

# Exam : 70-297

Title: Designing a MicrosoftWindows Server 2003Active Directory andNetwork Infrastructure

## Version : DEMO

1.Overview

Litware, Inc., is a corporate management company that manages the internal operations for its business customers.

Internal operations include sales, accounting, and payroll.

Physical Locations

Litware, Inc., has two main offices in the following locations:

? New York

? Chicago

Each office has approximately 300 users.

The New York office has a branch office in Boston. The Boston office has approximately 100 users. Staff in the Boston exclusively office work on projects for customers in the New York office. The Boston office has no customers of its own.

Planned Changes

As part of its initiative to streamline the IT environment and increase network security, the company has decided to implement a Windows Server 2003 Active Directory environment.

The New York office is currently in negotiations to secure Contoso, Ltd., as a new customer.

Business Processes

Litware, Inc., manages the business operations for eight business customers. For each customer, Litware,

Inc. has a dedicated staff that works exclusively with that customer.

Users require access only to project data for the customers to which they have been directly assigned. The

New York and Chicago offices are responsible for their own customers and maintain them separately. Each individual customer project is listed in the following table.

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Customers name	Managed by
Alpine Ski House	New York
Baldwin Museum of Science	Chicago
Coho Vineyard	New York
Fabrikam, Inc.	New York
Humongous Insurance	Chicago
Lucerne Publishing	New York
Wingtip Toys	Chicago
Woodgrove Bank	Chicago

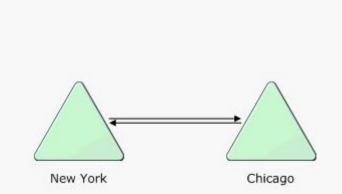
The chief information officer is the only person who is authorized to implement any changes that will impact the entire company. Roles and responsibilities in the IT department are shown in the following table.

Job title	Responsibilities	Office	
Chief information Approves all major IT decisions, Chief information manages the IT budget, functions as liaison between network administrators in the New York and Chicago offices.		New York	
Network administrator, New York	Manages the day-to-day operations of the New York and Boston networks. Installs and manages servers and domain controllers.	New York	
Network administrator, Chicago	Manages the day-to-day operations of the Chicago network. Installs and manages servers and domain controllers.	Chicago	
IT support	Provides day-to-day troubleshooting and maintenance of the network. This includes the installation of operating systems for end users and some server configuration. Each office has its own IT support staff.		
Help desk	Provides telephone support for all users in all offices.	New York	

### **Directory Services**

Currently, Litware, Inc., has two Windows NT 4.0 domains configured a shown in the Existing Domain Model exhibit.

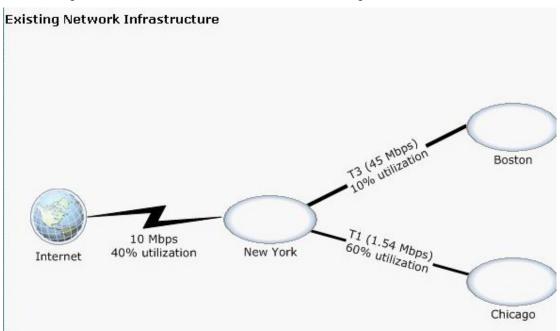
### **Existing Domain Model**



The New York domain contains user and computer accounts for both the New York and Boston offices. The Chicago domain contains user and computer accounts for the Chicago office.

Litware, Inc., users require access only to project data for the customers to which they have been directly assigned. They also require access to internal company resources, such as a time-building application that is hosted in the New York office.

Accounting auditors and executives require access to data from all customer projects to perform quarterly reports, account reviews, and billing verifications. Account auditors and executives are located in both New York and Chicago offices, and frequently travel between offices. Network Infrastructure



The existing network infrastructure is shown in the Existing Network Infrastructure exhibit.

All Internet access is provided through a proxy server located in the New York office. The proxy server provides Internet name resolution on behalf of the client computers.

Currently, all servers run Windows NT Server 4.0 with the latest service pack installed. A time-billing application is installed on a Microsoft SQL Server computer named SQL1. SQL1 is managed by the network administrators in the New York office, and is accessed by all Litware, Inc., users. The company??s servers, including their domain membership, physical locations, and network functions, are shown in the following table.

Server name DC1 DC2 DC3	Domain New York New York New York	Office New York New York Boston	Functions PDC, DHCP s BDC, WINS se BDC, DHCP	erver
server				Member
server Fileserver1	New York	New York		
Fileserveri	New fork	New fork	,DHCP server, file	server
Fileserver2	New York	New York	Member server,	
file				WINS server,
				server
Fileserver3	Chicago	Chicago	Member server	
file				DHCP server,
				server
Fileserver4	Chicago	Chicago	Member server,	

WINS server,

lile				
SQL1	New York	New York	Member server,	server
SQLI	New TOIK	INEW TOTK	Member Server,	SQL Server
				computer,
timebilling				
				application
				server
Most required network rea	sources are available locally.			
All client computers in the	e company run Windows 2000	Professional.		
Problem Statements				
The following business pr	roblems must be considered:			
? Contoso, Ltd., requires	that the new Active Directory	infrastructure is c	ompletely in place	prior to

? Contoso, Ltd., requires that the new Active Directory infrastructure is completely in place prior obtaining the contract.

? Administrative authority for network administrators in the New York and Chicago offices must remain equal.

Chief Executive Officer

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The addition of Contoso, Ltd., as a customer will likely increase annual revenue by 50 percent. Additional funds and resources have been allocated to secure this contract. All efforts should be made to demonstrate to the Contoso, Ltd., representatives that we will address all of their security concerns. This will be done on part though a migration to the Windows Server 2003 Active Directory environment. Any short-term costs associated with a technology deployment are acceptable if they allow for growth and flexibility in the future.

Chief Information Officer

A Web-based interface for the time-billing application will be implemented in the near future. The current network administrators in the New York and Chicago offices perform their jobs well. To reduce the burden on IT staff, trusted individuals within the organization should be identified to help reduce the IT administrative burden.

Office Worker

We want to be able to access the internal network from our home computers.

**Business Drivers** 

The following business requirements must be considered:

? The company wants access to the network to remain easy and intuitive. A company policy now states that user logon names and e-mail addresses should be identical. Currently, each user has an e-mail address made up of that user??s first initial and last name, and an additional domain name indicating the region that manages that user??s account. For example, the user Nicole Caron from the New York office has the e-mail address of ncaron@ny.litwareinc.com. The user Luis Bonifaz from Chicago has the e-mail address of Ibonifaz@chi.litwareinc.com.

? The domain name litwareinc.com has been registered.

? To ensure reliability in the event of a single WAN link failure, users should continue to authenticate on the network. Additionally, all domains should be fault tolerant in the event of a single domain controller failure.

? VPN access will be provided to enable user access to customer data outside of regular business hours. VPN connections will be assigned through the New York office.

Organizational Goals

The following organizational requirements must be considered:

? As part of the negotiations between Contoso, Ltd., and the New York office, Litware, Inc., has agreed to ensure that all users who require access to Contoso, Ltd., data must have complex passwords that are a minimum of 10 characters in length.

? The company has also agreed that management of Contoso, Ltd., data must be completely isolated from all other Litware, Inc., data. This included the ability to manage security of Contoso, Ltd., resources. There will be no exceptions.

? Planning for other aspects of how Contoso, Ltd., will integrate with the Litware, Inc., environment is premature at this point. However, a quick migration solution for the existing environment must be identified to allow for this anticipated growth.

? Litware, Inc., account auditors and executives from the New York and Chicago offices will require limited access to Contoso, Ltd., data.

### Security

The following security requirements must be considered:

? A new Web-based interface will be implemented for the time-billing application running on SQL1. This application will use IIS, and will require the use of IP filtering that uses computer host names for security purposes.

? Only authorized computers within the internal Litware, Inc., network will be given access to the time-billing application.

#### Active Directory

The following Active Directory requirements must be considered:

? The network administrators in the Chicago and New York offices will retain their current responsibilities, such as the management of user accounts, servers, and domain controllers for their regions. There should be no overlap between their administrative authority.

? There is a need to allow trusted individuals responsible for each customer project to manage user account information. Responsibilities will include the ability to reset passwords and define personal user information on user accounts, such as phone numbers and addresses. The trusted individuals will be allowed to manage only user accounts within the customer project to which they have been assigned.

## Network Infrastructure

The following infrastructure requirements must be considered:

? Users in the Chicago office access Internet-based resources frequently. This Internet-related traffic accounts for most of the bandwidth used between the Chicago and New York offices. Bandwidth utilization between these two offices is currently a cause for concern. Network traffic between the Chicago and New York offices must be minimized whenever possible.

? Because of the Boston office??s data access requirements, a high level of availability and reduced latency between the New York and Boston offices is required. Bandwidth utilization between the Boston and New York offices is minimal and is not a concern in the foreseeable future.

? A Windows Server 2003 computer will provide VPN access to the network by using both L2TP and PPTP. Usage statistics will be gathered over time to identify which users establish VPN

connections to the network, and the duration of their connections. These usage statistics will help the company track trends and plan for future growth.

? The network administrator in Chicago has extensive knowledge of DNS, and will manage the implementation of the DNS infrastructure for the Litware. Inc., network.

? The DNS structure must be secured against any unauthorized modifications, but also must be easy to maintain and manage.

Answer:

2.You are designing a forest and domain structure to address the concerns of Contoso, Ltd., and to meet the business and technical requirements. You want to use the minimum number of domains and forests that are required. Which domain structure should you use?

A.one forest and two domains

B.one forest and three domains

C.one forest and four domains

D.two forests and three domains

E.two forests and four domains

Answer: E

3. You are designing the top-level organizational unit (OU) structure to meet the administrative requirements. What should you do?

A.Create a top-level OU named New York. Place all user and computer accounts from New York in the New York OU.

B.Create a top-level OU named Chicago. Place all user and computer accounts from Chicago in the Chicago OU.

C.Create a top-level OU named Coho. Place all user and computer accounts that are assigned to the Coho Vineyard customer project in the Coho OU.

D.Create a top-level OU named Sales. Place all user and computer accounts from the sales department in the Sales OU.

Answer: C

4.You are designing a security group strategy to meet the business and technical requirements. What should you do?

A.Create one global group named G\_Executives. Make all executive user accounts members of that group.

B.Create two global groups named G\_Executives and one universal group named U\_Executives. Make the two global groups members of U\_Executives. Make the executive user accounts members of the appropriate global group.

C.Create three global groups named G\_NY\_Executives and G\_Chi\_Executives and G\_Executives. Make G\_NY\_Executives and G\_Chi\_Executives members of G\_Executives. Make the executive user accounts members of the appropriate global group.

D.Create one domain local group named DL\_Executives. Make all executive user accounts members of that group.

Answer: B

5. You are designing an Active Directory implementation strategy to present to executives from your

company and from Contoso, Ltd. Which implementation strategy should you use?

A.Upgrade the New York domain. Upgrade the Chicago domain. Create a pristine forest for Contoso, Ltd. B.Create a pristine forest. Upgrade the New York domain. Upgrade the Chicago domain. Do nothing further.

C.Create a pristine forest. Upgrade the New York domain. Upgrade the Chicago domain. Create a pristine forest for Contoso, Ltd.

D.Create a pristine forest. Upgrade the New York domain. Upgrade the Chicago domain. Create a new child domain for Contoso, Ltd.

Answer: C

6. You are designing the DNS infrastructure to meet the business and technical requirements. What should you do?

A.Create an Active Directory-integrated zone on DC4. Set the replication scope to all DNS servers in the domain.

B.Create an Active Directory-integrated zone on DC5. Set the replication scope to all DNS servers in the forest.

C.Create an Active Directory-integrated zone on any domain controller in the forest root domain. Set the replication scope to all domain controllers in the domain.

D.Create a standard primary zone on DC4.

E.Create a standard primary zone on any domain controller in the forest root domain

Answer: B

7.You are designing a DNS implementation strategy for the network. Which two zone types should you use? (Each correct answer presents part of the solution. Choose two.)

A.reverse lookup zones

B.standard primary zones

C.standard secondary zones

D.Active Directory-integrated zones

Answer: A D

8.You are designing a strategy to upgrade the DHCP servers after the new Active Directory structure is in place. Who can authorize the DHCP servers? (Choose all that apply.)

A.chief information officer

B.IT support staff in Boston

C.IT support staff in New York

D.network administrator in Chicago

E.network administrator in New York

Answer: A

9.You are designing the placement of the global catalog servers. You want to use the minimum number of global catalog servers that are required. Which design should you use?

A.one global catalog server in New York

B.two global catalog servers in New York

C.one global catalog server in Chicago and one global catalog server in New York

D.two global catalog servers in Chicago and two global catalog servers in New York

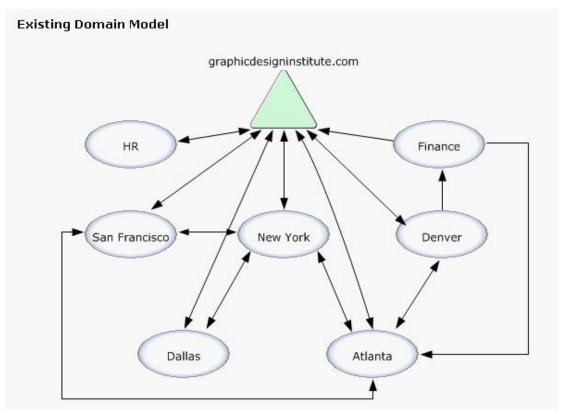
E.one global catalog server in Chicago, one global catalog server in New York, and one global catalog server in Boston

Answer: E

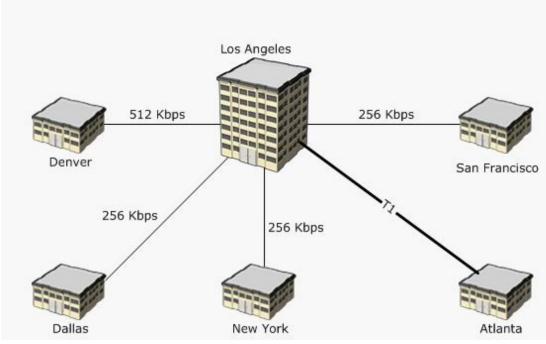
10.You are designing an IP addressing strategy for your VPN solution. How many public IP addresses should you use?

A.1 B.25 C.50 D.255 Answer: A

11. Exhibit, Existing Domain Model



#### Existing Network Infrastructure



#### Overview

Graphic Design Institute is a graphical design company that creates animated graphics for several advertising companies and move theaters.

The hours of operation are 8:00 A.M. to 5:00 P.M., Monday through Friday.

Physical Locations

The company??s main office is located in Los Angeles. The company has five branch offices in the following locations:

- ? Atlanta
- ? Dallas
- ? Denver
- ? New York
- ? San Francisco

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

Office	Number of users
Los Angeles	550
Atlanta	300
Dallas	30
Denver	210

#### **Planned Changes**

To meet new security and customer requirements, the company wants to implement a Windows Server 2003 Active Directory environment.

Existing Environment

Business Processes

Graphic Design Institute consists of the following primary departments:

- ? Human Resources (HR)
- ? Finance

## ? Information Technology (IT)

? Advertising

? Movies

? Animation

The IT department is responsible for all network management.

Users often work on multiple projects at the same time. A strong administrative structure based on each user??s office location and department is being used

Infrastructure

Directory Services

The existing domains and trust relationships are shown in the Existing Domain Model exhibit.

The company has one Windows 2000 domain located in the Los Angeles office. The name of the domain is

graphicdesigninstitute.com. The domain is a Windows 20000 mixed-mode domain that contains Windows 2000 Server computers configured as domain controllers, Windows NT Server 4.0 computers configured as BDCs, and Windows 2000 Server computers configured as member servers.

Currently, this domain is the only Active Directory domain. The domain consists of the following three top-level OUs:

? Movies

? Animation

? Advertising

The default site configuration has been implemented in the existing Active Directory environment. Problem statements

The following business problems must be considered:

? There is currently no enforcement of frequent password changes and logon hours.

? The ISP can only supply a single subnet, which consists of 32 IP addresses, for the Internet link.

? It is very difficult to manage users and groups and their necessary permissions.

? The finance and HR department cannot agree on a mutual security policy to implement.

? NetBIOS name resolution is saturating the WAN links.

Interviews

Chief Execute Offices

Graphic Design Institute has lost a number of contracts due to deadlines that have not been met. Decreasing the amount of time we spend administering the network, along with increasing the amount of time we spend on customers, is my primary reason for requesting the upgrade of the entire network. Funds are available for critical hardware requirements. I do not want any downtime for users. I also want strict business hours enforced. Employees should not be at the office or work from home outside normal business hours.

Chief Information Officer

Currently, we have problems as a result of all the merges and acquisitions. I want all the servers to be installed with Windows Server 2003 to resolve these problems. I also want all client computers upgraded to Windows XP Professional over the next two years.

The current IT response level is leading to a lot of lost production hours. Each office will continue to manage its own users and computers, with the exception of the finance and HR departments, which have their own requirements. We need to ensure that no production time is lost as a result of an interruption in the network connectivity.

Network Administrator

We are currently expected to resolve issues within 24 hours, although this sometimes is not achieved. Because most high-level administrative work can only be done when users are not in the office, network administrators often work after hours or on weekends.

Domain administrators are responsible for managing the private IP addresses of every computer that belongs to their respective domains.

Help desk staff exists in each branch office to assist users with software-related problems, as well as with basic network problems. Each domain has its own help desk staff with personnel located in each office. In the future, the help desk staff will be responsible for resetting passwords if users forget them.

Office Worker

Only selected users have Internet access. This prevents us from remaining competitive because we cannot

perform the necessary research about new technologies or software available.

**Business Requirements** 

**Business Drivers** 

The following business requirements must be considered:

? A single internal namespace is required to minimize administrative effort.

? A Web site exists outside the firewall to provide company contact information.

**Organizational Goals** 

The following organizational requirements must be considered:

? The new design must accommodate the finance and HR departments, which have requirements not addressed by the company??s planned password policy.

? All computers must have the latest service packs and hot fixes installed. In addition, computers in the advertising department must be updated to have the latest versions of graphics and audio drivers installed.

Security

The following security requirements must be considered:

? Specific security groups must be set up to address security requirements.

? Security must be based on departments and groups of individuals within the departments.

? Users in the finance department need access to payroll information on a server named Payroll, which is located in the HR department.

Customer Requirements

The following customer requirements must be considered:

? A new service-level agreement that requires a response from the IT department to users within one hour must go into effect.

? Personal information about employees must remain secure.

? All client computers, regardless of office location, must be able to access all other computers.

**Technical Requirements** 

Active Directory

The following Active Directory requirements must be considered:

? The company requires a new Active Directory environment that enables the security requirements of various departments to be met. This must be accomplished by installing a Windows Server 2003 on all domain controllers.

? A completely decentralized administrative approach will be used. Each group of administrators

will be responsible for its own departmental environment.

? Only one operations master role will be allowed per domain controller. This is required for fault tolerance.

? DNS replication of the forest root domain must be limited to forest domain controllers only. Network Infrastructure

The following infrastructure requirements must be considered:

? A new Routing and Remote Access solution must be installed:

? A DHCP solution that is fault tolerant within each office must be implemented

? All WAN links must be fault tolerant

? Name resolution must be localized on the local network

Answer:

11. You are designing an Active Directory forest structure to meet the business and technical requirements. What should you do?

A.Create a single forest that has one domain. Use organizational units (OUs) to separate the departments.

B.Create a single forest that has multiple domains to represent every department.

C.Create a single forest that has three domains: one for finance, one for HR, and one for the remaining departments.

D.Create multiple forests that has a single domain in each forest to represent the departments. Answer: C

12. You are designing a WAN implementation strategy to meet the business and technical requirements. What should you do?

A.Configure a demand-dial router.

B.Create multiple Active Directory site links.

C.Configure a VPN connection between each branch office.

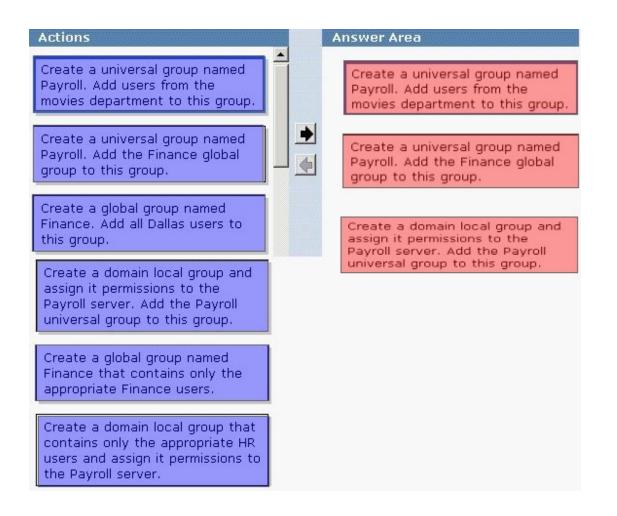
D.Install an Internet Authentication Service (IAS) server in each branch office.

Answer: A

13.You are designing a strategy to provide the required security for the Payroll server.You need to identify the actions that you should perform to achieve this goal.What should you do?

To answer, move the appropriate actions from the list of actions to the answer area, and arrange them in the appropriate order. (Use only actions that apply.)

拖拽对象



14You are designing a password management solution to meet the business and technical requirements. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.) A.Delegate the password management controls to the help desk staff.

B.Delegate the password management controls to the Domain Users group.

C.Configure the Default Domain Policy to enforce password expiration settings.

D.Configure the Default Domain Controller Policy to enforce password expiration settings.

Answer: B D

15. You are designing a strategy to address the requirements of the advertising department. What should you do?

A.Create a Group Policy object (GPO) and link it to the Denver site.

B.Create a Group Policy object (GPO) and link it to the Advertising OU.

C.Create a Group Policy object (GPO) and link it to the graphicdesigninstitute.com domain.

D.Configure the Default Domain Policy to have the No Override option.

E.Use block inheritance to prevent the Group Policy object (GPO) from applying to members of the advertising department.

Answer: B

16.You are designing a NetBIOS name resolution strategy to meet the business and technical requirements. What should you do?

A.Install one WINS server in each branch office. Configure the WINS servers to use push/pull replication with the WINS server in Los Angeles. Configure all computers to have the IP address of the local WINS server.

B.Install two additional WINS servers in Los Angeles. Configure the WINS servers to use push/pull replication. Configure all computers to have the IP addresses of the WINS servers.

C.Install the DNS Server service on one domain controller in each branch office. Configure the DNS servers to forward all unanswered queries to the WINS server. Configure all computers to have the IP addresses of the DNS servers.

D.Configure the DNS servers in each branch office to forward all unanswered queries to a local WINS server. Configure all computers to have the IP addresses of the DNS server in the graphicdesigninstitute.com forest root.

Answer: A

17You are designing a DHCP strategy to meet the business and technical requirements. What should you do?

A.Install one DHCP server in each branch office and one DHCP server in Los Angeles.

B.Install one DHCP server in each branch office and two DHCP servers in Los Angeles.

C.Install two DHCP servers in each branch office and one DHCP server in Los Angeles.

D.Install two DHCP servers in each branch office and two DHCP servers in Los Angeles.

Answer: D

18.You are designing a DNS strategy to meet the business and technical requirements. What should you do?

A.Install the DNS Server service on all domain controllers. Create Active Directory-integrated zones. Replicate the zones to all DNS servers in the forest.

B.Install the DNS Server service on all domain controllers. Create Active Directory-integrated zones. Replicate the zones to all DNS servers in the domain.

C.Install the DNS Server service on all domain controllers. Create primary zones and secondary zones. D.Create application partitions for the different zones on one domain controller. Configure replication to occur on all DNS servers.

Answer: B

19.You need to identify the number of servers that will be used specifically for operations master roles. How many servers should you recommend?

A.5

B.11

C.14

D.17

E.20

Answer: B

20.You are designing a strategy to provide Internet access to all users. What should you do? A.Configure Internet Connection Sharing on all client computers.

B.Configure Automatic Private IP Addressing (APIPA) on all client computers.

C.Configure one server as a Routing and Remote Access VPN server. D.Configure one server as a Routing and Remote Access NAT router. Answer: D