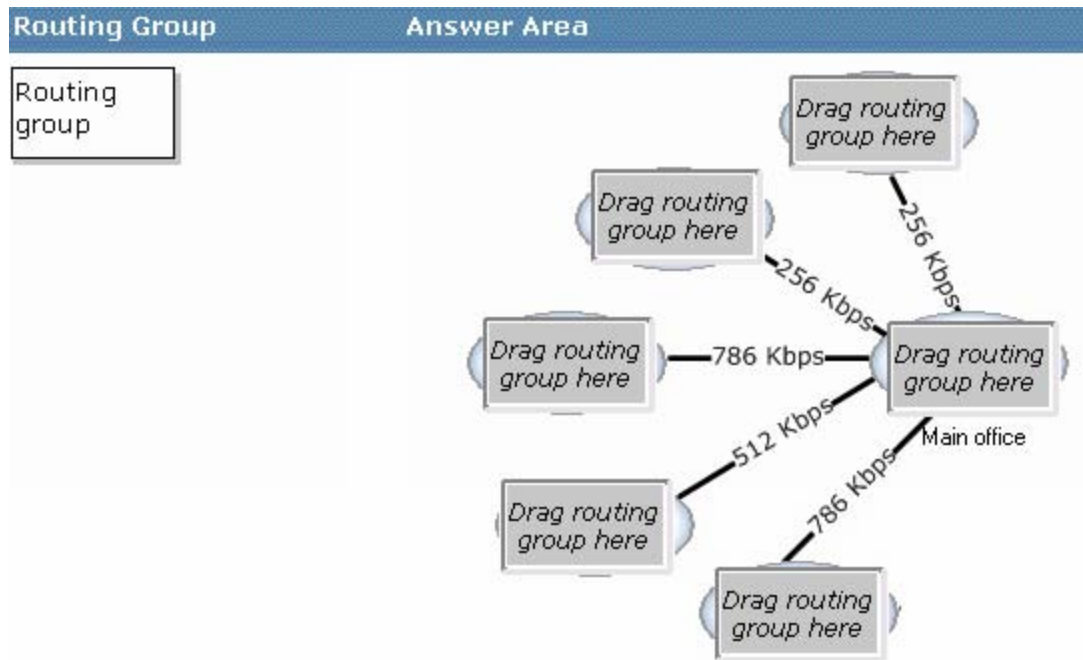
When you assign a user or a group Exchange View Only Administrator permissions, the user or the group can view Exchange Server configuration information.

Reference :

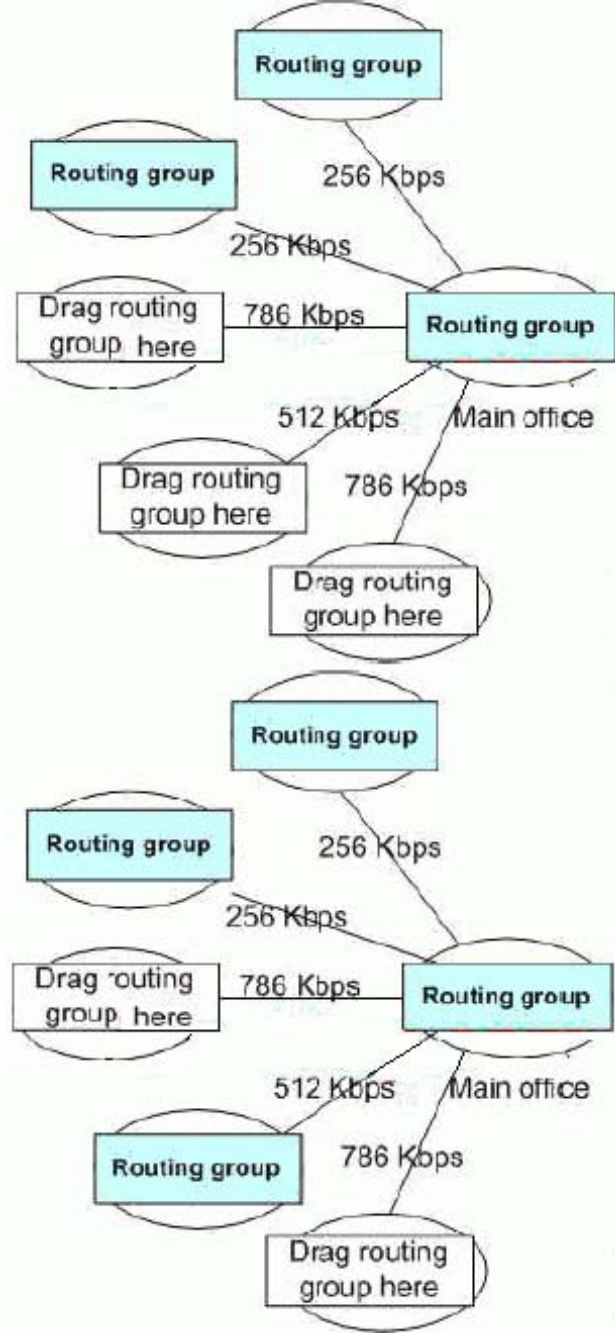
Overview of Exchange Administrative Role Permissions in Exchange 2003 KB article 823018

Question: 2

You need to design a routing group configuration for the Exchange organization. Which offices should you configure to have a routing group? To answer, drag a routing group to the correct location or locations in the answer area. Select three.



Answer:



Explanation:

The diagram in the question is a scaled down replica of the diagram on page 35, which shows the organization's WAN connections to its branch offices. It also states on page 35 that there are only 25 users in each branch office. On page 39, under "E-mail Client Infrastructure", it states that if an office has more than 30 users or less than a 640 Kbps connection, then the Exchange server will be replaced. On page 38, the CIO stated that we must reduce the number of exchange servers as much as possible. Using these two statements, we can assume that all offices with 30 users or less AND a 640Kbps or higher connection will have their Exchange 5.5 servers removed, and use the server(s) in the main office.

Since all branch offices have 25 users, less than the 30 user criteria, the only determination if a branch office is to have an exchange server locally will be the connection speed. Therefore, all branch offices with a connection speed of less than 640Kbps will need it's own local exchange server. In Microsoft's book titled "Implementing and Managing Microsoft Exchange Server 2003", on Page 3-15 it states, "Routing groups come into play when you have multiple physical locations connected by slower wide area network (WAN) bandwidth". This fits all branch offices with an exchange server. Therefore, the answer should have a routing group at the main office (It has Exchange servers because it has more than 30 users), at both branch offices that have 256Kbps connections (they have Exchange servers because of the bandwidth requirement) and at the branch office with the 512Kbps connection (it has an exchange server because of the bandwidth requirement). What should you do?

- Question: 3**
- A. Use the Exchange Task wizard to migrate all the mailboxes to the Exchange 2003 servers.
 - B. Use the Exchange Mailbox Merge wizard (Exmerge) to migrate all the mailboxes to the Exchange 2003 servers.
 - C. Use the Exchange Server Migration wizard to migrate all the mailboxes to the Exchange 2003 servers.
 - D. Export the contents of each mailbox to a .pst file. Create a new mailbox on the Exchange 2003 servers for each existing mailbox. Import the .pst file contents into each new mailbox.

Answer: C

Explanation:

They are moving mailboxes from the subsidiary that uses Exchange 5.5 servers in a separate organization to different Exchange 5.5 Org to Microsoft Windows Server 2003 Active Directory functional mode in corp domain and on interim mode in MO and Field domains that were created by upgrading Windows NT 4.0 domains to Windows Server 2003 Active Directory both domains still contain Windows NT 4.0 backup domain controllers. By the end of the project, they will run only Exchange 2003 servers deployed with the exception of the subsidiary that will still be running Exchange 5.5 server over the next year. We can use Exchange Server Migration Wizard to migrate all the mailboxes to the Exchange 2003 Servers

Incorrect Answers

- A. Exchange Migration Wizard was in Exchange 2000 and is now named Exchange Server Migration Wizard in Exchange 2003
- B. To be able to use Exchange Mailbox Merge Wizard you need to download this tool from Exchange Downloads website. <http://go.microsoft.com/fwlink/?LinkId=25097> After you restore the appropriate mailbox store a Recovery Storage Group, You can use Exmerge and follow the instructions in the wizard to move the mailbox data.
- D. Export the contents of each mailbox to a .pst file. Create a new mailbox on the Exchange 2003 servers for each existing mailbox. Import the .pst file contents into each new mailbox. this will work but require more administrative effort

Reference :

Appendix A - Tools Used with Exchange Exchange 2003 Deployment Guide
Chapter 5 - Inter-Organizational Migration

Question: 4

You need to design a solution so that users in the retail outlets can access their email on the Exchange 2003 servers. What should you do?

- A. Install an Exchange 2003 server infrastructure that will support POP3 connections from the Internet. Install a user certificate on each client computer at the retail outlets. Instruct the users to sign and encrypt all outbound e-mail messages.
- B. Install an Exchange 2003 server infrastructure that will support encrypted POP3 connections from the Internet. Configure the client computers in the retail outlets to use an encrypted connection to the POP3 server.
- C. Install an Exchange 2003 server infrastructure that will support encrypted Microsoft Outlook Web Access connections from the Internet. Instruct all users at the retail outlets to access their e-mail by using Microsoft Internet Explorer 5.5 or later to connect to the secure Microsoft Outlook Web Access server.
- D. Install an Exchange 2003 server infrastructure that will support encrypted IMAP4 connections from the Internet. Configure the client computers in the retail outlets to use an encrypted connection to the IMAP4 server.

Answer: C

Explanation:

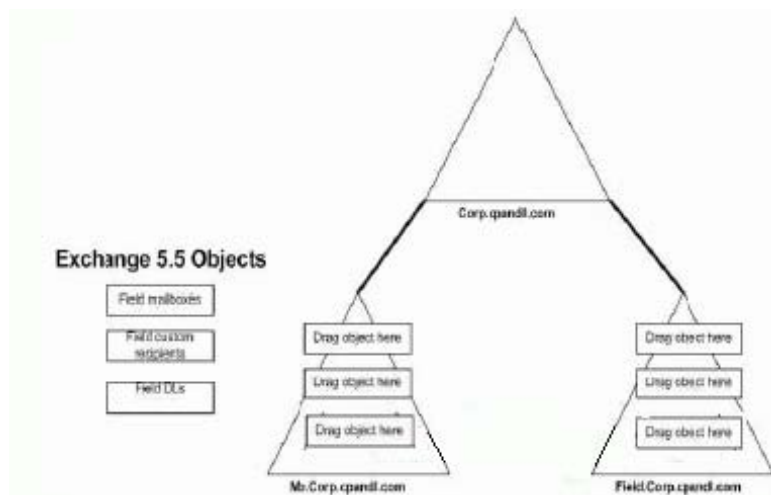
They tell you that the company is prepared to accept a decrease in e-mail client performance for users in the branch offices when the Exchange servers are removed. Also, all mailboxes for users in the retail outlets will be centralized on one of the Exchange 2003 servers at the main office and they do not need to be able to access their e-mail when the Internet connection is down, but they do need to access their mailboxes, public folders and calendars when they are online. For that reason the best answer is C with OWA you can access either your mailbox or public folders, some attributes are missing if they still using Internet Explorer 5,

Incorrect Answers A, B. You cannot access over POP protocol to the public folders.

D. You can do it if they are going to use a web application.

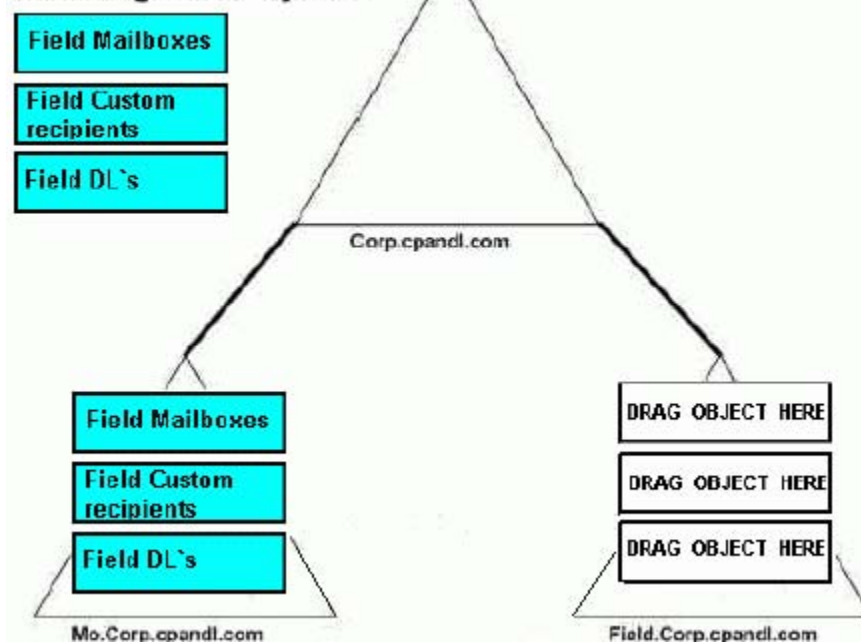
Question: 5

In preparation for migrating mailboxes and public folders to Exchange Server 2003, you need to create a design for replicating the mailboxes, custom recipients, and distribution lists (DLs) from the Exchange Server 5.5 Field sites to Active Directory. What should you do? To answer, drag the appropriate Exchange 5.5 object or objects to the correct location or locations in the answer area.



Answer:

Exchange 5.5 Objects



Explanation:

They want subsidiary user accounts to be displayed in our global address list (GAL) before and after the users move, also that corporate user accounts are displayed in the GAL at the subsidiary and to make sure that no changes are made either to GAL by synchronization process until after an administrator reviews the changes. They need to replicate all Exchange 5.5 objects to AD in MO.corpcpandl.com and your implementation efforts should support that long-term strategy to eliminate the Field.Corp.cpandl.com domain, because they have an exception in the subsidiary that will maintain an Exchange 5.5 server over the next year they need to replicate all between both domains until the last Exchange 5.5 is seized.

Question: 6

You need to design a connection agreement for Active Directory Connector to synchronize directory information with the subsidiary location. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Configure a one-way connection agreement that replicates from the subsidiary's Exchange 5.5 organization to Active Directory.
- B. Configure a one-way connection agreement that replicates from Active Directory to the subsidiary's Exchange 5.5 organization.
- C. Configure two one-way connection agreements that replicate between the subsidiary's Exchange 5.5 organization and Active Directory.
- D. Configure the connection agreement to replicate all objects.
- E. Configure the connection agreement to replicate only mailboxes.
- F. Configure the connection agreement to save deletions in an LDAP Data Interchange Format file.

Answer: A, E

Background

Overview

Northwind Traders imports various kinds of merchandise from around the world. The company requires its messaging system to be available Monday through Friday from 9:00 A.M. to 5:00 P.M. local time. E-mail is the primary means of communication between company employees and overseas vendors.

Physical Locations

The company has offices in New York and Los Angeles. The New York office has 400 users and the Los Angeles office has 150 users. A total of 50 New York users also work from home and access e-mail by using a Web interface.

Planned Changes

The company currently uses a POP3 messaging system. This system will be replaced with Exchange Server 2003. Messages will not be migrated from the old system to Exchange. The company will deploy Microsoft Outlook Web Access so that employees working from home can access e-mail. In 18 months, the company will purchase a subsidiary, which will add 50 users to the New York office. All of these users will access e-mail by using Outlook Web Access.

EXISTING MESSAGING ENVIRONMENT

Administrative Structure

- Server administrators at each office create and manage the mailboxes on the POP3 messaging system.

Messaging Infrastructure

- The company has a third-party certification authority (CA) deployed on the network.
- The CA is integrated with Active Directory.

E-mail Clients

- All office users run Microsoft Outlook 2003 and Internet Explorer 6.0 on their client computers.
- Home users run Microsoft Internet Explorer 6.0 or later.

Supporting Infrastructure

Directory Services

- The company has a single Active Directory domain with two sites.
- Each site contains two domain controllers.
- One domain controller at the New York office is configured to be a global catalog server.
- There are no other global catalog servers.

Network Infrastructure

- • Each office has a dedicated 1.544-Mbps connection to the Internet. • • The offices are connected to each other by a dedicated 3—Mbps connection.
- This connection is less than 20 percent utilized. • • Each office has a perimeter network that connects it to the Internet.

Administration

- A central IT administration group works at the New York office this group is responsible

- o Active Directory administration and has administrative permissions on all company servers

-

Hardware
maintenance
exchange
servers.

-

Each office
also has a
server
administration
group that has
administrative
permissions on
all servers
in that office.

Business Requirements

Security

- All connections to Outlook Web Access must be encrypted.
- Server administrators in each office must be able to manage the Exchange servers, including performing backup and recovery operations, without having permissions to create or modify user and group objects in Active Directory.
- Server administrators from each office must be able to manage all Exchange servers in the company.

Interviews

Chief Executive Officer:

- If a mailbox store fails, we must not lose more than one hour of data.
- If a single store fails because of file corruption or other database-related reasons, no more than 150 users must be affected.
- I am told that we have about 3 GB of nightly backup capacity, so our backup and recovery strategy must work within that limitation.
- Additionally, we must simplify our backup strategy as much as possible.
- In the past, our competition has sent forged e-mail messages to our vendors so that the messages appeared to be coming from us.
- The new messaging system must allow us to ensure that messages to our vendors are identifiable as coming from us.
- However, we cannot afford to spend additional money on these security measures.

Chief Information Officer:

- Corporate security policies prohibit domain communications, including logon and password change traffic, from passing through any firewall on our network.
- We also need to minimize the address book traffic that the Exchange system creates on our WAN connection.
- We need to minimize the number of new servers we purchase for Exchange, and we need to minimize the number of global catalog servers on the network.

Technical Requirements

E-mail Client Infrastructure

- All company vendors use Microsoft Outlook 2000 or later for e-mail.
- Company policies state that all e-mail users will be limited to 100 MB of mailbox storage space.
- The company wants to build the Exchange system so that future hardware purchases that are necessary to provide e-mail to the subsidiary users are minimized.
- The servers that the company is purchasing for Exchange have adequate disk space to accommodate the subsidiary users.

Case Study #5, Northwind Traders (4 Questions)

Question: 1

- A. Create a single organizational unit (OU). Place the user accounts for each office into the OU. Delegate control over the OU to the office's server administrators and the central IT staff.
- B. Create a single Exchange administrative group. Place all Exchange servers into that administrative group. Assign permissions for the administrative group to the office's server administrators and the central IT staff.
- C. Create an Exchange administrative group for each office. Place the Exchange servers for each office into that office's administrative group. Assign permissions for the administrative group to the office's server administrators. Allow the central IT staff to manage user mailboxes.
- D. Create an organizational unit (OU) for each office. Place the user accounts for each office into the appropriate OU. Delegate control over each OU to the office's server administrators. Allow the central IT staff to manage user mailboxes.

Answer: B

Explanation:

This question is little tricky between the meaning of Active Directory delegation and Exchange Server delegation, to be able to accomplish the required task also some of the required permissions can not be assigned just using AD users and computer GUI or Exchange System Administrator tool, to be able to resolve the dilemma you will need to use ADSIEDIT.MSC Tool from Windows 2003 Server tools, to assign required permissions because they do not use a custom Active Directory delegation that is required for this task.

Incorrect answers

- A.** Delegate control over the OU to the office's server administrators and the central IT staff of users does not give them any Exchange Organization admin permissions, this need to be delegated over specific objects and they do not give us such information they do not tell us create a custom task You assign Write permissions to the attributes associated with mailboxes by using the Active Directory Users and Computers utility or by using a third- party utility for account delegation management using adsiedit.msc tool and you will be able to manage users but not the servers because the OU just contain just users not computers
- C.** There is not any needs to create two Exchange administrative groups because Server administrators from each office must be able to manage all Exchange servers in the company and central IT administration group works at the New York office has administrative permissions on all company servers.
- D.** This give permissions to central IT staff to create mailbox but central IT administration group works at the New York office and must has administrative permissions on all company servers this include Exchange servers providing permissions to Server administrators from each office and mange mailbox do not take consideration the question.

Reference :

Minimum permissions necessary to perform Exchange-related tasks KB article 316792

Question: 2

You need to design a strategy for providing e-mail access to the subsidiary users. What should you do?

- A. Deploy POP3 and IMAP4 services on Exchange front-end servers. Make the front-end servers accessible from the Internet by means of POP3, IMAP4, and SMTP only.
- B. Deploy Microsoft Outlook Web Access on Exchange mailbox servers. Make the mailbox servers accessible from the Internet by means of HTTPS and SMTP only.

D. Deploy an additional Exchange mailbox server that contains all subsidiary mailboxes. Deploy Microsoft Outlook Web Access on the server. Make the server accessible from the Internet by means of HTTPS only.

Answer: C
C. Deploy Microsoft Outlook Web Access on Exchange front-end servers. Make the front-end servers accessible from the Internet by means of HTTPS only.

Explanation: :

OWA over Https is the only match.

Question: 3

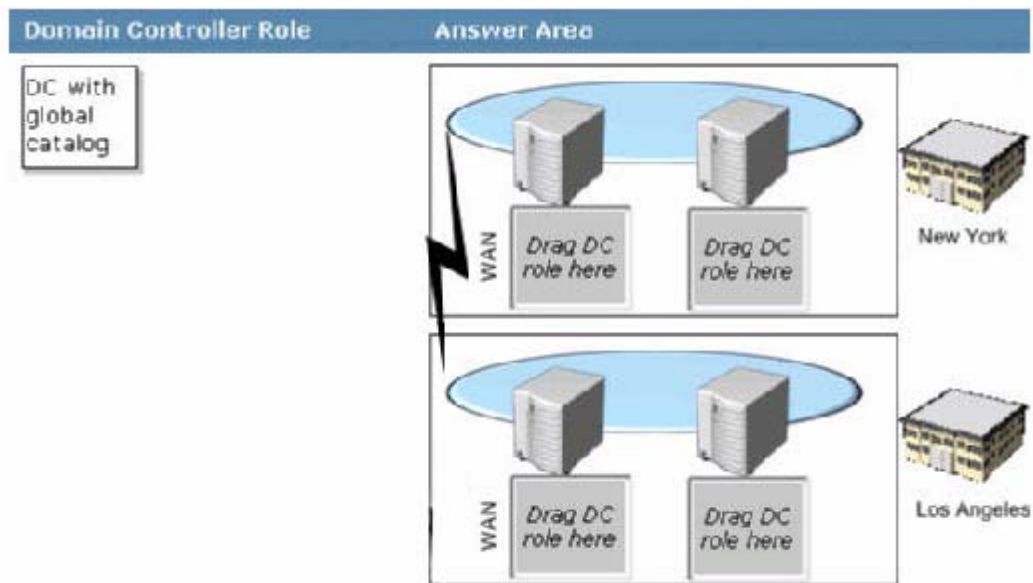
You need to design security for messages exchanged between Northwind Traders employees and its vendors. What should you do?

- A. Require employees to access e-mail only over connections that use SSL.
- B. Place Exchange mailbox stores on NTFS volumes. Use Encrypting File System (EFS) to encrypt the stores.
- C. Use the internal certification authority (CA) to issue certificates to all employees. Require employees to digitally sign outbound e-mail.
- D. Use the internal certification authority (CA) to issue certificates to all employees and vendors. Instruct employees and vendors to use secure MIME to encrypt all e-mail sent between them.

Answer: C

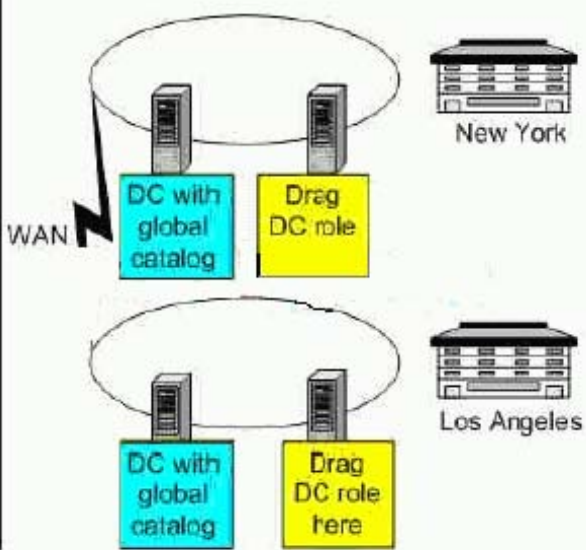
Question: 4

You need to designate which domain controllers will be global catalog servers in the new environment. What should you do? To answer, drag the domain controller role to the correct location or locations in the answer area.



Answer:

DC with
global
catalog

**Explanation:**

They already have a Domain controller running CG on New York Site, you will need to put another global catalog in Los Angeles site to minimize address book traffic that Exchange system creates on their WAN connection when make Address book queries and because they already have one and You need to designate which domain controllers will be global catalog servers in the new environment

Note:

One and only one Global Catalog server in each location.

Overview

Company.com is a large retail company that has 2,000 locations all across Europe and 10,000 employees.

Case Study #6: Company.com

Physical Locations

The main office is in Dublin. Branch offices are in London, Rome, and Paris. The main office and each branch office connect to satellite offices in the same country. The locations of offices and the number of users in each office are shown in the following table.

Main or Branch Office	Number of Users in Main or Branch Office	Country in Which Satellite Offices Are Located	Total Number of Users in Satellite Offices
Dublin	1,000	Ireland	5,000
London	500	England	1,500
Rome	100	Italy	400
Paris	50	France	1,450

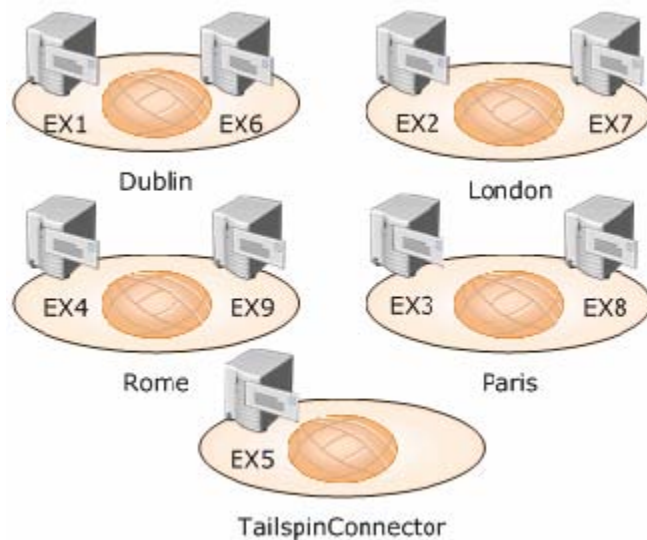
Planned Changes

Company.com plans to migrate the current Exchange 2000 Server messaging environment to Exchange Server 2003.

Existing Messaging Environment

Administrative Structure

The administrative groups for Company.com are shown in the following diagram.



Messaging Infrastructure

- All Exchange servers run Exchange 2000 Server with the most recent service pack.
- The operating system on each Exchange server is Microsoft Windows 2000 Server with the most recent service pack.

- All mail-enabled user accounts have an Internet SMTP alias that complies with the following format: username@Company.com
- The servers are used as shown in the following table.
- The only link between users at Company.com and Tailspin Toys is the Lotus cc: Mail

Server Function	Server Names
Front-end server	EX6, EX7, EX8, EX9
Mailbox and public folder information store	EX1, EX2, EX3, EX4
Lotus cc:Mail connector	EX5

- You plan to purchase two additional servers for the Dublin office after the upgrade.
- You plan to name these servers EX1D and EX11.
- You plan to install Windows Server 2003 and Exchange Server 2003 on these servers and configure them in the future as needed.

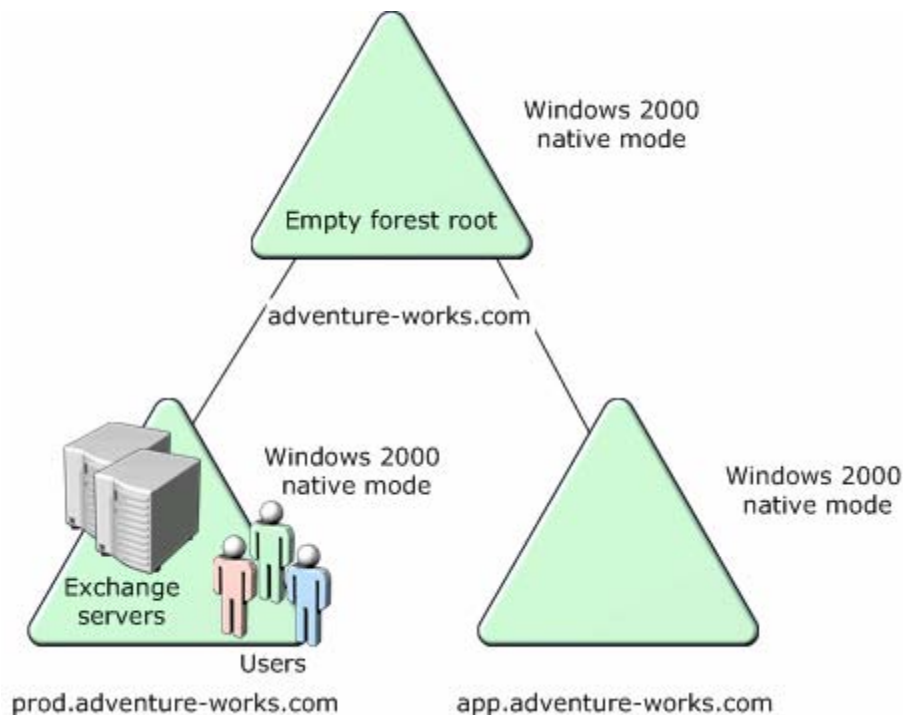
E-mail Clients

- All users who work in the main office or in a branch office connect to their mailboxes and public folders by using Microsoft Outlook 2000.
- All users who work in a satellite office connect to their mailboxes and public folders over a virtual private network (VPN) connection on the Internet by using an IMAP4 client of their own choosing. Not all e-mail clients support IMAP4 referrals.
- Users at Tailspin Toys use Lotus cc: Mail to retrieve and send their e-mail messages.

Supporting Infrastructure

Directory Services

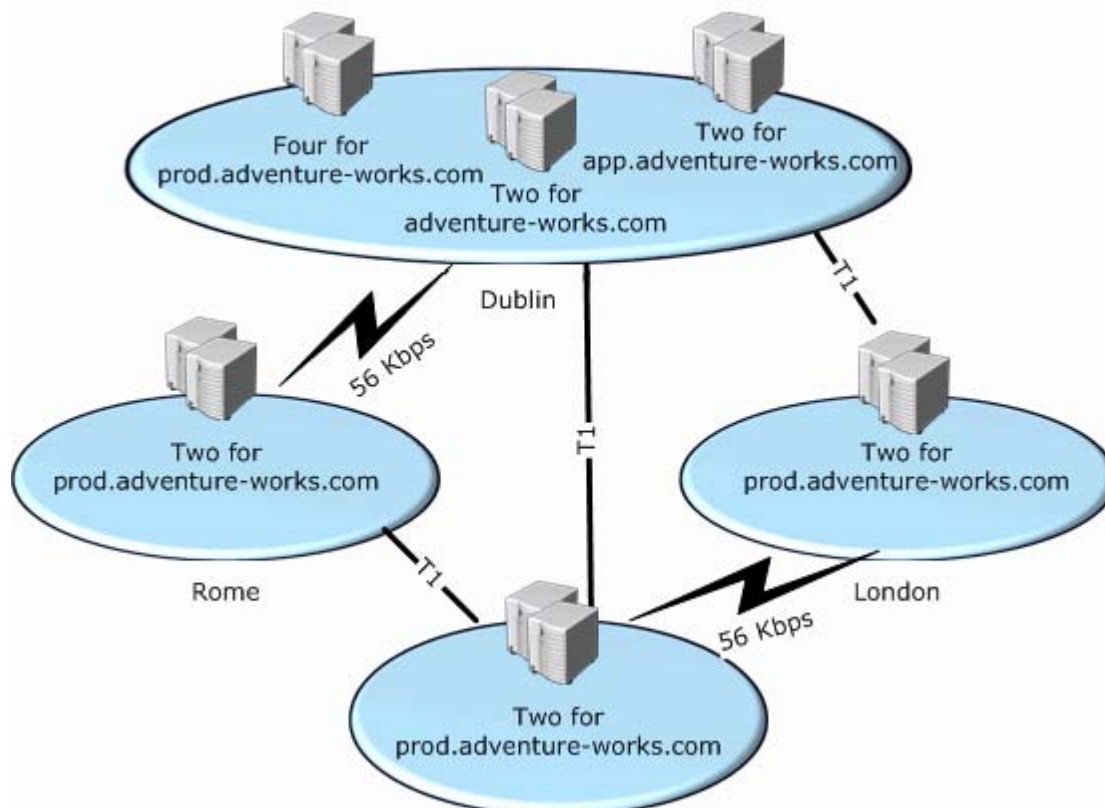
The Active Directory infrastructure is shown in the following diagram.



- The main office and its associated satellite offices are configured as a single site, and each branch office and its associated satellite offices are configured as a separate site.
- The app.Company.com domain was created to support a third-party application. There are no user accounts in this domain.

Network Infrastructure

The placement of global catalog servers is shown in the following diagram.



- The main office in Dublin and the branch offices in Rome and Paris each have an independent connection to the Internet by using a local ISP.
- Each of these locations is configured to accept VPN client connections.
- Two Windows Server 2003 member servers named DNS1 and DNS2 are located in the main office and are configured as DNS servers for the external zone named Company.com.
- The routing costs for all WAN connections are set to the same value.

Business Requirements

- The company needs to take advantage of new features in Exchange Server 2003. You must implement these new features for the largest number of users in the shortest time.
- Messages that have large attachments must be scheduled to be transferred between branch or satellite offices and the main office during off-peak hours only.
- You must not change the method that users in satellite offices use to access their messages after the upgrade. Insufficient resources are available to train these users to use a new e-mail client or connection method.
- An analysis of home use indicates that users in England do not access the network from home as often as users in the other countries.
- No more than one server can be upgraded on any single day.

Technical Requirements

- You must maintain connectivity to existing messaging systems and for the Tailspin Toys users.
- You must ensure that users in the satellite offices in England are able to access public folders on the servers in the London office when they attempt to browse public folder content.
- You must not add any additional hardware until the upgrade is complete.

Supporting Infrastructure

- During the upgrade procedure, you must not change the existing domain structure.
- You must not change the existing administrative model.
- You need to ensure that messaging traffic over connections that are slower than T1 take place only when there are disruptions to the T1 connections.
- You need to ensure that incoming Internet SMTP traffic is load-balanced across SMTP servers.

Case Study #6, Company.com (6 Questions)

Question: 1

You need to configure the DNS resource records for incoming e-mail messages from the Internet. What should you do?

- A. Configure mailbox (MB) resource records in the external DNS domain. Configure each record so that it has the same refresh interval.
- B. Configure each record so that it has the same default Time to Live (TTL) interval.
- C. Configure mail exchanger (MX) resource records in the external DNS domain. Configure each record to have the same preference and a different mail exchanger.
- D. Configure mail exchanger (MX) resource records in the external DNS domain. Configure each record to have the same preference and the same mail exchanger.

Answer: C

Question: 2

You need to configure connectors between each routing group. What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

- A. Create and configure SMTP connectors between the routing groups. Do not create additional connectors between the routing groups.
- B. Create and configure routing group connectors between the routing groups. Do not create additional connectors between routing groups.
- C. Create and configure low-cost routing group connectors and high-cost SMTP connectors between the routing groups.
- D. Create and configure high-cost routing group connectors and low-cost SMTP connectors between the routing groups.

Answer: B, C

Question: 3

You are preparing the supporting network infrastructure for the upgrade to Exchange Server 2003. You want to accomplish this upgrade by using the minimum amount of administrative effort. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Run the setup.exe /domainprep command on a domain controller in the prod.adventure-works.com domain.

- C. Run the setup.exe /domainprep command on a domain controller in the Company.com domain.
- D. Log on to the domain by using a user account that is a member of the Domain Admins group.
- E. Log on to the domain by using a user account that is a member of the Schema Admins group.
- B. Run the setup.exe /domainprep command on a domain controller in the app.adventure-works.com domain.

Answer: A, D

Explanation:

They do not offer setup.exe /forestprep as option you must assume that ForestPrep already been ran in the Organization. To upgrade from AD Exchange 2000 objects Schema to AD Exchange 2003 Schema. So, the next step is run DomainPrep in any domain that will have Exchange mailbox enabled users. In the diagram they tell you that Company.com is the empty forest root (no users except administrators), therefore this domain will not have mail enabled users. They also tell us that app.Company.com does not contain users, so the only answers that make sense are A and D. To run DomainPrep in prod.Company.com domain you just must to be member of Domain Admin group.

Reference :

Exchange 2003 Deployment Guide – pages 31 – 33.

<http://www.microsoft.com/technet/prodtechnol/exchange/2003/library/depguide.mspx>

Question: 4

You need to upgrade the Exchange servers in the main office while meeting the company's goals and constraints. Which server or servers should you upgrade? To answer, select the appropriate server, servers, or group of servers in the answer area.



EX1



EX5



Ex6



Global
Catalog
Servers

Answer:



Question: 5

You need to upgrade the Exchange servers in the Mexico City, Buenos Aires, and Rio de Janeiro branch offices. In which order should you upgrade the servers. To answer, move the appropriate server names from the list of server names to the answer area and arrange them in the correct order. (Use only server names that apply)

Server Names	Answer Area
EX2	
EX3	
EX4	
EX7	
EX8	
EX9	

Answer:

Server Names		Answer Area
		EX7
		EX2
		EX8
		EX3
		EX9
		EX4

You design a routing topology as shown in the answer area. You need to assign a cost to each connector. How should you configure the connector costs? To answer, drag the appropriate costs to the correct locations in the answer area.

Costs		Answer Area
10	20	<pre>graph TD; Dublin --- Drag cost here London; Dublin --- Drag cost here Rome; London --- Drag cost here Paris; Rome --- Drag cost here Paris; Dublin --- Drag cost here Paris;</pre>
30		

Answer:

Costs		Answer Area
10	20	<pre>graph TD; Dublin --- 10 London; Dublin --- 20 Rome; London --- 10 Paris; Rome --- 20 Paris; Dublin --- 20 Paris;</pre>
30		

Over view

Coho Vineyard is an international winery and wine distribution company.

Physical locations Case Study #7, Coho Vineyard

Coho Vineyard has vineyards in France, Italy, and Australia. The main office is located in Paris, and the branch offices are located in Paris, Rome, and Sydney. Coho Vineyard has recently purchased a subsidiary location that manufactures oak barrels. This subsidiary is located just outside Paris.

Location	Number of Users
Paris main office	1,500
Paris branch office	500
Rome branch office	500
Sydney branch office	500
Total users in vineyard locations	100
Paris main office	1,500
Paris branch office	500
Rome branch office	500
Sydney branch office	500
Total users in vineyard locations	100
Mobile sales personnel	50
Subsidiary	20

Planned Changes

Coho Vineyard is migrating from Exchange 2000 Serve to Exchange Server 2003.

Problem Statements

The Mobile users at Coho Vineyard need enhanced functionality without compromising security. The subsidiary location needs to be integrated with the Coho Vineyard infrastructure.

Administrative structure

The administration of the domain and the Exchange organization are configured as shown in the following table.

Group Name	Exchange Permissions	Active Directory Permissions	Comments
MOAdmins	Full Exchange Administrator for the organization	Domain Admins group	All members are located at the main office
CityBranchAdmins	Exchange Administrator for the city's administration group	Domain Admins group	Administers Exchange servers and all user and group accounts in the city's branch office
MOUserAdmins	Exchange View Only Administrator for the organization	Is delegated full control of users and groups in the domain	Administers all user and group accounts in the company

All Windows security groups are located in the main office organizational unit (OU).

Messaging Infrastructure
The Exchange 2000 back-end server in the main office and one in each of the branch offices.

- Each office is configured as a separate routing group and administrative group.
- All routing groups are connected with Routing Group connectors.
- All of the Exchange 2000 servers run on hardware that is on the hardware compatibility list for Windows 2000 Server and Windows Server 2003.
- The Exchange organization at the subsidiary includes a single administrative group in a
- The new subsidiary location has a single Exchange 2000 server.

- o The subsidiary location has a 56-Kbps dial-up connection to the Internet.

- o The Exchange server uses this connection for sending and receiving Internet email

- Coho Vineyard has deployed an Exchange 2000 front-end server at the main office that is configured to support all the required Internet protocols.

All users who connect to Exchange from the Internet connect to the front-end server. Coho Vineyard needs to be modified so that all of the Internet e-mail messages to and from the subsidiary pass through the Paris main office organization to Exchange 2003. Coho Vineyard does not plan to upgrade the Exchange 2000 server at the subsidiary possible.

- The dial-up connection at the subsidiary location is being modified to dial in to a server running Routing and Remote Access from the Paris branch office. All of the mailboxes on the

Server at the Paris main office
need to be relocated to another Exchange

- servers at the main office.

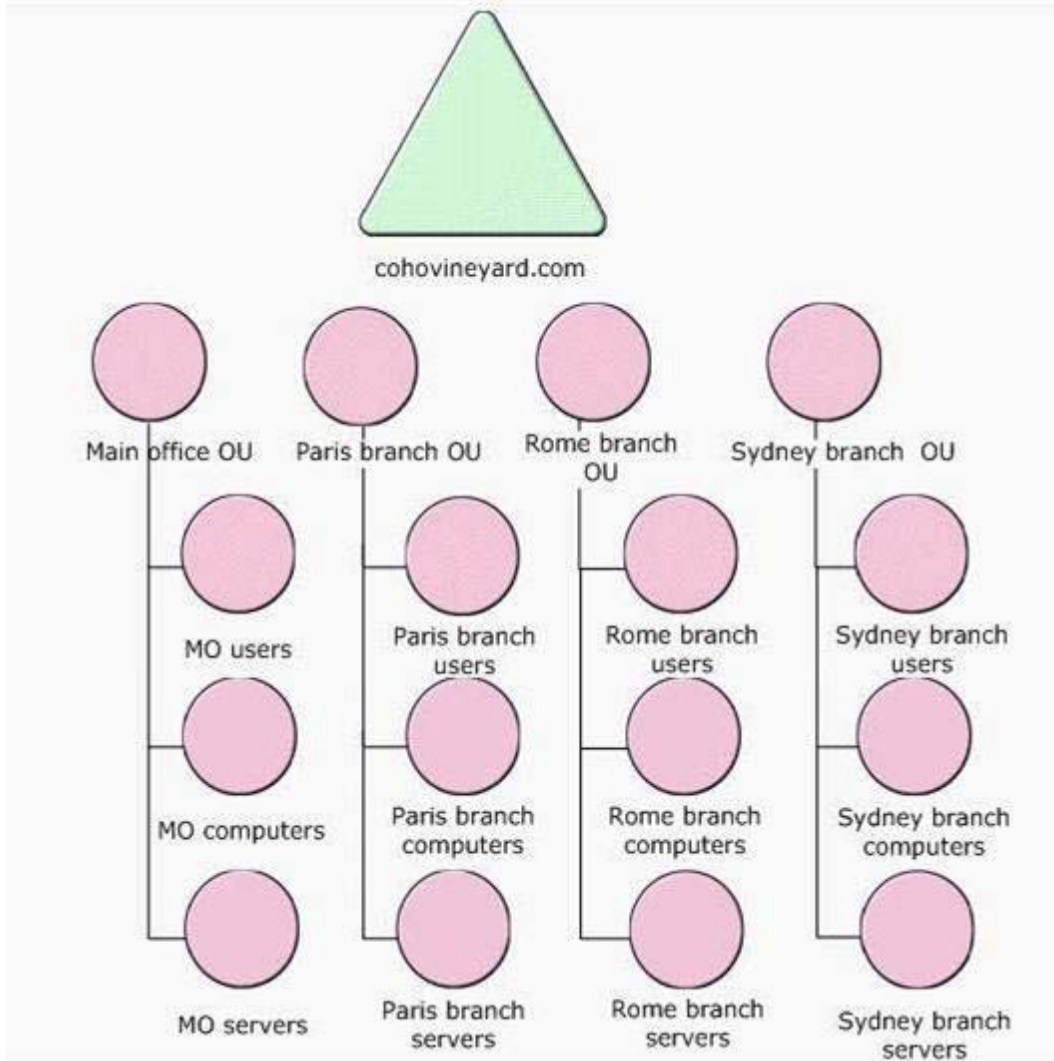
- The sales personnel travel throughout the world. Each salesperson carries a company portable computer.

- Sales personnel and users at vineyard locations use Microsoft Outlook Web Access.

- The mailboxes for all Outlook Web Access users are located on the Exchange server at the main office. All users run Microsoft Internet Explorer 5.0 or later.

Directory Services

Coho Vineyard has deployed a single Windows Server 2003 Active Directory domain named cohovineyard.com. The active Directory configuration is shown in the following diagram.



Each branch office contains a single Windows 2000 Server domain controller that is configured as a global catalog server.

- The main office contains two Window Server 2003 domain controllers.
 - o Both of these domain controllers are configured as global catalog servers.
 - The domain functional level is set to Windows 2000 native.

Network Infrastructure

- The WAN connections have been upgraded recently, and no new upgrades are planned.
- The company locations and WAN connections are shown in the following diagram.

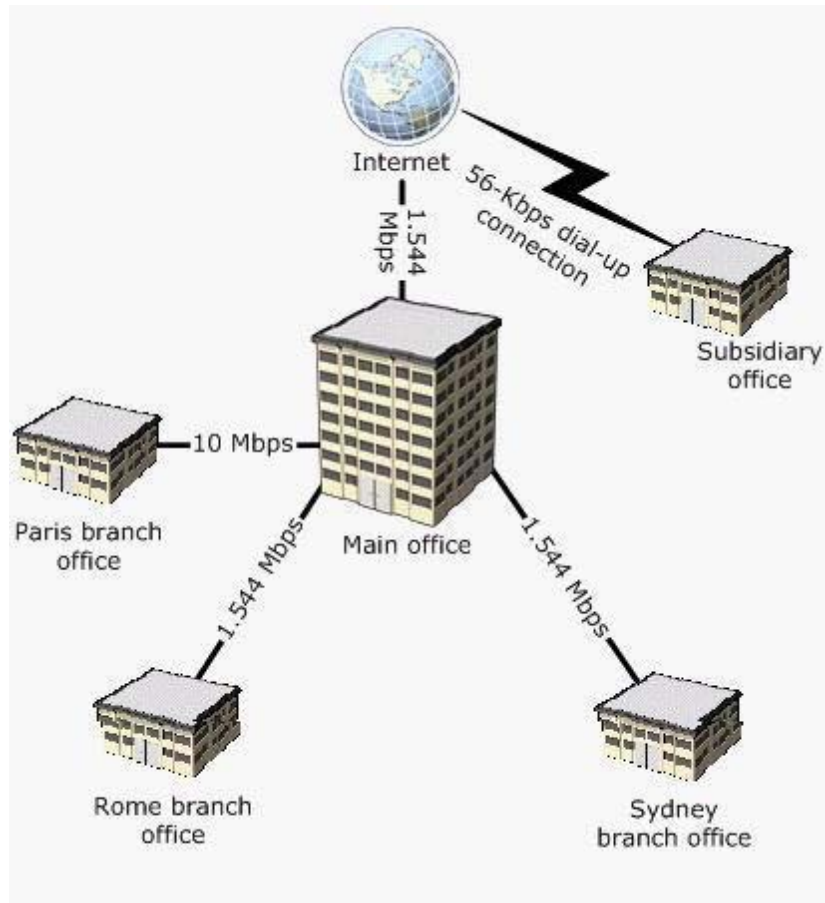
Supporting Infrastructure

Only the MOAdmins group should be able to modify the routing configuration for the Exchange organization. The branch office administrators should be able to administer all users, groups, and computers—including Exchange servers—in their respective offices. The branch office administrators must not be able to grant themselves additional the main office.

E-mail Client Infrastructure

- All of the users at the vineyard locations will continue to use Outlook Web Access to access the Exchange servers.
- The company has not decided which e-mail client they will deploy on the portable computers that are used by the sales personnel.
- Many of the sales personnel need to be able to read and respond to e-mail and schedule meetings when they are not connected to the Internet.
- Their messages should be delivered automatically when they connect to the Exchange servers.

Network Topology Exhibit



Security

- The Exchange 2000 front-end server needs to be upgraded to Exchange 2003 without modifying the way client computers connect to Exchange or the way Internet e-mail is delivered.
- All client computer connections from the Internet must be as secure as possible.

Interviews Chief

Information Officer:

- We recently bought a new application that we will use to track our wine production.
- This application is messaging based. It uses several public folders on the Exchange servers to store information.
- All of the users at the vineyard locations, as well as about 20 users in each branch office, must have access to the application.

- Our sales personnel are critical to our continued growth.
- We need to do whatever we can to make them as efficient as possible.
- We need to be able to back up and restore the data used by this application separately from our regular public folders.

IT Manager:

- Our IT administrators at the main office are very busy.
- Ideally we need to make sure that we do not add too much to their workload during the implementation of Exchange 2003.
- We need to assign as much work as possible to lower level administrators like the MOUserAdmins group.
- This group of users is not as skilled as our IT administrators, but they do a great job if they are given a procedure and they use familiar tools.
- We also need to minimize the growth of the Exchange databases during the migration.

Exchange Administrator:

- Existing hardware can support up to 2,500 mailboxes per server.
- We have about 20 public folders in active uses in the company.
- All 20 public folders are replicated to all the Exchange servers in the company.
- There are two additional public folders named Sales Data and production Data.
- Both folders are updated two or three times a week.
- These updates are about 5 MB in size.
- At least 20 users in each office access the reports in the Sales Data folder every day.
- The Production Data folder is accessed primarily by users at the main office.
- Users from the other offices do not access this folder more than once every two weeks.
- The only replica of both public folders is on the Exchange server at the main office.

Network Administrator:

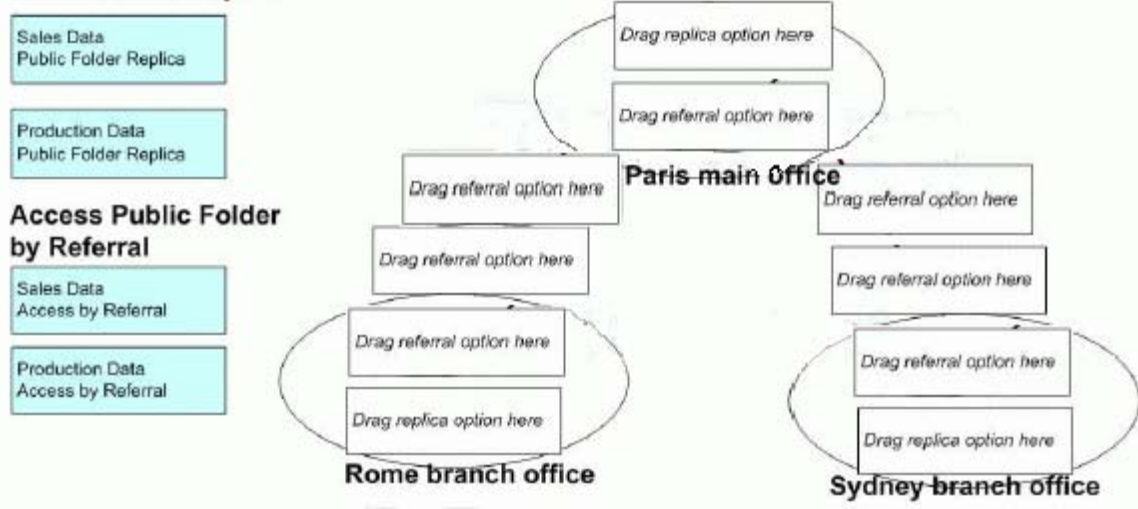
You need to make sure that you do not create additional network traffic across any of the network connections outside Paris. If possible, you should decrease e-mail related traffic.

Server Administrator:

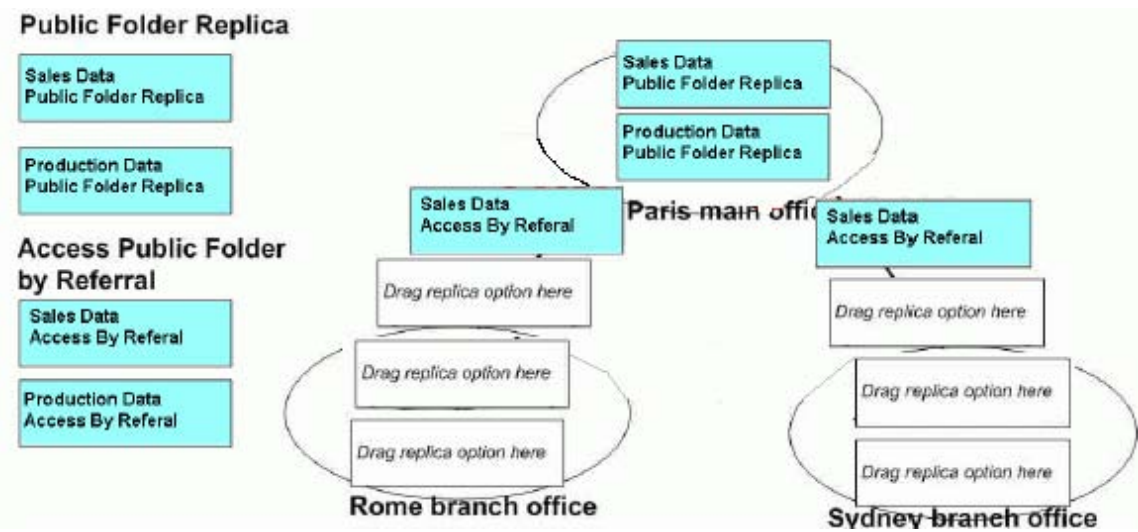
- All of our Exchange servers are running Windows 2000 Advanced Server with the latest service packs.
- Our server management policy states that we do not upgrade from one version of Windows to another.
- If we need to install Windows Server 2003 on any computers, we will buy new hardware and install a clean version of Windows Server 2003.

Case Study #7, Coho Vineyard (5 Questions)**Question: 1**

You need to design a public folder strategy for the Sales Data and Production Data public folders. What should you do? To answer, drag the appropriate option or options to the correct location or locations in the answer area.



Answer:



Explanation:

They tell us that the only replica of Sales Data and Production Data Public folders, are in on the Exchange server at the main office. According with the use of public folders, at least 20 users in each office access the reports in the Sales Data folder every day. Apart from them, other users do not access this folder more than once every two weeks and the Production Data folder is accessed primarily by users at the main office. They can use referrals instead replicas because they tell us that you need to make sure that you do not create additional network traffic across any of the network connections outside Paris. If possible, you should decrease e-mail related traffic.

Reference :

Exchange Server 2003 Administration Guide

<http://www.microsoft.com/technet/prodtechnol/exchange/2003/library/admingde.msp>

Understanding Public Folder Replication and Referrals

<http://support.microsoft.com/default.aspx?kbid=273479>

Exchange Server 2003 and Exchange 2000 Server Front-End and Back-End Topology

<http://www.microsoft.com/downloads/details.aspx?FamilyId=E64666FC-42B7-48A1-AB853C8327D77B70&displaylang=en>

Note :

There are several ways to meet the objectives in this question. There is not only a single correct answer.

Question: 2

You need to design a solution for deploying the custom wine production application. Your solution must make as few configuration changes as possible. Which three actions should you perform? (Each correct answer presents part of the solution. Choose three.)

- A. Create a new public folder named ProdData in the default public folder tree on the Exchange back-end server at the main office.
- B. Create a general purpose public folder tree named ProdData on the Exchange back-end server at the main office.
- C. Configure an additional IMAP4 virtual server on the Exchange front-end server at the main office. Associate the IMAP4 virtual server with ProdData.
- D. Configure an additional IMAP4 virtual server on the Exchange back-end server at the main office. Associate the IMAP4 virtual server with ProdData.
- E. Configure an HTTP virtual server on the Exchange front-end server at the main office. Associate the HTTP virtual server with ProdData.
- F. Configure an HTTP virtual server on the Exchange back-end server at the main office. Associate the HTTP virtual server with ProdData.

Answer: B, E, F

Explanation:

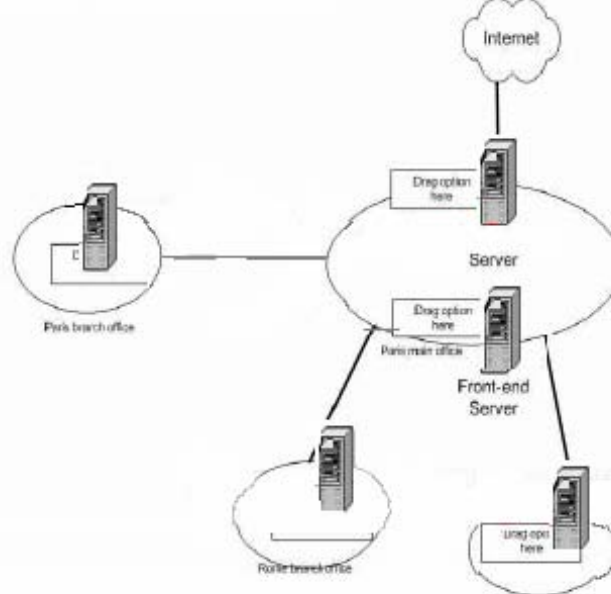
They are replicating 20 public folders to all the Exchange servers in the company that are in the root hierarchy. They need to create a general purpose public folder tree named ProdData to control the replication to be able to back up and restore the data used by this application separately from our regular public folders and they need to be able to back up and restore the data used by this application separately from our regular public folders. Front-end server at the main office is already configured to support all the required Internet protocols. They configure a new additional IMAP virtual server on the Exchange front-end server at the main office this can be used by the remote locations to access this public folder using a better protocol than https for public folder access. One of the main advantages of IMAP is that it makes your e-mail easily accessible from multiple locations and computers. With IMAP, all mail is stored on the IMAP server, but they tell us that all of the users at the vineyard locations will continue to use Outlook Web Access to access the Exchange servers.

Question: 3

You need to design a strategy for migrating the Exchange servers from Exchange 2000 to Exchange 2003. What should you do? To answer, drag the appropriate server configuration option or options to the correct location or locations in the answer area.

Server Configuration Options

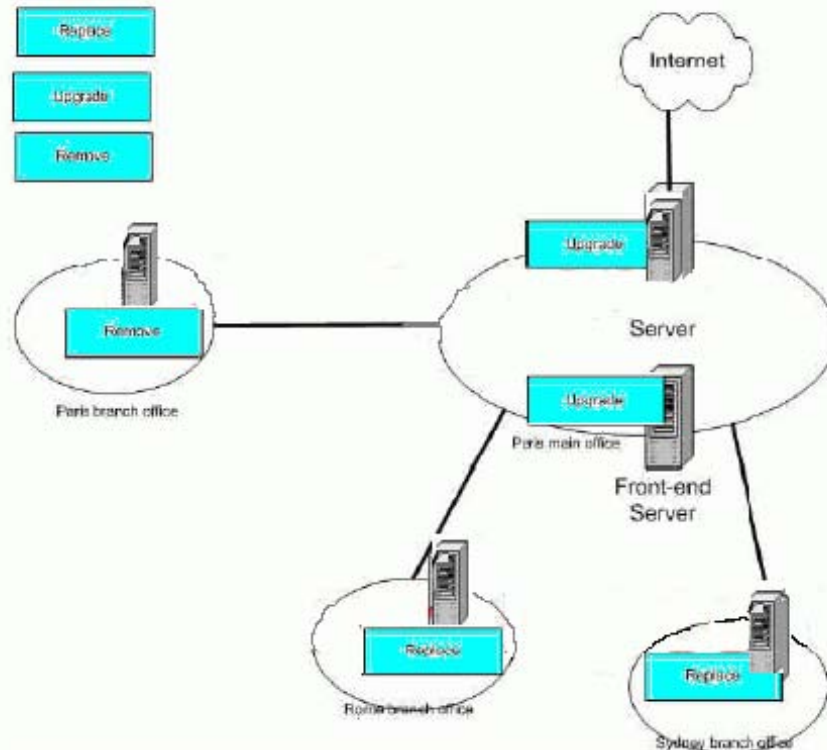
- Replace
- Upgrade
- Remove



Answer:

Server Configuration Options

- Replace
- Upgrade
- Remove



Explanation:

Paris branch offer server can be removed. A good solution is to upgrade is to upgrade all the other servers, though some of these could be replaced as well.

Question: 4

- A. Configure the HTTP virtual server on the Exchange front-end server to require a secure connection. Instruct the sales personnel to use Microsoft Outlook Web Access to connect to the Exchange front-end server.
- B. You need to design a strategy for remote client computer access that meets all business and technical requirements. What should you do? Configure the back-end Exchange servers to use static ports for RPC connections. Open the required ports on the firewall. Install Microsoft Outlook 2003 on the portable computers and configure it to connect to the Exchange back-end server using a MAPI connection.
- C. Configure the Exchange front-end server to require secure connections from IMAP4 client computers. Install Microsoft Outlook 2003 on the portable computers and configure it to use a secure IMAP4 connection.
- D. Configure the Exchange servers to support RPC over HTTPS. Install Microsoft Outlook 2003 on the portable computers and configure it to use RPC over HTTPS.

Answer: D

Explanation:

To use RPC over HTTP, you must install Windows Server 2003 on the computers that are running Exchange Server 2003 and you need Windows 2003 DC running Global catalog role. They tell us that Coho Vineyard has deployed a single Windows Server 2003 Active Directory domain named cohovineyard.com and that the main office contains two Windows Server 2003 domain controllers that are also global catalog servers. Because you need to design a strategy for remote client computer access that meets all business and technical requirements, you can think that you can deploy https over RPC, but their users at the main office and in the branch offices use Microsoft Outlook 2000. So, for them to access with https over RPC, they need to run Outlook 2003. They tell us that we can configure the Exchange servers to support RPC over HTTPS and install Microsoft Outlook 2003 on the portable computers, as is required to access an Exchange 2003 Server using RPC over HTTPS.

Reference :

Exchange Server 2003 RPC over HTTP Deployment Scenarios

<http://www.microsoft.com/downloads/details.aspx?familyid=ef58395d-3710-49cf-9698938e2bef39e8&displaylang=en>

Question: 5

You need to design a strategy for moving the mailboxes from the Exchange server at the Paris branch office to the Exchange server at the main office. What should you do?

- A. Use the Exchange Task Wizard to migrate all the mailboxes to the Exchange 2003 server.
- B. Use the Exchange Mailbox Merge Wizard (Exmerge0) to migrate all the mailboxes to the Exchange 2003 server.
- C. Use the Exchange Server Migration Wizard to migrate all the mailboxes to the Exchange 2003 server.
- D. Export the contents of each mailbox to a .pst file. Create a new mailbox on the Exchange 2003 servers for each existing mailbox. Import the .pst file contents into each new mailbox.

Answer: A

Background

Overview

Prosaware, Inc., produced manuscripts that are published by other companies. The company provides e-mail access to employees during business hours only, Monday through Friday from 9:00 A.M. to 5:00 P.M.

Physical Locations

The company has one main office and three branch offices in North America. Each office has 600 users. Users work from the office, and they use their own Internet connections to work from home.

Planned Changes

The company will provide after-hours e-mail access to users when they are working from home.

Existing Messaging Environment

E-mail Clients

- All users run Microsoft Windows XP Professional and Microsoft Outlook in the office and at home.
- The company uses an in-house POP3 server for e-mail. This server will be replaced with Exchange Server 2003. Mail will not be migrated from the old server.

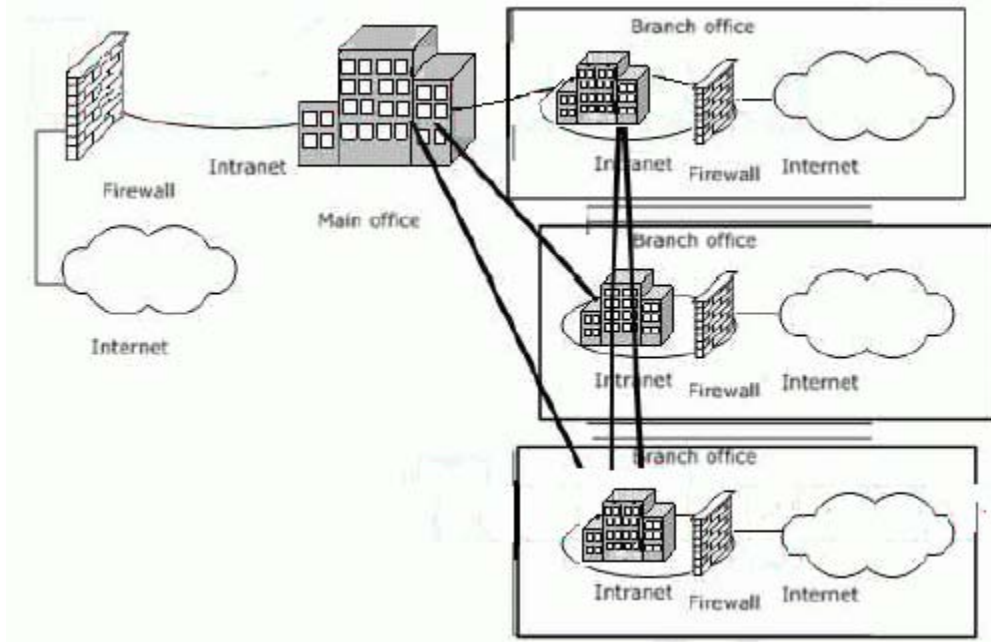
Supporting Infrastructure

Directory Services

- The company has a single Active Directory domain with one domain controller at each office. The domain controller at the main office is a global catalog server.

Network Infrastructure

- Each office has an internal network, which is connected to the Internet by a firewall.
- Each office also has a 128-Kbps WAN connection to the other offices.
- The relevant portion of the network is shown in the following diagram.



Business Requirements

Security

- Branch office technicians will manage Exchange backup and recovery operations, including single-mailbox recovery, on all servers located in their offices. The central information Technology (IT) group will manage all other aspects of all servers. The branch office technicians may occasionally manage other aspects of the Exchange servers, under the direction of the central IT group.
- Branch office technicians must not have permissions on any servers located in other offices.

Interviews

- **Chief Executive Officer:** I want all users to have full access to all Exchange e-mail features

– including calendars, client-side messaging rules, contacts, and journal entries – at all times. In addition, I want all users to use Microsoft Outlook 2003. I want all users to have a 250-MB limit on their mailboxes. This limit will encourage users to manage their e-mail messages more effectively than they have in the past. We must minimize additional hardware purchase other than the four new servers we bought to run Exchange.

- **Chief Information Officer:** We need to ensure that e-mail servers are protected from denial of service attacks. We do not want to manage the technology resources that would be required to allow all users to connect to the company network through a VPN. However, all access to e-mail by remote users must be encrypted. We need to ensure that users have the best e-mail performance possible while minimizing the use of our WAN connections, which have very low bandwidth.

- **Network Administrator:** We need to minimize our backup requirements for the new email system. Each office has the capacity to back up an additional 73 GB of data each weekday. We also need to minimize the complexity of backup and recovery operations, because the office technicians are not well trained. Most import, we must be able to restore from a complete mailbox store failure as quickly as possible. We want all aspects of the server configuration to be as simple as possible while meeting our business and technical requirements.

Technical Requirements

Message Infrastructure

- The company will add four Exchange Server 2003 computers. The company wants to spread the messaging workload equally across the four servers. Each server will contain seven 120GB hard disks.
- The Exchange server hard disks must be configured to provide the best possible performance. Also, neither the operating system, the Exchange log files, nor the Exchange data must be affected by the failure of a single hard disk.

E-mail Client Infrastructure

- Each user that works from home will connect to his or her local office through that office's Internet connection.
- All users will use remote e-mail capabilities only when they work from home.

Study #8, Pros aware, Inc, (4 Questions)

Question: 1

You need to design an administrative model for Exchange Server 2003. What should you?

- A. Create an administrative group for each office. Place each Exchange server that is managed by an office technician into that Office's administrative group. Assign the central IT group full control over all administrative groups. Assign each office technician control over his or her office's administrative groups.
- B. Create one administrative group. Place all Exchange servers in the administrative group. Assign the central IT group full control over the administrative group. Make each office technician a member of the local Backup Operators group on each group they manage.
- C. Create an administrative group for each office. Place one Exchange server in each group. Assign the central IT group and each office technician full control over each administrative group.
- D. Create one administrative group for all Exchange front-end servers. Assign each office technician control over this administrative group. Create another administrative group for all Exchange back-end servers. Assign the central IT group control over this administrative group.

Answer: A

Question: 2

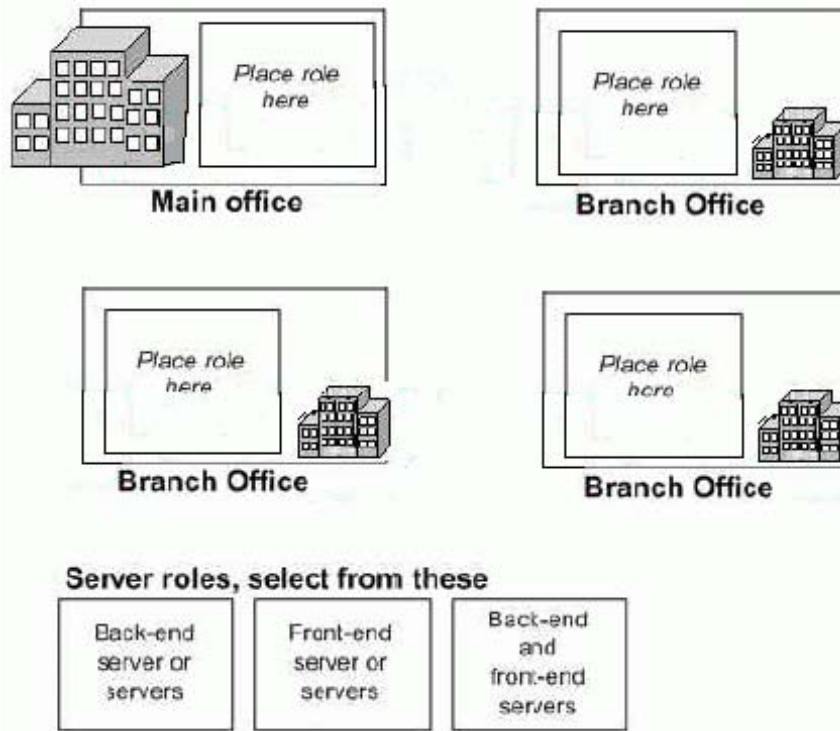
You need to design an e-mail access strategy for remote users. What should you do?

- A. Instruct remote users to connect to their e-mail by using RPC.
- B. Instruct remote users to connect to Outlook Web Access by using only HTTPS.
- C. Instruct remote users to connect to the company network by using PPTP connections.
- D. Instruct remote users to connect to their e-mail by using RPC over HTTP. Configure the HTTP servers to require encryption.

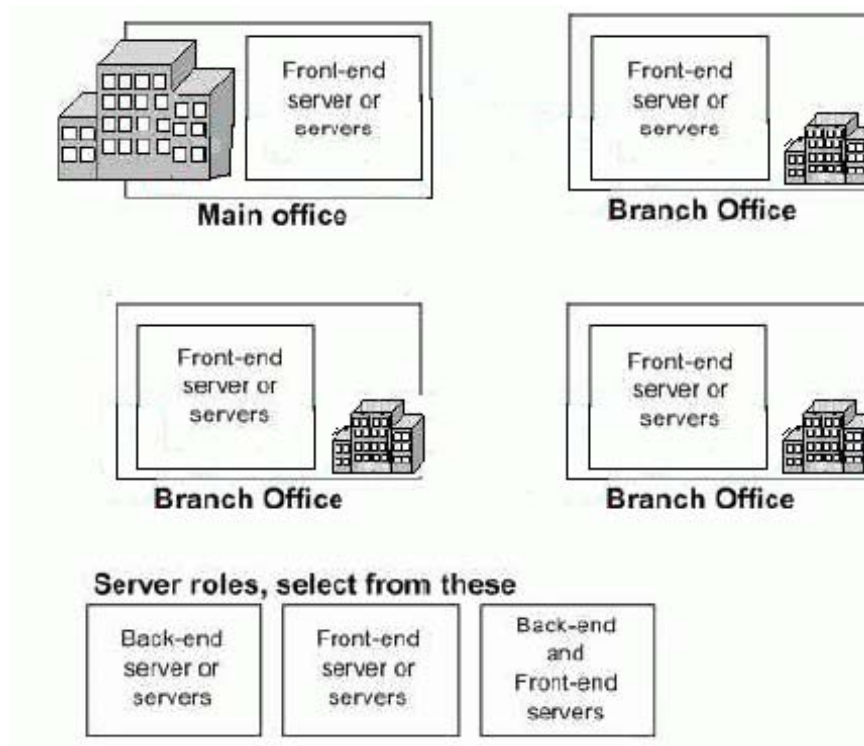
Answer: D

Question: 3

You need to designate Exchange server roles and locations. What should you do?
Drag and drop.

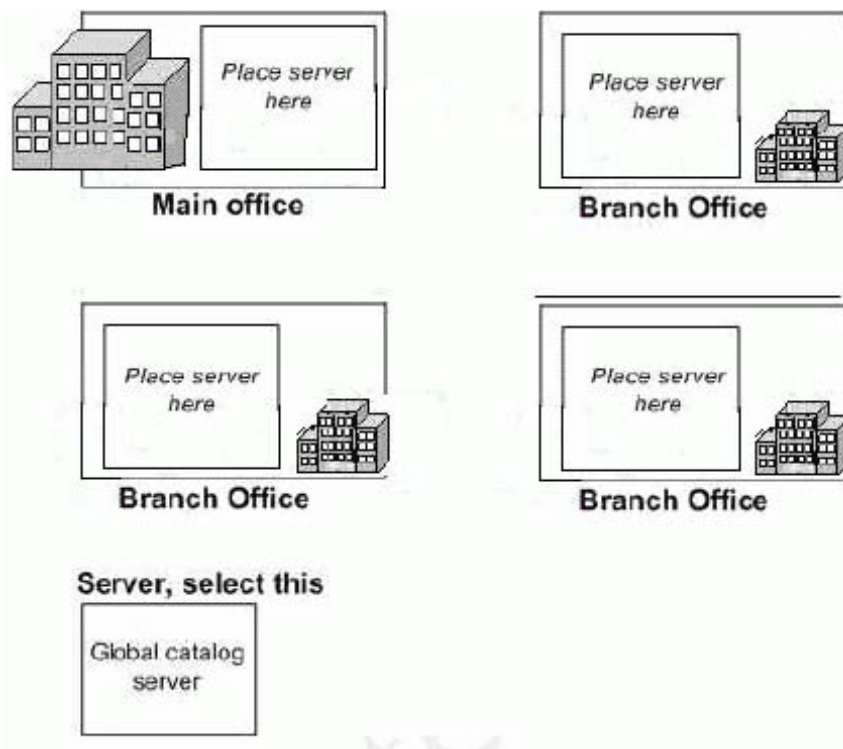


Answer:



Question: 4

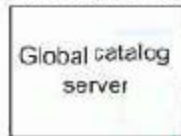
You need to design the replacement of global catalog servers for the new environment.



Answer:



Server, select this



Case Study #9: A. Datum Corporation

Background

A. Datum Corporation is a company that has a wholly owned subsidiary named Company.com.

Physical Locations

A. Datum Corporation has an office in New Delhi that includes 500 users.
Company.com has an office in Mumbai that includes 1,000 users.

Planned Changes

The company plans to migrate its messaging environment from Exchange Server 5.5 to Exchange Server 2003.

Problem Statements

Administrators report that there is a lack of server capacity for future growth in the number and size of mailboxes. The messaging infrastructure for Company.com will be partitioned into a separate Exchange organization to facilitate the future sale of the company.

Existing Messaging Environment

Administrative Structure

- Administration is centralized in the New Delhi office. All Exchange Server computers are managed by a single group of messaging administrators.
- These administrators are responsible for server maintenance, design and implementation of GPOs, installation of antivirus software, and the design and implementation procedures for the backup and restoration of data.
- One employee named Company is responsible for maintaining the availability of all conference rooms in adatum.com. Her user account is the primary account for the conference room mailboxes in addition to her personal mailbox.

Messaging Infrastructure

- The network contains a single Exchange Server 5.5 organization for both companies. An Exchange Server named EX1 contains mailboxes for all users.
- EX1 runs Microsoft Windows 2000 Server SP1 and Exchange Server 5.5 SP3.

E-mail clients

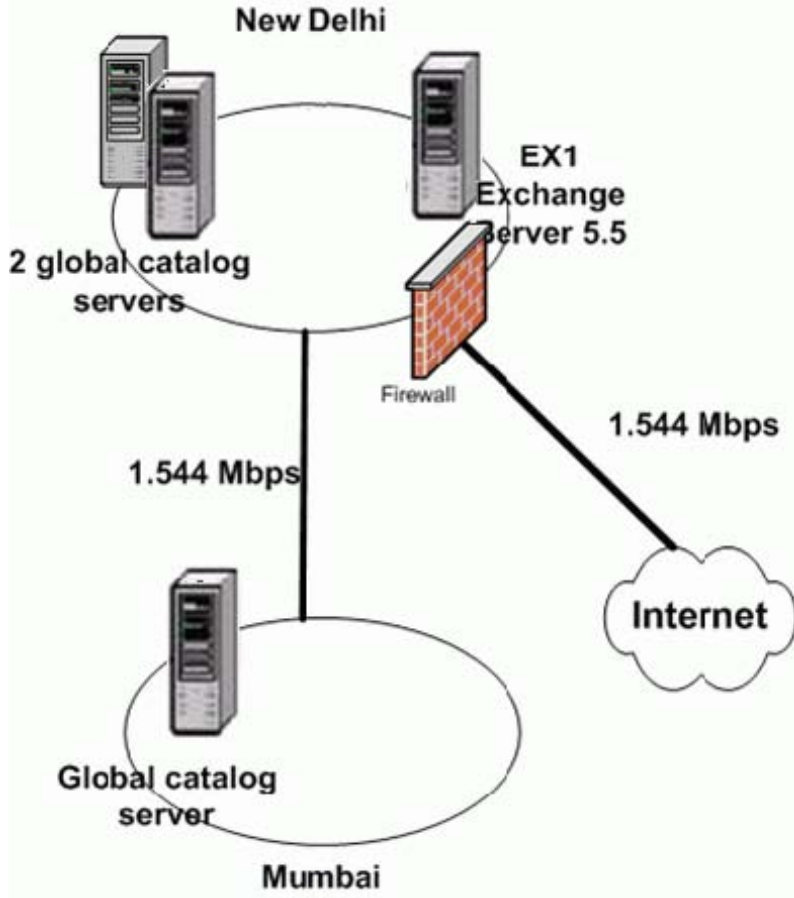
- When working at the office, users connect to their mailboxes by using Microsoft Outlook 2000.
- All users have portable computers and periodically connect to their mailboxes from remote locations such as a home office by using Outlook 2000 and a MAPI connection over a virtual private network (VPN).
- All home users report that they use Microsoft Internet Explorer 5.01 or later.

Directory Services

- The network consists of a single-domain Active Directory forest named adatum.com. The functional level of the forest is Windows Server 2003.

Network Infrastructure

- The company registered adatum.com and Company.com for use as the external DNS Internet domains.
- The network configuration is shown in the following diagram.



- A Windows Server 2003 computer named DNS1 hosts the internal adatum.com and Company.com DNS zones.
- A Windows Server 2003 computer named DNS2 hosts the external adatum.com and Company.com DNS zones.
- The company has a third-party X.500 directory that contains person objects. For security reasons, these objects must not be located in the adatum.com forest.
- Mail-enabled InetOrgPerson objects exist in Active Directory for the objects in the thirdparty directory.
- A member server named Server1.adatum.com will be available to host Active Directory Connector (ADC).

Business Factors

- Users have personal address books that contain contacts from within the Exchange organization. You need to minimize disruption to the users during the migration.
- Users are required to enable the out-of-office notification when they are on vacation.
- Free/Busy information in the Outlook Calendar is used extensively in the company.
- You need to minimize the disruption to the users at Company.com in the event of a single Exchange server failure.
- Users at Company.com must maintain access to resources in adatum.com during the migration.

Security

- The company's written security policy requires the minimum number of ports possible to be opened on the firewall to allow home users to access their e-mail messages.

- You need to ensure that the user account that will install ADC has only minimum necessary permissions.
- The written policy also requires that user passwords for company user accounts must not be stored permanently in the Web browsers of home users.

Technical requirements

Messaging Infrastructure

- The company plans to implement adatum.com and Company.com as separate Exchange organizations with separate identities.
- You purchase three new server computers for the New Delhi office. The servers are shown in the following table.
- There is no budget for additional hardware during the migration.
- The company wants EX4 to be used for incoming Internet e-mail messages only when EX2 is unavailable. You need to ensure that internal e-mail messages are sent only to servers in the current environment until the migration is complete.
- The new servers will be installed in the Mumbai office as a two-node cluster named EX5, and the cluster will belong to the new Exchange Server 2003 organization for Company.com.
- You plan to install Windows Server 2003 and Exchange Server 2003 on each server.
- EX3 You plan to perform a one-time migration of mailboxes for Company.com users to EX5. The global address list must be available for all users during and after the migration.
- To the maximum extent possible, you need to ensure that only the e-mail messages from the last six months are migrated.

Server name	Server type	External IP address
EX2	Single server	131.107.0.1
EX3	Single server	Not available

Case Study #9, A. Datum Corporation (5 Questions)

Question: 1

You need to implement an e-mail client that can be used by all home users at A. Datum Corporation. You want to minimize the amount of additional configuration that users need to do to their e-mail clients. What should you do?

- A. Enable forms based authentication. Instruct the users on the use of Outlook Web Access.
- B. Enable ports 110 and 995 on the firewall. Create and configure a POP3 virtual server to enable ports 110 and 995. Instruct users to install a POP3 client.
- C. Enable ports 143 and 993 on the firewall. Create and configure a IMAP4 virtual server to enable ports 143 and 993. Instruct users to install an IMPAT4 client.
- D. Configure EX2 to use RPC over HTTP and configure an RPC virtual directory in IIS. Configure EX2 to act as an RPC proxy server. Instruct users to obtain and install Outlook 2003.
- E. Configure EX2 to use RPC over HTTP and configure an RPC virtual directory in IIS. Instruct users on the use of Outlook Web Access.

Answer: A

Question: 2

Server	Preference	Mail Exchanger
EX2	Place preference here	Place Mail Exchanger here
EX4	Place preference here	Place Mail Exchanger here

and EX4 on the external
adatum.com zone?

Select from these

Preference

5	10
--------------------------------	---------------------------------

Mail Exchanger

ex2.adatum.com	ex4.adatum.com
207.46.245.222	207.46.245.214

Answer
:

Server	Preference	Mail Exchanger
EX2	5	ex2.adatum.com
EX4	10	ex4.adatum.com

Select from these

Preference

5	10
---	----

Mail Exchanger

ex2.adatum.com	ex4.adatum.com
207.46.245.222	207.46.245.214

Question:

You need to be able to delegate responsibility for administration of the Exchange servers. Where should you place the Exchange servers?

- A. in a new subdomain named exchange.adatum.com
- B. in a new Active Directory forest exchange.local
- C. in a new OU named ExchangeServers in adatum.com
- D. in the default Domain Controllers OU in adatum.com

Answer: C

Question: 4

You need to ensure that Company's user account is associated with only her mailbox during and after the migration. You want to achieve this goal by using the minimum amount of administrative effort. What should you do?

- A. Run the Resource Mailbox Wizard to mark the conference room mailboxes as resource mailboxes.
- B. Run the Migration Wizard to migrate the conference room mailboxes to the new server.
- C. Create a comma-separated value (CSV) file that assigns Company's user account to the objusers hidden attribute.
- D. Create a comma-separated value (CSV) file that sets a custom attribute with the NTDSNoMatch value on each conference room mailbox.

Answer: A

Question: 5

- A. Domain Admins for adatum.com
- B. Enterprise Admins for adatum.com
- C. Schema Admins for adatum.com
- D. Exchange Full Administrator for the organization
- E. Exchange Services
- F. Exchange Administrators
- G. Local Administrators for EX1
- H. Local Administrators for Server1

Answer: B, C

Background

Baldwin Museum of Science is a network of four research centers that are open to the public and employ field researches and senior research staff from many disciplines.

Physical Locations

Case Study #10, Baldwin Museum of Science

The main office of the museum is located in Toronto. The three branch offices are located in Montreal, Ottawa, and Quebec.

Planned Changes

The museum is planning to upgrade its Exchange Server 5.5 messaging environment to Exchange Server 2003. The company plans to consolidate administration of the Exchange Server 2003 environment as soon as possible.

Problem Statements

The museum is merging with a research firm named Company.com. The only office of Company.com is in Moscow. The Montreal, Ottawa, and Quebec offices lack a secure server room and administrative resources. The message stores and the administration of messaging for the X museum must be consolidated in the Toronto office as soon as possible.

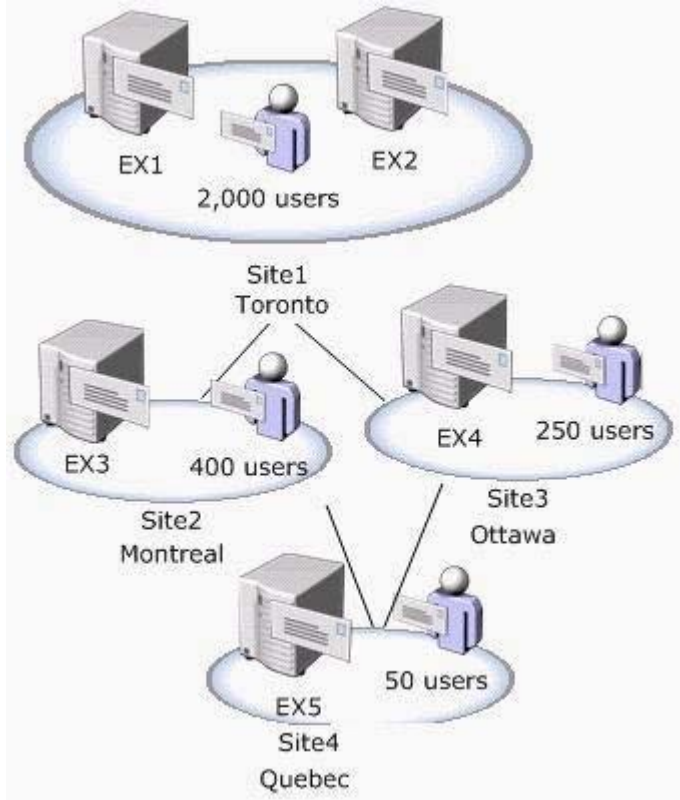
Existing Messaging Environment

Administrative Structure

- The museum currently has a distributed administrative structure.
- The Exchange Server 5.5 organization is named BaldwinMuseum(ofScience)

Messaging infrastructure

- The Exchange Server 5.5 routing topology for the museum is shown in the following diagram.



E-mail Clients

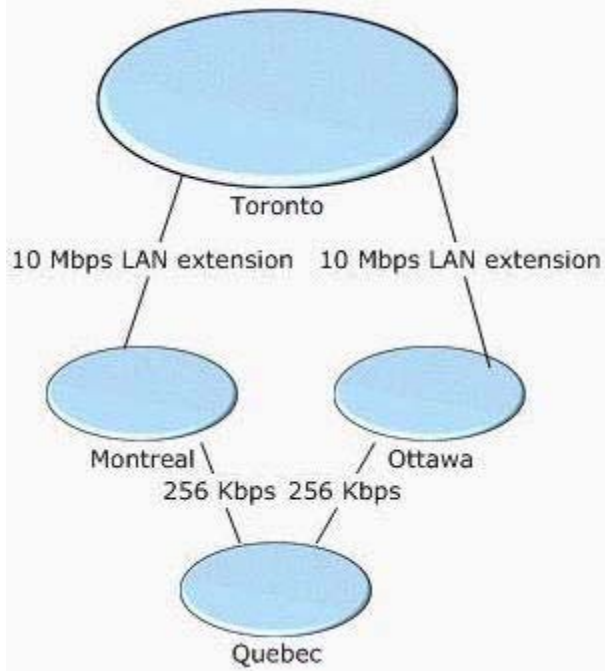
- All current users at the museum use Microsoft Outlook 2000 as their e-mail client.
- Many users at the museum have server-side and client-side Inbox rules.
- Users at the museum do not access any public folders by using their e-mail clients.
- All users at Litware, Inc., use a POP3 client on their portable computers to connect to an ISP-hosted e-mail system both from the office and from remote locations.

Directory Services

- The network for the museum consists of a single-domain Active Directory forest named `baldwinmuseumofscience.com`.
- The domain currently contains a single Microsoft Windows Server 2003 domain controller that acts as a global catalog server in the Toronto office.

Network Infrastructure – Baldwin Museum of Science

- The museum network is shown in the following diagram.



- Routing costs for all WAN connections are set to the same value.
- The global catalog server in the Toronto office acts as a DNS server for the internal baldwinmuseumofscience.com zone.
- A Windows Server 2003 member server named DNS1 in the Toronto office is configured to host the external baldwinmuseumofscience.com zone.
- In addition, member servers are distributed as shown in the following table.

Server Name	Operating System	Location
Server1	Windows Server 2003 with most recent pack	Toronto
Server2	Windows NT Server 4.0 SP6a	Montreal
Server3	Windows 2000 Server SP3	Ottawa

Network Infrastructure – Litware, Inc.

- The Litware, Inc., network consists of a LAN in the Amsterdam office that supports 800 users.
- Litware, Inc., relies on an ISP for DNS name resolution services. Litware, Inc.; has an independent connection to the Internet.
- The Toronto office of the Baldwin Museum of Science and the Amsterdam office of Litware, Inc., are connected by using a VPN connection over the Internet.

Business Factors

- You need to perform the migration to Exchange Server 2003 at the Baldwin Museum of Science by using the minimum amount of administrative effort.
- You also need to ensure that users experience the minimum amount of disruption to their messaging capabilities during the migration.
- Messages that have large attachments, such as research documents, must be scheduled to use the VPN connection between the Toronto office and the Litware, Inc., office only during off-peak hours whenever possible.
- Costs for the deployment of e-mail clients for Litware, Inc.; must be minimized as much as possible.

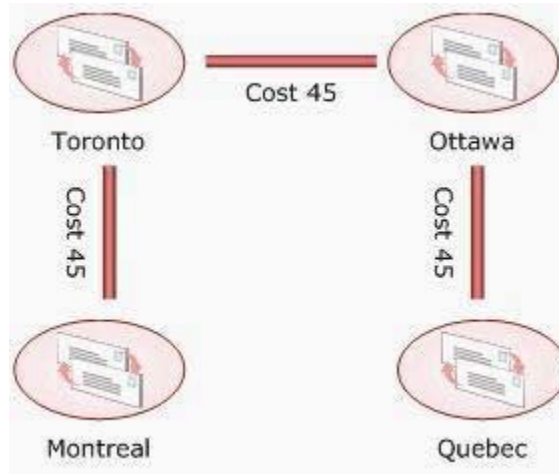
- Research in the Litware, Inc., office must digitally encrypt messages that they send to their colleagues in the field.
- Administrative assistants for Litware, Inc., must be able to send messages and respond to messages from research staff on behalf of senior staff members.

Security

- The Active Directory database must be physically secured and protected against the failure of a single domain controller.

Messaging Infrastructure

- When the migration to Exchange Server 2003 at the Baldwin Museum of Science is complete, additional Windows Server 2003 and Exchange Server 2003 computers will be deployed as necessary for Litware, Inc., as part of a separate Exchange Server 2003 organization named Litware.
- The planned routing group design for the museum is shown in the following diagram.
- You need to ensure that e-mail messages will be delivered to the Quebec office even if the



ec offices fails.
d in the Amsterdam and Toronto offices to route
nizations over the Internet.
es from Baldwin Museum of Science users in
the bridgehead server for Litware, Inc.
mailboxes for the museum to be created on the

- You need to ensure that Single Instance Store (SIS) is maintained on the Exchange Server 5.5 information stores for as long as possible during the migration.

- Two additional servers are available to act as back-end Exchange Server 2003 mail servers in the Toronto office. You plan to name these servers EX11 and EX12. No additional servers are available to assist with the migration.

Supporting Infrastructure

- During the period of coexistence of Active Directory and Exchange Server 5.5, user accounts and their mailboxes will be created from Active Directory.
- You need to ensure that replication between Active Directory and the Exchange Server 5.5 directory has the minimum possible effect on the network traffic between offices.
- You need to ensure that duplicate mailboxes are not created during the period of coexistence.

E-mail Client Infrastructure

- You need to ensure that researched at Litware, Inc., have the minimum possible effect on network traffic when accessing their mailboxes from remote locations.

Case Study #10, Baldwin Museum of Science (4 Questions)

Question: 1

You need to implement EX11 as an Exchange 2003 mailbox server and move mailboxes to EX11. What should you do? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order. (Use only actions that apply)

Actions	Answer Area
Install Exchange Server 2003 on EX11 and join EX11 to the same site as the Exchange 5.5 servers in the main office.	
Use the Exchange Task Wizard to move mailboxes from the Exchange 5.5 servers to EX11.	
Use the Migration Wizard to migrate mailboxes from the Exchange 5.5 servers to EX11.	

Answer:

Actions	Answer Area
Install Exchange Server 2003 on EX11 and join EX11 to the same site as the Exchange 5.5 servers in the main office.	Install Exchange Server 2003 on EX11 and join EX11 to the same site as the Exchange 5.5 servers in the main office.
Use the Exchange Task Wizard to move mailboxes from the Exchange 5.5 servers to EX11.	Use the Exchange Task Wizard to move mailboxes from the Exchange 5.5 servers to EX11.
Use the Migration Wizard to migrate mailboxes from the Exchange 5.5 servers to EX11.	

Question: 2

You need to design a routing configuration between the Toronto office and the Litware, Inc., office. You need to ensure that the configuration requires the minimum amount of administrative effort to create and maintain.

- A. Install an X.400 connector to connect the two offices.
- B. Install an SMTP connector to connect the two offices.
- C. Configure the appropriate mail exchange (MX) resource records to route e-mail messages between the two offices.
- D. Configure the appropriate name server (NS) resource record to route e-mail messages between the two offices.

Answer: B

Question: 3

You need to configure the messaging environment to route e-mail messages from users at the Baldwin Museum of Science to users at Litware, Inc. What should you do?

- A. On DNS1, configure mail exchanger (MX) resource records for the Exchange servers in the litwareinc.com domain.
- B. On DNS1, configure host (A) resource records for the designated bridgehead server at the Litware, Inc., office.
- C. Configure a bridgehead server in the Toronto office to route e-mail messages to the litwareinc.com domain by using a smart host.
- D. Configure a bridgehead server at the Litware, Inc., office to route e-mail messages to the baldwinmuseumofscience.com domain by using a smart host.
- E. Install and configure a DNS server at the Litware, Inc., office by using the appropriate mail exchanger (MX) resource records for Exchange servers that host the litwareinc.com domain.

Answer: C

Question: 4

You need to deploy new e-mail clients to users at Litware, Inc. Which e-mail client or clients should you use for each type of users? To answer, drag the appropriate e-mail client type or types to the correct location or locations in the answer area.

E-mail Client Types	Answer Area
Outlook 2003	Senior staff members Drag e-mail client type here
Outlook Web Access	Drag e-mail client type here
POP3 client	Administrative assistants Drag e-mail client type here
	Drag e-mail client type here
	Field researches Drag e-mail client type here
	Drag e-mail client type here

Answer:

E-mail Client Types

Outlook 2003

Outlook Web Access

POP3 client

Answer Area

Senior staff
members

Outlook 2003

Drag e-mail client type
here

Administrative
assistants

Drag e-mail client type
here

Outlook 2003

Field
researches

Outlook Web Access

Drag e-mail client type
here

Overview

Southridge Video is one of the fastest growing retailers of movies in videocassette and DVD in the southern United States. The company offers movies for sale and rental. The retail outlets are open seven days per week from 10:00 A.M. through 10:00 P.M.

Case Study #11: Southridge Video

Physical Locations

The company's main office is in Dallas. The company also has 10 branch offices that operate as distribution centers to 100 retail outlets across the southern United States. There are 3,000 users at the main office, 600 users at each branch office, and between 90 and 100 users at each retail outlet.

Planned Changes

The company plans to upgrade from Exchange 2000 Server to Exchange Server 2003 within the next three months. Microsoft Outlook 2003 will be deployed to all client computers as part of this project.

Problem Statements

A previous migration from Exchange Server 5.5 to Exchange 2000 Server resulted in the existing administrative group structure that makes administration difficult. A recent estimate is that almost 50 percent of e-mail messages received by users at the company are unsolicited commercial e-mail messages. The amount of unsolicited commercial e-mail messages received by users is growing.

Administrative Structure

- There are currently 111 administrative groups, with one group for each physical location.
- The administrative group at the main office is named MO Admins. This group is responsible for all servers and users located in the main office.
- All main office servers have a mailbox storage policy to limit users' mailboxes to 50 megabytes. Some users have an exemption to this limitation.
- The administrative group at each branch office is named *Branchname* Admins.
- Each *Branchname* Admins group is responsible for all servers and users located in the branch office and its associated retail outlets. No branch office or retail outlet servers have mailbox storage policies in place.
- Group membership and permissions are shown in the following table.

Group	Exchange 2000 Server Permissions	Active Directory Permissions	Member Of
MO Admins	Full administrative rights to all Exchange servers in the main office and branch offices	Full Control	Local Administrators Group of all Exchange servers
<i>Branchname</i> Admins	Full administrative rights to branch office Exchange servers and associated retail outlet servers	Full Control	Local Administrators Group of all Exchange servers

Messaging Infrastructure

- Southridge Video currently uses Exchange 2000 Server. An in-place upgrade was performed from Exchange Server 5.5 two years ago.
- The network includes 11 Internet SMTP connectors.

- Each branch office Exchange server has a single mailbox store.
 - Two Exchange 2000 servers at the main office contain all 200 MB of the public folders.
 - Public folders are widely used throughout the environment.
 - Tape backups are performed locally on each Exchange server. A full backup is performed every Sunday, and a daily incremental backup is performed every Monday through Friday.
- At the main office, there are separate mailbox stores created for each department.

E-mail Clients

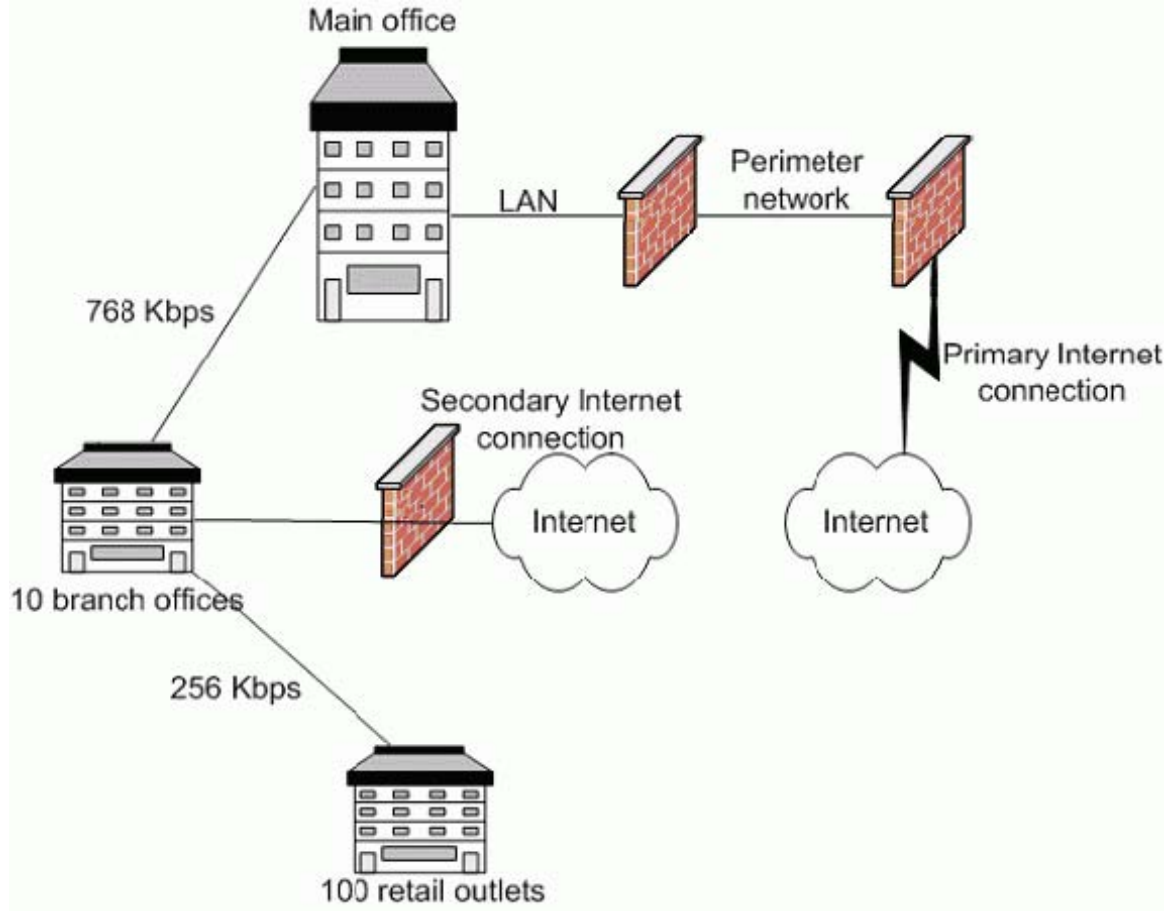
- Outlook 2000 and Outlook 2002 are supported.
- Some users upgraded to Outlook 2003 on their own.
- Microsoft Outlook Web Access is used by a few users at their homes.
- Some users use Microsoft Outlook Express. No other e-mail clients are supported.
- The MAPI, IMAP4, and POP3 protocols are currently enabled.
- Each user at the main office, branch offices, and retail outlets used Outlook configured with a MAPI connection to access the user's mailbox located on the Exchange 2000 server at the user's location.

Directory Services

- Active Directory is deployed in a single-domain forest named southridgevideo.com.
- All user accounts are located in a single organizational unit (OU) named Company Users.
- There are 12 global catalog servers, with two at the main office and one at each branch office. There are no additional domain controllers within the environment.

Network Infrastructure

- The network infrastructure is shown in the following diagram.



Administration

- **Chief Executive Officer:** We need to improve our electronic messaging environment. It takes too long for our retail outlets to receive some mailings. This is not acceptable. We have been spending too many IT resources cleaning viruses that have entered our network through our e-mail system.

-

- The IT administrative functions are distributed between the main office and the branch office. Each branch office IT group is also responsible for the administration of 10 retail outlets.
- Currently, all Active Directory user administration is performed by each Exchange administrative group.

Security

- External access to user mailboxes needs to be allowed only for users who use Outlook Web Access. In addition, access to e-mail messages must be encrypted.
- Efforts to stop unsolicited commercial e-mail messages must be implemented.
- An antivirus solution needs to be implemented to protect the network from Internet email messages that are potentially harmful.
- Files that pose a virus risk need to be blocked.

Interviews

- **Chief Information Officer:** Our current e-mail infrastructure is based on an in-place upgrade that was performed over two years ago. As we grew, we did not adapt to our current needs. There seem to be too many security risks. We need to minimize the permissions that the Exchange administrators have. Currently, Exchange administrators can create a user

account with a mailbox on any Exchange 2000 server. This needs to be restricted to allowing administrators to create mailboxes on only the servers they support and manage. We need to be able to recover a single mailbox without effecting other user's mailboxes. **Messaging Expert:** I notice that almost every marketing person in the main office has an exemption by using polices.

End Users: I work in a retail outlet. Sometimes when I send an e-mail message, it seems to take a long time to send, especially if I am sending it to a distribution group. Also. Sometimes when I click a public folder, I receive a pop-up message that tells me that my computer is trying to connect to the server and that I have to wait.

Messaging Infrastructure

- You need to ensure that a single mailbox can be recovered without adding additional hardware.
- Each new Exchange 2003 server will have seven 72-GB hard disks.

Supporting Infrastructure

- You need to ensure that Active Directory supports the current Exchange administrative model. No changes will be made to the network topology

E-mail Client Infrastructure

- The company wants Outlook 2003 to be used as the e-mail client for users who are connected to the LAN.
- The company wants Outlook Web Access to be used as the e-mail client on computers that are not members of the southridgevideo.com domain.
- All network segments must allow HTTPS, MAPI, and IMAP4. POP3 will no longer be allowed.
- You need to ensure that a single mailbox can be recovered without adding additional hardware.
- Each new Exchange 2003 server will have seven 72-GB hard disks.

Supporting Infrastructure

- You need to ensure that Active Directory supports the current Exchange administrative model. No changes will be made to the network topology.

E-mail Client Infrastructure

- The company wants Outlook 2003 to be used as the e-mail for users who are connected to the LAN.
- The company wants Outlook Web Access to be used as the e-mail client on computers that are not members of the southridgevideo. Com domain.
- All network segments must allow HTTPS, MAPI, and IMAP4. POP3 will no longer be allowed.
- Microsoft Internet Explorer 5.0 and later is the only supported Web browser.

Case Study #11, Southridge Video (6 Questions)**Question: 1**

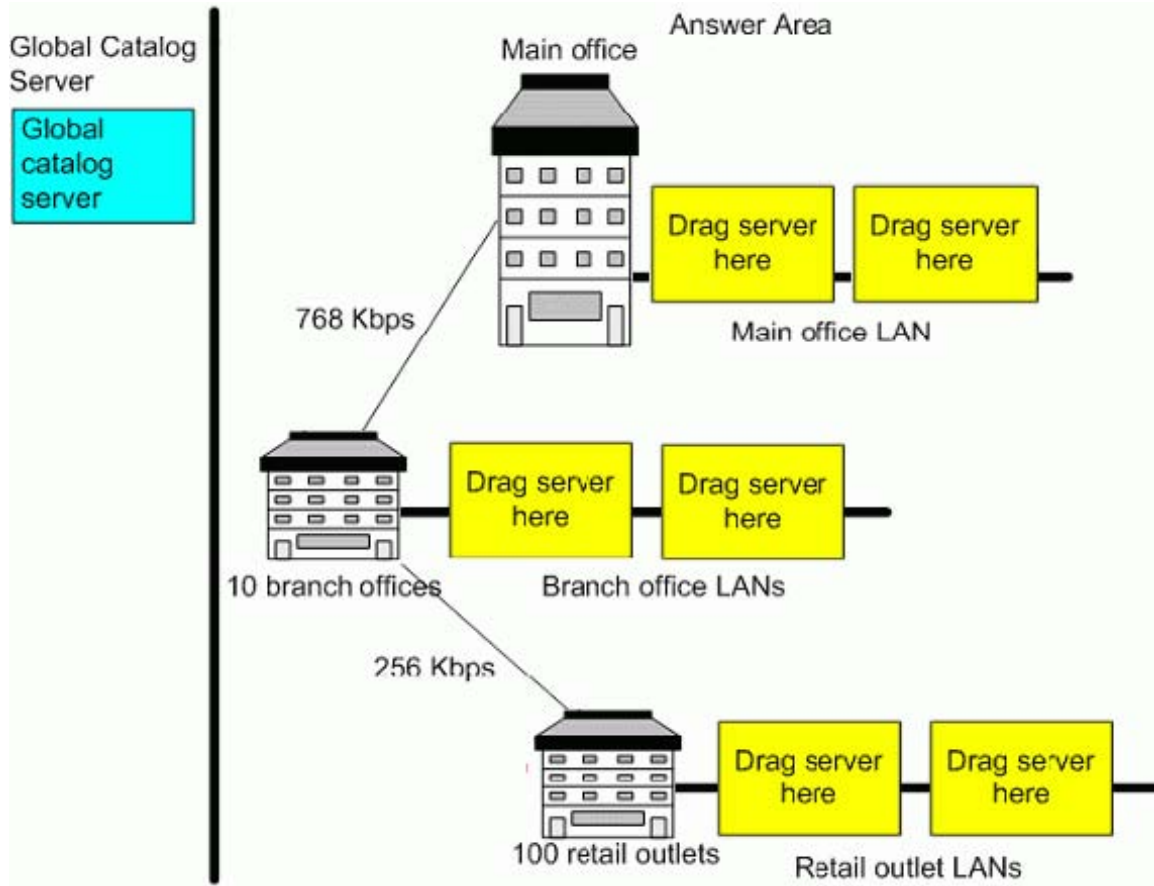
You need to design a mailbox store policy for all mailboxes.
What should you do?

- A. Create and apply one mailbox store policy for users in all offices.
- B. Create and apply one mailbox store store policy for the users at all the branch offices.

- D. Create and apply one mailbox store policy for the users in the marketing department. Create and apply a second mailbox store policy for users in all other departments.
- C. Create and apply one mailbox store policy for all users who are not in the marketing department.
- Answer:** D. Create and apply a second mailbox store policy for the users at all the branch offices.

Question: 2

You need to design the placement of global catalog servers in the new environment. Where should you place global catalog servers?



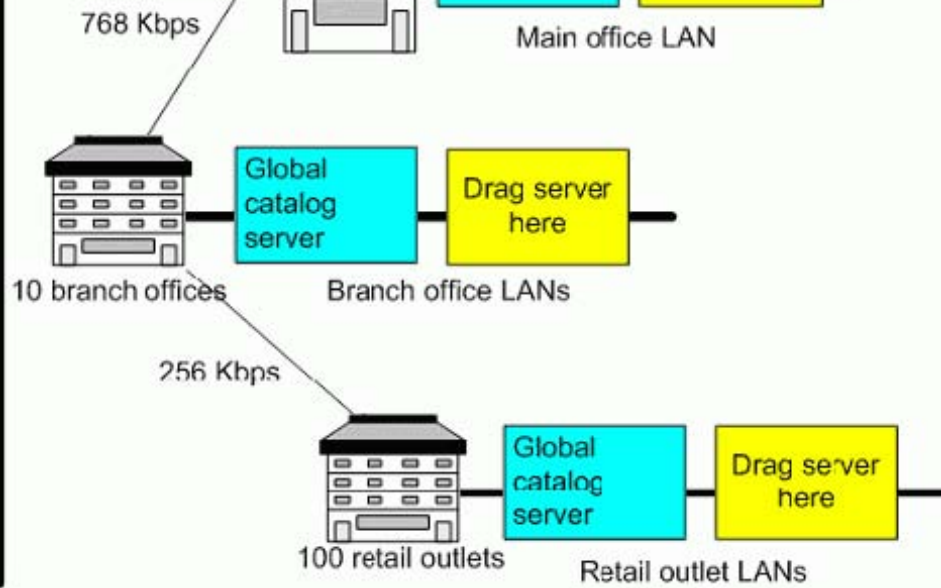
Answer:

Global Catalog Server

Global catalog server

Main office

Answer Area



Question: 3

You need to reduce the number of unsolicited commercial e-mail messages that are received.
What should you do?

- A. Require Basic authentication on all SMTP virtual servers.
- B. Require Integrated Windows authentication on all SMTP virtual servers.
- C. Create a block list of IP addresses and apply the block list to each SMTP virtual server.
- D. Subscribe to a real-time list service and use the appropriate Block List Service Configuration Settings.

Answer: D

Question: 4

You need to design a plan for recovering mailboxes.
What should you do?

- A. Configure a recovery storage group on each Exchange 2003 server.
- B. Configure a new empty storage group on each Exchange 2003 server.
- C. Configure a recovery storage group on one Exchange 2003 server at the main office.
- D. Install Exchange Server 2003 on a separate server at each location. Configure these servers to perform mailbox recoveries.
- E. Install Exchange Server 2003 on a separate server at the main office. Configure this server to perform mailbox recoveries.

Answer: A

You need to protect the messaging environment from potentially harmful attachments to email messages. What should you do?

- A. Configure block list in the global settings for the Exchange organization.
- B. Configure a receipt filter in the global settings for *@southridgevideo.com.
- C. Configure Outlook 2003 so that it does not allow users to access potentially harmful file types.
- D. Configure Outlook 2003 rules to move all potentially harmful attachments to a quarantine folder.

Answer: C

Question: 6

You need to design a security strategy for Outlook Web Access. Which three actions should you perform? (Each correct answer presents part of the solution. Choose three)

- A. Install an SSL client certificate.
- B. Install an SSL server certificate.
- C. Require only Basic authentication.
- D. Require SSL for access to each Outlook Web Access server that is accessible from the Internet.
- E. Allow only Integrated Windows authentication.
- F. Allow SSL connections for access to each Outlook Web Access server that is accessible from the Internet.

Answer: B, C, D

Overview

The School of Fine Art is a creative learning school that specializes in modern art. Primary hours of operation are 8:00 A.M. to 5 P.M. Users include faculty members, students, and employees. All users must be able to access their e-mail messages at all hours.

Case Study #12: The School of Fine Art

Physical Locations

The school's main office is in Chicago. There are 150 campuses located throughout the United States. The main office includes 2,500 users. Each campus has approximately 30 faculty members who are network users.

Planned Changes

Users must be able to retrieve their e-mail messages from any supported device that is connected to the Internet. Both wired and wireless connectivity must be supported.

Problem Statements

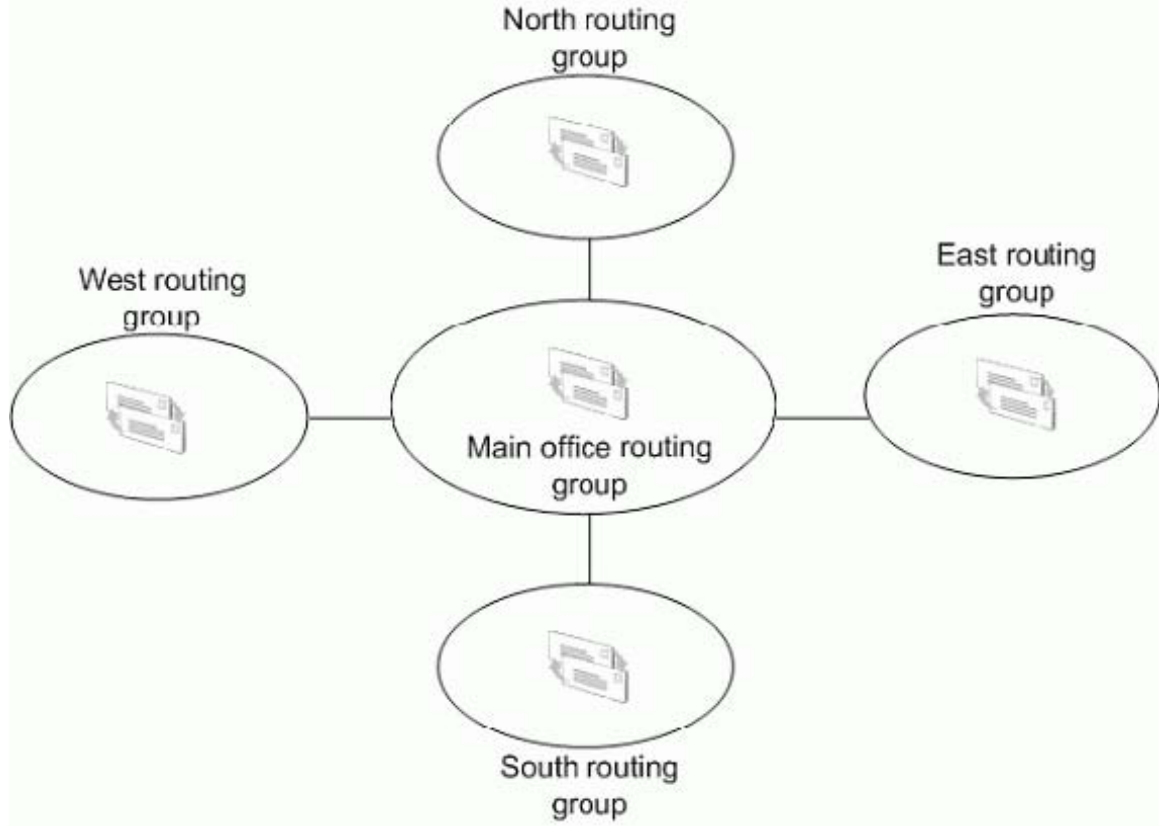
Users cannot currently access their e-mail messages remotely by using Microsoft Outlook.

Administrative Structure

- There is one Exchange 2000 Server administrative group for the Exchange servers in the main office. There are 150 additional Exchange 2000 Server administrative groups, with one group for each campus. These groups were created when the company upgraded from Exchange Server 5.5.
- All Information Technology (IT) administrative roles are centralized in the main office.
- The campus office are administered by a team named Campus Admin, which is also located in the main office. The Campus Admin team has Exchange Full Administrator permission for the 150 Campus administrative groups.
- The main office servers are administered by a team named Main Office Admin. The Main Office Admin team has Exchange Full Administrator permission for all administrative groups.

Messaging Infrastructure

- Currently, the School of Fine Art is using Exchange 2000 Server as its messaging platform. The Exchange servers are grouped into five main routing groups. The main office routing group contains all of the servers in the main office. The servers for the 150 campus locations are in routing groups based on regions of the country.
- The routing group topology is shown in the following diagram.



- All campus Exchange servers have a single mailbox store for all users in that campus location.
- The Exchange servers at the main office have two mailbox stores that have the users divided equally based on the first letter of their last name. Both stores are in a single storage group. Exchange servers at all campus locations are backed up daily by performing a local backup. A centralized network backup tool is used for the Exchange servers at the main office. The current backup solution can back up and restore at a rate of 14 GB per hour.
- There is one public folder server that is widely used.

E-mail Clients

- Users access their e-mail messages by using Outlook 2000 and Microsoft Outlook Web Access.
- E-mail clients access Outlook Web Access by using SSL from the Internet and while using the company network.
- Outlook Web Access is deployed on the front-end servers located in the perimeter network.
- There are no mailbox size limits.

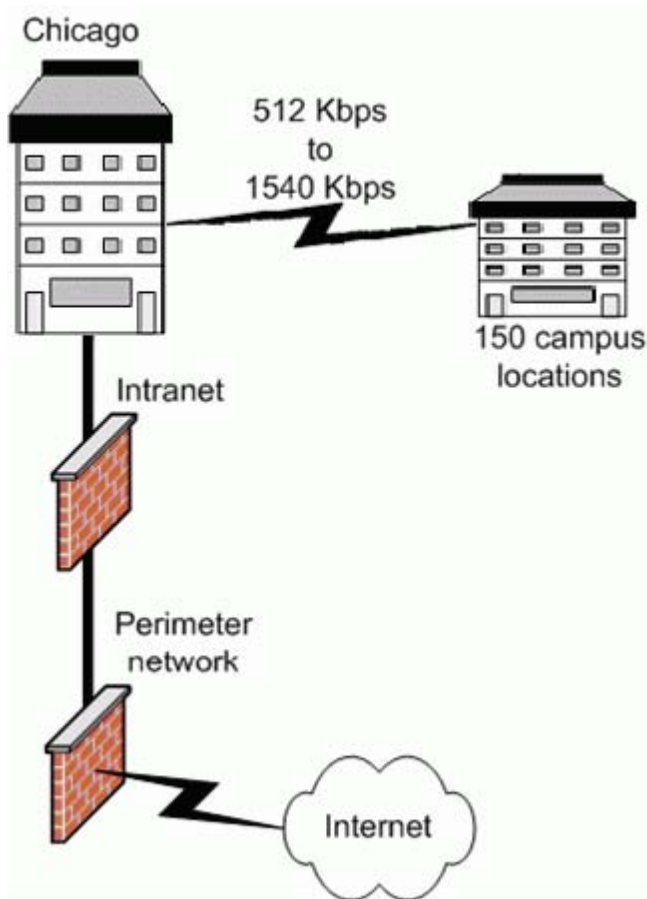
Directory Services

- Active Directory is deployed in a single domain named corp.fineartschool.net.
- Each campus office is considered a single site and has a site connector back into the main office site.

Network Infrastructure

- Each campus office is connected directly to the main office. Connection speeds vary from 512 Kbps to 1540 Kbps. All LAN connections are 100 Mbps.

- The relevant portion of the network is shown in the following diagram.



n server that is the Exchange 2000 server

Business Factors

The company requires end users to be able to access to their e-mail messages from any supported device. Sales personnel need to be able to read and send e-mail messages and schedule meetings while they are offline. The company wants e-mail messages and meeting requests to be sent automatically when the sales personnel connect to the Exchange servers from remote locations.

Security

The Exchange environment includes mailboxes for only faculty members and no other users. The company requires security measures to be put into place to protect the messaging environment from external and internal users. There are currently no message attachments being blocked. The company wants attachment types that can invoke a virus attack to be blocked at the SMTP gateway level. The company wants viruses to be stopped before they reach the Exchange environment. All mailbox data that a user accesses from the Internet must be encrypted to ensure security.

Interview Chief

Information Officer:

We plan to implement new service level agreements that will require us to restore mailboxes within one hour of a request. We currently cannot do this in regard to availability and recovery. We need to make our internal network more secure by limiting the traffic into our internal network

to secure Web traffic and SMTP traffic only. We need to limit the cost of hardware and software while still achieving our technical goals. We need to be able to apply service packs and security updates without affecting users' access to their mailboxes.

Messaging Expert:

We need to move all mail functions and servers into the main office data centers. We must have redundant servers for all messaging functions. We must design a solution that has the most flexibility for future growth without having to redesign mailbox servers. We must also have dedicated servers for each mail function. We also cannot afford to lose a single e-mail item if a database becomes corrupt.

Messaging Administrator:

The administrative model must be streamlined. Our current administrative group structure at times makes it difficult to find a server quickly.

Messaging Infrastructure

- Service-level agreements require mailboxes to be restored within one hour.
- Users must be able to send and receive e-mail messages in the event of a single mailbox server failure.

Supporting Infrastructure

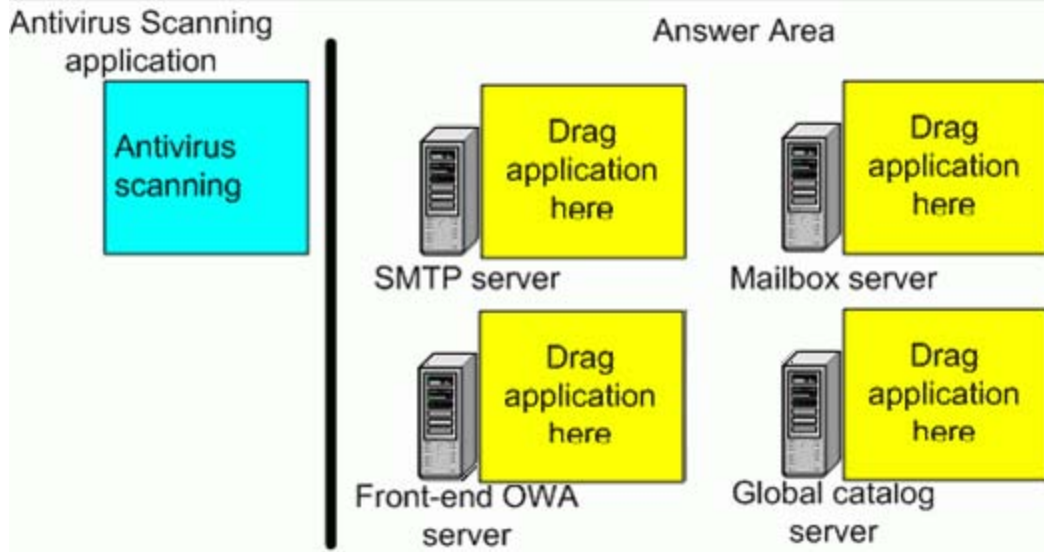
- No changes are planned for the network topology.
- As a part of the migration, the functional level of the Active Directory forest will be upgraded to Windows Server 2003.

E-mail Client Infrastructure

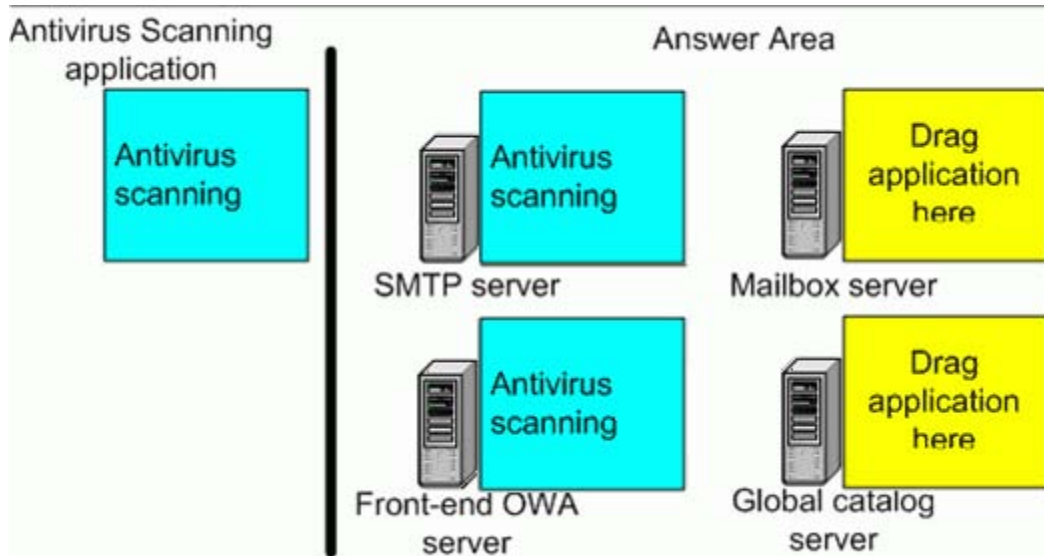
- Outlook 2003 will be deployed to all client computers. Outlook Web Access 2003 and Outlook Mobile Access will also be deployed. Microsoft Outlook Express will not be a supported e-mail client.

Case Study #12, The School of Fine Art (4 Questions)**Question: 1**

You need to design an antivirus solution for scanning e-mail messages- On which server or servers should you install an antivirus scanning application? To answer, drag the antivirus scanning application to the appropriate server or servers in the answer area.



Answer:



Question: 2

You need to design a fault tolerant Exchange Server 2003 solution for the main office users. What should you do?

- A. Design an active/active cluster that includes two back-end mailbox servers.
- B. Design an active/passive cluster that includes two back-end mailbox servers.
- C. Design a Network Load Balancing solution consisting of two front-end servers per load balanced server group.
- D. Design front-end and back-end Exchange servers for mailbox access by using two front-end servers for each back-end mailbox server.

Answer: B

Question: 3

- A. Create one administrative group for each campus location.
- B. Create one administrative group for each of the routing groups.
- C. You need to design an administrative group model that supports the IT administrative model. Create one administrative group for each of the departments at the main office.
- D. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two)
Create one administrative group for all servers that store mailboxes for users at the main office.
- E. Create one administrative group for all servers that store mailboxes for users at the campus locations.

Answer: D, E

Question: 4

You need to design the public folder infrastructure. Which two solutions should you perform? (Each correct answer presents part of the solution. Choose two)

- A. Create one dedicated folder server.
- B. Create two dedicated public folder servers.
- C. Create five dedicated public folder servers.
- D. Replicate each public folder to all dedicated public folder servers.
- E. Replicate only the free and busy information to each public folder server.
- F. Replicate only the free and busy information to all Exchange 2003 servers.

Answer: B, D

Overview

They Research is a global company that specializes in new technology research. The company operates at all hours due to the time differences around the world.

Case Study # 13, Trey Research

Physical Locations

The main office is located in Rome, and the company has five branch offices and 45 satellite offices around the world. There are 500 users at the main office. Each branch office has between 100 and 150 users. Each satellite office has between 50 and 75 users.

Planned Changes

The company recently upgraded the entire messaging environment from Exchange 2000 Server to Exchange Server 2003. Microsoft Office 2003 will be deployed to all client computers.

Administrative Structure

- There are currently 51 administrative groups. There is one administrative group for the main office, one for each branch office, and one for each satellite office.
- There are currently no server or mailbox store policies. The Exchange administrators at the main office are responsible for the Exchange servers at the main office as well as all shared messaging functions and meeting the requirements of new service-level agreements (SLAs).
- The Exchange administrator at each branch office is responsible for the Exchange server at the branch office.
- The Exchange administrator at each satellite office is responsible for the Exchange server at the satellite office.

Messaging Infrastructure

- Exchange Server 2003 is deployed throughout the entire company. Each Exchange server has one mailbox store.
- There are 51 routing groups. There is one routing group for the main office, one for each branch office, and one for each satellite office.
- Local backups are performed at each branch office and satellite office by using the ntbackup command. The main office uses a third-party network backup solution.
- The Internet connection at the main office is protected by a firewall. Each office uses this connection for its Internet traffic.

E-mail Clients

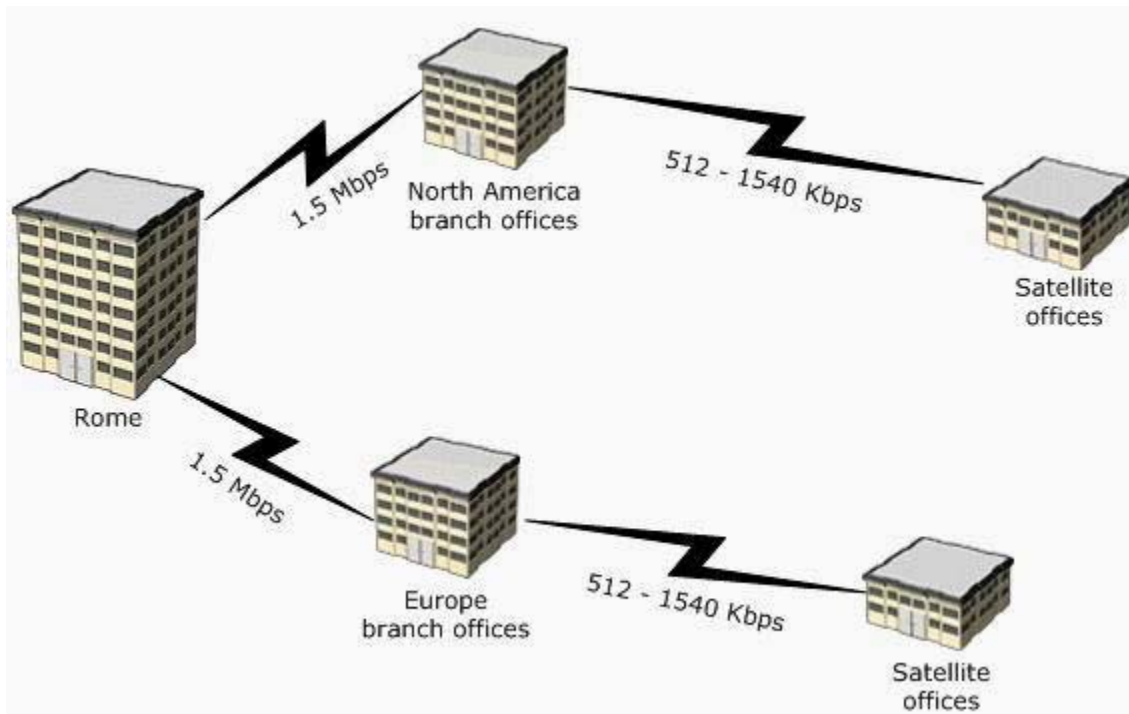
- Users currently use Microsoft Outlook 98 SR2 or later.
- Due to poor performance, Microsoft Outlook Web Access is seldom used.
- The protocols currently supported are MAPI, HTTP, HTTPS, and SMTP.
- Users connect to their mailboxes by using portable computers either in the office or while traveling.
- Users run various versions of Microsoft Internet Explorer and other Web browsers.

Directory Services

- The network consists of a single-domain Microsoft Windows Server 2003 Active Directory forest named treyresearch.com.
- The main office has an organizational unit (OU) named Main Office, and the Exchange administrators at the main office have Full Control permission for this OU.
- Each branch and satellite office has its own OU named for the city in which the office is located, and all Exchange administrators have Full Control permission for these OUs.

Network Infrastructure

- Each branch and satellite office has a single server that is an Exchange server, a Windows Server 2003 domain controller, and global catalog server.
- A representative portion of the current network infrastructure is shown in the following diagram.



Administration

- Active Directory is managed by the data security team. That team manages all user and computer accounts including creation, group membership, and deletion.
- The domain administrators have Exchange View Only Administrator permission for all Exchange 2003 servers.
- Any Exchange task is performed by either the administrators at the main office or the administrators at a branch office or satellite office.

Business Factors

- Users must be able to access their e-mail messages from the office, from home, or from other locations.
- The company wants users of portable computers to be able to use the same Outlook profile regardless of whether they are in the office or connecting from a remote location.

Security

- All external access to the new e-mail system must be encrypted.
- Although unsolicited commercial e-mail messages are not currently a problem, the new design must allow filtering to be implemented if needed.
- All viruses must be stopped prior to reaching any Exchange server.
- All potentially harmful attachments must be blocked by the antivirus scanning application.
- Users must be able to digitally sign e-mail messages.
- All inbound Internet traffic is not directly allowed into the internal network.

Interviews

- **Chief Executive Officer:** We have been increasing our number of users at over 50 percent per year and expect this growth rate to continue for the next few years. We need to ensure that our new messaging environment is capable of handling this growth. Our executive team also must have priority in regard to mailbox restoration times. They must have their mailboxes restored within four hours of failure. In addition, our budget requires us to limit hardware purchases to those that are necessary to meet our business goals.
- **Chief Information Officer:** Our current e-mail infrastructure provides us with generally adequate results. However, the slow speed of sending and receiving e-mail messages for users at the branch offices and satellite offices is unacceptable. We need to improve the speed of delivery for e-mail messages to support our future growth. We now know that the servers at our main office have recently been used as an open relay. We need to protect ourselves against this. We also need to protect each branch office and satellite office from unauthorized access by administrators in other branch offices and satellite offices.
- **Messaging Expert:** Our routing topology seems to be causing occasional slowdowns for sending or receiving e-mail messages. We need to standardize on a single e-mail client platform as well as enable users to work from virtually anywhere without having to reconfigure their e-mail client. We need to be able to troubleshoot Internet connectivity 24 hours a day. Troubleshooting can be time-consuming since we cannot contact the IT staff in Rome when they are not at their office.
- **End User:** My connection to e-mail messages when I use Outlook from home is very slow over my dial-up VPN connection. Most of the time I do not even bother using Outlook over a slow connection.
- When I am traveling, the results are no better and very frustrating. If I am able to use a broadband connection when traveling, the results seem to be much better.

Messaging Infrastructure

- More efficient store management needs to occur. Users currently have no limit on mailbox size, and this factor detrimentally affects the amount of disk space.
- In the event of a failure, mailboxes for users other than executives must be recovered within six hours.
- A more secure firewall infrastructure will need to be implemented to protect the network at each office.

Supporting Infrastructure

- The current Active Directory structure and network topology will be maintained.

E-mail Client Infrastructure

- Outlook 2003 will be deployed to all client computers.
- All current Web browser versions must continue to be supported.

Case Study # 13, Trey Research (5 Question)

Question: 1

You need to design a fault tolerant solution for remote e-mail access. What should you do?

- A. Configure the DNS serves that provide external name resolution to use round robin name resolution to two front-end Exchange 2003 servers.
- B. Configure the internal DNS servers to use round robin name resolution to two front-end Exchange 2003 servers.
- C. Configure Exchange server for remote mailbox access by using two front-end Exchange 2003 servers for each Exchange 2003 mailbox server.
- D. Design a Network Load Balancing solution consisting of two front-end servers.

Answer: D

Question: 2

You need to ensure that the connections are encrypted when users connect to their mailboxes from the Internet. What should you do?

- A. Configure all mailbox servers to have a server certificate and require SSL.
- B. Configure all front-end servers to have a server certificate and require SSL.
- C. Configure each client computer to have a client certificate. Allow client certificates on each mailbox server.
- D. Configure each client computer to use Integrated Windows authentication when using Internet Explorer to connect to the Exchange servers.

Answer: B

Question: 3

You need to configure public folder security. Which group or groups should you allow to create top-level public folders?

- A. only the Exchange administrators at the main office
- B. only the Exchange administrators at the branch offices and satellite offices
- C. the Exchange administrators at the main office and the Domain Admins group
- D. the Exchange administrators at the main office and the Exchange administrators at the branch offices and satellite offices

Answer: A

Question: 4

You need to design a storage strategy that meets the business and technical requirements. What should you do?

- A. Create a separate storage group and mailbox store for each branch office and each satellite office.
- B. Create a separate storage group and mailbox store for the executives on all servers that contain executive mailboxes.
- C. Install a new Exchange server at the main office and use the new server for only executive mailboxes.
- D. Install a new Exchange server at each branch office. Create a separate storage group named Executive Storage Group and a new mailbox store in this storage group. Place the executive mailboxes from the appropriate branch office or satellite office in this new mailbox store.

Answer: B

Question: 5

You need to design a remote access solution so that users can access their e-mail messages. What should you do?

- A. Configure Outlook Web Access so that it is configured to use SSL on each mailbox server.
- B. Configure Outlook Web Access to require Integrated Windows authentication on each mailbox server.
- C. Install and configure a front-end server in the perimeter network. Install and configure the RPC Proxy Service on a front-end server in the perimeter network.
- D. Install and configure a front-end server in the internal network. Install and configure the RPC Proxy Service on a front-end server in the internal network.

Answer: C