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# Product Questions: 245

## Version: 21.0

### Case Study: 1

#### Contoso Ltd Case A

##### Overview

Contoso, Ltd., is a healthcare company in Europe that has 2,000 users. The company is migrating to Windows Server 2012.

The company has two main offices and two branch offices. The main offices are located in Paris and Amsterdam. One of the branch offices is a sales office located in Berlin. The other branch office is a research office located in Brussels.

The offices connect to each other by using a WAN link.

##### Current Environment

###### Active Directory

The network contains an Active Directory forest named contoso.com. An Active Directory site exists for each office.

The forest contains a child domain named research.contoso.com.

The functional level of both the domains is Windows Server 2008.

In each site, there are two domain controllers for the contoso.com domain and two domain controllers for the research.contoso.com domain. The domain controllers run Windows Server 2008 R2.

All of the domain controllers are global catalog servers.

The FSMO roles were not moved since the domains were deployed.

###### Network Infrastructure

All servers run Windows Server 2008 R2.

Each user has a laptop computer that runs Windows 7.

The company has 10 print servers. Each print server contains several shared printers.

The company has 10 file servers that have the following disk configurations:

- A simple volume named C that is the System and Boot volume and is formatted NTFS
- A mounted virtual hard disk (VHD) named DATA that is formatted NTFS
- A simple volume named D that is formatted FAT32
- A simple volume named E that is formatted NTFS
- A Clustered Shared Volume (CSV)

The Paris office contains a server named PA1. The Amsterdam office contains a server named AM1.

Both servers have the following server roles installed:

- DNS Server
- DHCP Server

- Remote Access

The DNS servers are configured to use the DNS servers of the company's Internet Service Provider (ISP) as forwarders.

Users often work remotely. The users access the internal network by using an SSTP-based VPN connection.

## **Requirements**

### **Planned Changes**

The company plans to implement the following changes:

- Create a child domain named sales.contoso.com. Only the domain controllers in sales.contoso.com will host a zone for the sales.contoso.com domain. The domain controllers in sales.contoso.com will run Windows Server 2012. The client computers in sales.contoso.com will use the sales.contoso.com domain controllers as their DNS servers.
- Implement two servers in the Amsterdam office and two servers in the Paris office to replace PA1 and AM1. These new servers will run Windows Server 2012 and will not have shared storage.
- Decommission the research.contoso.com domain. All of the users and the Group Policy objects (GPOs) in research.contoso.com will be migrated to contoso.com.
- Migrate the existing print queues to virtualized instances of Windows Server 2012.
- Migrate the file servers to new servers that run Windows Server 2012.
- Implement RADIUS authentication for VPN connections.
- Deploy Windows Server 2012 to all new servers.

### **Technical Requirements**

The company identifies following technical requirements:

- All changes to Group Policies must be logged.
- Network Access Protection (NAP) policies must be managed centrally.
- Core networking services in each office must be redundant if a server fails.
- The possibility of IP address conflicts during the DHCP migration must be minimized.
- A central log of the IP address leases and the users associated to those leases must be created.
- All of the client computers must be able to resolve internal names and internet names.
- Administrators in the Paris office need to deploy a series of desktop restrictions to the entire company by using Group Policy.
- The new sales.contoso.com domain will contain a web application that will access data from a Microsoft SQL Server located in the contoso.com domain. The web application must use integrated Windows authentication. Users' credentials must

be passed from the web applications to the SQL Server.

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**Question: 1**

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You implement and authorize the new DHCP servers. You import the server configurations and the scope configurations from PA1 and AM1.

You need to ensure that clients can obtain DHCP address assignments after you shut down PA1 and AM1. The solution must meet the technical requirements.

What should you do?

- A. Run the Get-DhcpServerv4Lease cmdlet and the Remove-DhcpServerv4Lease cmdlet. Run the Windows Server Migration Tools.
- B. Run the Get-DhcpServerv4Lease cmdlet and the Add-DhcpServerv4Lease cmdlet. Activate the scopes.
- C. Run the Get-DhcpServerv4FreeIPAddress cmdlet and the Invoke-DhcpServerv4FailoverReplication cmdlet. Run the Windows Server Migration Tools.
- D. Run the Get-DhcpServerv4FreeIPAddress cmdlet and the Invoke-DhcpServerv4FailoverReplication cmdlet. Activate the scopes.

---

**Answer: B**

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The Get-DhcpServerv4Lease cmdlet gets one or more lease records from the Dynamic Host Configuration Protocol (DHCP) server service.

The Add-DhcpServerv4Lease cmdlet adds a new IPv4 address lease on the Dynamic Host Configuration Protocol (DHCP) server service. This cmdlet is only supported for DHCP server service running on Windows Server® 2012.

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**Question: 2**

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You need to recommend a management solution for the GPOs. The solution must meet the technical requirements. What should you include in the recommendation?

- A. Microsoft Baseline Security Analyzer (MBSA)
- B. Microsoft Desktop Optimization Pack (MDOP)
- C. Microsoft System Center 2012 Operations Manager
- D. Microsoft System Center 2012 Data Protection Manager (DPM)

---

**Answer: B**

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Explanation:

\* Scenario:

/ All changes to Group Policies must be logged.

/ Administrators in the Paris office need to deploy a series of desktop restrictions to the entire company by using Group Policy.

\* Microsoft Desktop Optimization Pack

Windows Vista Enterprise helps global organizations and enterprises with complex IT infrastructures lower IT costs, reduce risk, and stay connected. The Microsoft Desktop

Optimization Pack for Software Assurance further extends this value by reducing application deployment costs, enabling delivery of applications as services, and allowing for better management and control of enterprise desktop environments. Together these technologies deliver a highly cost-effective and flexible Windows desktop management solution.

What is the Microsoft Desktop Optimization Pack?

The Microsoft Desktop Optimization Pack (MDOP) for Software Assurance is an add-on subscription license available to Software Assurance customers. It uses innovative technologies to help reduce the total cost of ownership (TCO) of the Windows desktop by accelerating operating system and

application management and enhancing IT responsiveness and end-user uptime. It will enable you to better control the desktop, accelerate and simplify desktop deployments and management, and create a dynamic infrastructure by turning software into centrally managed services.

MDOP facilitates accelerated deployment and manageability of Windows through these innovative technologies— available only to Windows Software Assurance customers.

Reference: Microsoft Desktop Optimization Pack

URL: <http://technet.microsoft.com/en-us/library/cc507880.aspx>

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### Question: 3

You are planning the decommissioning of research.contoso.com.

You need to ensure that an administrator named Admin5 in the research department can manage the user accounts that are migrated to contoso.com. The solution must minimize the number of permissions assigned to Admin5.

What should you do before you migrate the user accounts?

- A. Run the New-Object cmdlet, and then run the Add-ADPrincipalGroupMembershipcmdlet.
- B. Create a new organizational unit (OU), and then add Admin5 to the Account Operators group.
- C. Create a new organizational unit (OU), and then run the Delegation of Control Wizard.
- D. Run the New-Object cmdlet, and then run the Add-ADCentralAccessPolicyMembercmdlet.

---

**Answer: C**

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Explanation:

\* Scenario: Decommission the research.contoso.com domain. All of the users and the Group Policy objects (GPOs) in research.contoso.com will be migrated to contoso.com.

Reference: Delegation of Control Wizard

<http://technet.microsoft.com/en-us/library/dd145344.aspx>

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### Question: 4

You need to recommend changes to the DNS environment that support the implementation of the sales.contoso.com domain. The solution must ensure that the users in all of the domains can resolve both Internet names and the names of the servers in all of the internal domains.

What should you recommend?

- A. On the DNS servers in contoso.com, configure a reverse lookup zone. On the DNS servers in sales.contoso.com, configure a conditional forwarder to contoso.com.
- B. On the DNS servers in contoso.com, add a conditional forwarder to the sales.contoso.com zone. On the DNS servers in sales.contoso.com, add a forwarder to the DNS servers of the company's ISP.
- C. On the DNS servers in contoso.com, create a zone delegation in the contoso.com zone. On the DNS servers in sales.contoso.com, add a forwarder to the contoso.com DNS servers.
- D. On the DNS servers in contoso.com, configure a conditional forwarder to sales.contoso.com. On the DNS servers in sales.contoso.com, configure a reverse zone.

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**Answer: C**

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Scenario: The client computers in sales.contoso.com will use the sales.contoso.com domain controllers as their DNS servers.

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### Question: 5

You are evaluating the implementation of data deduplication on the planned Windows Server 2012 file servers.

The planned servers will have the identical disk configurations as the current servers.

You need to identify which volumes can be enabled for data deduplication.

Which volumes should you identify? (Each correct answer presents part of the solution. Choose all

that apply.)

- A. C
- B.D
- C.E
- D. The CSV
- E.DATA

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**Answer: C, E**

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Explanation:

\* Scenario:

A mounted virtual hard disk (VHD) named DATA that is formatted NTFS

A simple volume named E that is formatted NTFS

\* Note: Data Deduplication feature doesn't do everything in this version. It is only available in certain Windows Server 2012 editions and has some limitations. Deduplication was built for NTFS data volumes and it does not support boot or system drives and cannot be used with Cluster Shared Volumes (CSV). We don't support deduplicating live VMs or running SQL databases. See how to determine which volumes are candidates for deduplication on Technet.

Incorrect:

Not A: Volume C is a boot volume. Data deduplication does not work on boot volumes.

Not B: Volume B is FAT32 volume. Data deduplication requires NTFS.

Not D: Deduplication cannot be used with CSV.

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### Question: 6

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You are planning the implementation of two new servers that will be configured as RADIUS servers. You need to recommend which configuration must be performed on the VPN servers. The solution must meet the technical requirements. What should you do on each VPN server?

- A. Add a RADIUS client.
- B.Install the Health Registration Authority role service.
- C.Enable DirectAccess.
- D.Modify the authentication provider.

---

**Answer: D**

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Explanation:

\* Implement RADIUS authentication for VPN connections.

\* The new sales.contoso.com domain will contain a web application that will access data from a Microsoft SQL Server located in the contoso.com domain. The web application must use integrated Windows authentication. Users' credentials must be passed from the web applications to the SQL Server.

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### Question: 7

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You need to recommend which changes must be implemented to the network before you can deploy the new web application. What should you include in the recommendation?

- A. Change the forest functional level to Windows Server 2008 R2.
- B.Upgrade the DNS servers to Windows Server 2012.
- C.Change the functional level of both the domains to Windows Server 2008 R2.
- D.Upgrade the domain controllers to Windows Server 2012.

---

**Answer: D**

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Explanation:

The web application is in the sales.contoso.com domain, which will have Windows Server 2012 Domain controllers. We should therefore upgrade the other domain controller to Windows Server 2012.

Scenario:

\* The new sales.contoso.com domain will contain a web application that will access data from a Microsoft SQL Server located in the contoso.com domain. The web application must use integrated Windows authentication. Users' credentials must be passed from the web applications to the SQL Server.

\* Planned changes include: create a child domain named sales.contoso.com. Only the domain controllers in sales.contoso.com will host a zone for the sales.contoso.com domain. The domain controllers in sales.contoso.com will run Windows Server 2012.

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**Question: 8**

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You need to recommend a fault-tolerant solution for the VPN. The solution must meet the technical requirements.

What should you include in the recommendation?

- A. Network adapter teaming
- B. Network Load Balancing (NLB)
- C. Failover Clustering
- D. DirectAccess

---

**Answer: B**

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Explanation:

\* Scenario: Core networking services in each office must be redundant if a server fails.

\* The Network Load Balancing (NLB) feature distributes traffic across several servers by using the TCP/IP networking protocol. By combining two or more computers that are running applications into a single virtual cluster, NLB provides reliability and performance for web servers and other mission-critical servers.

Reference: Network Load Balancing Overview

<http://technet.microsoft.com/en-us/library/hh831698.aspx>

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**Question: 9**

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You are planning the migration of research.contoso.com.

You need to identify which tools must be used to perform the migration.

Which tools should you identify?

- A. Active Directory Migration Tool version 3.2 (ADMT v3.2) and Group Policy Management Console (GPMC)
- B. Active Directory Federation Services (AD FS) and Microsoft Federation Gateway
- C. Active Directory Migration Tool version 3.2 (ADMT v3.2) and Active Directory Federation Services (AD FS)
- D. Active Directory Lightweight Directory Services (AD LDS) and Group Policy Management Console (GPMC)

---

**Answer: A**

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Explanation:

\* Scenario:

All of the users and the Group Policy objects (GPOs) in research.contoso.com will be migrated to

contoso.com.

two domain controllers for the research.contoso.com domain. The domain controllers run Windows Server 2008 R2.

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**Question: 10**

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You need to recommend a solution for DHCP logging. The solution must meet the technical requirement.

What should you include in the recommendation?

- A. Event subscriptions
- B. IP Address Management (IPAM)
- C. DHCP audit logging
- D. DHCP filtering

---

**Answer: B**

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\* Scenario: A central log of the IP address leases and the users associated to those leases must be created.

\* Feature description

IPAM in Windows Server 2012 is a new built-in framework for discovering, monitoring, auditing, and managing the IP address space used on a corporate network. IPAM provides for administration and monitoring of servers running Dynamic Host Configuration Protocol (DHCP) and Domain Name Service (DNS). IPAM includes components for:

- Automatic IP address infrastructure discovery: IPAM discovers domain controllers, DHCP servers, and DNS servers in the domains you choose. You can enable or disable management of these servers by IPAM.
- Custom IP address space display, reporting, and management: The display of IP addresses is highly customizable and detailed tracking and utilization data is available. IPv4 and IPv6 address space is organized into IP address blocks, IP address ranges, and individual IP addresses. IP addresses are assigned built-in or user-defined fields that can be used to further organize IP address space into hierarchical, logical groups.
- Audit of server configuration changes and tracking of IP address usage: Operational events are displayed for the IPAM server and managed DHCP servers. IPAM also enables IP address tracking using DHCP lease events and user logon events collected from Network Policy Server (NPS), domain controllers, and DHCP servers. Tracking is available by IP address, client ID, host name, or user name.
- Monitoring and management of DHCP and DNS services: IPAM enables automated service availability monitoring for Microsoft DHCP and DNS servers across the forest. DNS zone health is displayed, and detailed DHCP server and scope management is available using the IPAM console.

Reference: IP Address Management (IPAM) Overview

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**Question: 11**

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After the planned upgrade to Windows Server 2012, you restore a user account from the Active Directory Recycle Bin.

You need to replicate the restored user account as quickly as possible.

Which cmdlets should you run?

- A. Get-ADReplicationSite and Set-ADReplicationConnection
- B. Get-ADReplicationAttributeMetadata and Compare-Object
- C. Get-ADReplicationUpToDatenessVectorTable and Set-ADReplicationSite
- D. Get ADDomainController and Sync-ADObject



---

**Answer: D**

---

Explanation:

\* Scenario:

All of the domain controllers are global catalog servers.

The FSMO roles were not moved since the domains were deployed.

\* Example: The following command replicates the user "James" to all the domain controllers:

```
Get-ADDomainController -filter * | ForEach {Sync-ADObject -object "CN=James, OU=BusinessUsers, DC=Test, DC=Local" -source NKAD1 -destination $_.hostname}
```

Note:

\* The Get-ADDomainController cmdlet gets the domain controllers specified by the parameters.

You can get domain controllers by setting the Identity, Filter or Discover parameters.

\* The Sync-ADObject cmdlet replicates a single object between any two domain controllers that have partitions in common. The two domain controllers do not need to be direct replication partners. It can also be used to populate passwords in a read-only domain controller (RODC) cache.

Reference: Get-ADDomainController, Sync-ADObject

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**Question: 12**

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You implement a new virtualized print server that runs Windows Server 2012.

You need to migrate the print queues.

Which tool should you use?

- A. Windows Server Migration Tools
- B. Active Directory Migration Tool (ADMT)
- C. Print Management
- D. Computer Management

---

**Answer: C**

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Explanation:

\* Scenario: Migrate the existing print queues to virtualized instances of Windows Server 2012.

\* To manage the migration process, use one of the following:

The Printer Migration Wizard, which you access through Print Management, a snap-in in Microsoft Management Console (MMC).

The Printbrm.exe command-line tool.

You can perform the migration locally or remotely, and from either a client computer or server.

Important

As a best practice, run the Printer Migration Wizard or Printbrm.exe from a computer running Windows Server 2012

\* Reference: Migrate Print and Document Services to Windows Server 2012

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**Question: 13**

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What method should you use to deploy servers?

- A. WDS
- B. AIK
- C. ADK
- D. EDT

---

**Answer: A**

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WDS is a server role that enables you to remotely deploy Windows operating systems. You can use it to set up new computers by using a network-based installation. This means that you do not have to install each operating system directly from a CD, USB drive, or DVD.

Reference: What's New in Windows Deployment Services in Windows Server

<https://technet.microsoft.com/en-us/library/dn281955.aspx>

## **Case Study: 2**

### **Proseware, Inc**

#### **Overview**

##### **General Overview**

Proseware, Inc. is a pharmaceutical services company that has a sales department, a marketing department, an operations department, and a human resources department.

##### **Physical Locations**

Proseware has two main offices. One of the offices is located in New York. The other office is located in Chicago. The New York office uses a 172.16.1.0/24 network ID. The Chicago office uses a 192.168.1.0/24 network ID.

The offices connect to each other by using a high-bandwidth, low-latency WAN link. Each office connects directly to the Internet.

##### **Existing Environment**

The network contains an Active Directory forest named proseware.com. The forest contains two domains named proseware.com and chicago.proseware.com. All of the user accounts and the computer accounts in the New York office reside in the proseware.com domain. All of the user accounts and the computer accounts in the Chicago office reside in the chicago.proseware.com domain. All DNS zones are Active-Directory-integrated.

Each office is configured as an Active Directory site. The network ID for each office is associated to the appropriate site.

Each office contains two domain controllers. The domain controllers were recently upgraded from Windows Server 2008 R2 to Windows Server 2012 R2. The functional level of the domain and the forest is Windows Server 2003.

The company uses Active Directory user attributes to store the personal information of its employees in custom attributes.

##### **Existing Servers**

The relevant servers are configured as shown in the following table.

Server name	Role	Site
DC01	<ul style="list-style-type: none"> <li>Domain controller</li> <li>DNS server</li> <li>DHCP server</li> </ul>	New York
DC02	<ul style="list-style-type: none"> <li>Domain controller</li> <li>DNS server</li> </ul>	New York
WDS01	Windows Deployment Services (WDS) server	New York
Host01	Hyper-V host	New York
Host02	Hyper-V host	New York
Host03	Hyper-V host	New York
RAS01	Remote access server	New York
File01	File server	New York
DC03	<ul style="list-style-type: none"> <li>Domain controller</li> <li>DHCP server</li> </ul>	Chicago
DC04	Domain controller	Chicago
Host04	Hyper-V host	Chicago
Host05	Hyper-V host	Chicago
Host06	Hyper-V host	Chicago
RAS02	Remote access server	Chicago
File02	File server	Chicago

All servers run Windows Server 2012 R2.

DC01 has an IPv4 scope. The starting IP address in the range is 172.16.1.100 and the ending address is 172.16.1.199.

DC03 has an IPv4 scope. The starting IP address in the range is 192.168.1.100 and the ending IP address is 192.168.1.199. There are no exclusion ranges configured on DC01 or DC03.

## Requirements

### Planned Changes

Proseware plans to implement the following changes:

- Deploy a read-only domain controller (RODC) to the London office.
- Give users remote access to both offices by using a VPN connection from their laptop or tablet.
- If DC01 fails, ensure that the computers in the New York office can receive IP addresses within 30 minutes.
- In the New York site, deploy two 50-TB, Fibre Channel SAN disk arrays. Offloaded Data Transfer (ODX) will be used on both storage arrays. The Hyper-V hosts will use the new SANs for virtual machine storage.
- Open three additional offices in Montreal, Atlanta, and London. The offices will connect to each other by using a high-bandwidth, low-latency WAN link. Each office will connect directly to the Internet.
- For legal reasons, the Montreal site will have its own forest named montreal.proseware.com.
- The Montreal and Atlanta offices will have local IT administrators to manage the network infrastructure of their respective office. The London office will not have a local IT staff. Each office will have approximately 50 client computers.

### Technical Requirements

Proseware identifies the following technical requirements:

- Users in the Montreal office must only be allowed to access shares that are located on File01 and File02. The Montreal users must be prevented from accessing any other servers in the proseware.com forest regardless of the permissions on the resources,
- Users in the New York office must be able to reconnect to the remote access VPN servers automatically. Users in the Chicago office must use SSL to connect to the remote access VPN servers.
- Domain controllers that run Windows Server 2012 R2 and Windows Server 2008 R2 must be able to be deployed to the proseware.com domain.
- Administrators in the New York office must be able to restore objects from the Active Directory Recycle Bin.
- The DNS servers must be prevented from overwriting the existing DNS entries that have been stored in cache.
- Each DNS server must be managed by an administrator from the same office as the DNS server.
- The required time to create new fixed virtual hard disks (VHDs) on the SANs must be minimized.
- The remote access servers must be able to restrict outgoing traffic based on IP addresses.
- All certificates must be deployed to all of the client computers by using auto-enrollment.
- All of the DHCP Server server roles must be installed on a domain controller.
- Only one DHCP server in each site must lease IP addresses at any given time.
- DHCP traffic must not cross site boundaries.
- RODCs must not contain personal user information.

---

**Question: 1**

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**HOTSPOT**

You need to recommend a configuration for the DHCP infrastructure.

What should you recommend? To answer, select the appropriate options in the answer area.

**Answer Area**

Server on which to deploy the DHCP Server server role:

DHCP failover mode:

DHCP failover setting to configure:

## Answer Area

Server on which to deploy the DHCP Server server role:

DHCP failover mode:

DHCP failover setting to configure:

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**Answer:**

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## Answer Area

Server on which to deploy the DHCP Server server role:

DHCP failover mode:

DHCP failover setting to configure:

Box 1: DC02

DC02 is in New York site, which does not have a DHCP server, and it is a domain controller (which is required).

Not RAS01 as it is not a domain controller.

Not DC4 or RAS02 as they are located in Chicago, and the Chicago site already has a DHCP server.

Box 2: Host standby.

In Host standby mode only one of the servers actively leases IP addresses.

Not Load-Balanced as in this mode both DHCP servers answer client request, but according to scenario only one DHCP Server in each site must lease IP addresses at a given time.

Box 3: State switchover interval

For automatic state switchover to happen from communication interrupt to partner down state, you need to enable state switchover interval. If you don't do that then you would need to manually transition primary server to partner down mode.

\* Scenario:

- All of the DHCP Server server roles must be installed on a domain controller.
- Only one DHCP server in each site must lease IP addresses at any given time.

Reference: DHCP Failover Hot-Standby Mode

<https://blogs.technet.microsoft.com/teamdhcp/2012/09/03/dhcp-failover-hot-standby-mode/>

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## Question: 2

You need to recommend a trust model.

What should you include in the recommendation?

- A. A one-way, forest trust that has selective authentication.
- B. A one-way, external trust
- C. A two-way, external trust
- D. A one-way, forest trust that has domain-wide authentication.

---

**Answer: A**

---

As users in the Montreal office is in a separate site, and they need access to only to some of the resources, the File01 file server in New York and the File02 file server in Chicago, we should use a one-way forest trust with selective authentication.

\* When you enable the selective authentication feature of a forest trust relationship, users accessing cross-forest resources from one forest cannot authenticate to a domain controller or resource server (e.g., file server, print server) in the other forest unless they are explicitly allowed to do so. Selective authentication lessens the attack surface by restricting the quantity of authentication requests that can pass through an interforest trust.

\* From case study:

/ The Montreal site will have its own forest named montreal.proseware.com.

/ Users in the Montreal office must only be allowed to access shares that are located on File01 and File02. The Montreal users must be prevented from accessing any other servers in the proseware.com forest regardless of the permissions on the resources.

Reference: <http://windowsitpro.com/security/selective-authentication>

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**Question: 3**

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DRAG DROP

You need to recommend the VPN protocols for Proseware.

What should you recommend? To answer, drag the appropriate VPN protocols to the correct offices. Each protocol may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content,

VPN Protocols	Answer Area
IKEv2	The New York office: VPN
L2TP	The Chicago office: VPN
PPTP	
SSTP	

---

**Answer:**

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The New York office:	IKEv2
The Chicago office:	SSTP

Explanation

Box 1: IKEv2

An IKEv2 VPN provides resilience to the VPN client when the client moves from one wireless hotspot to another or when it switches from a wireless to a wired connection. This meets the requirement that users in the New York office must be able to reconnect to the remote access VPN servers automatically.

Box 2: SSTP

SSTP is the only of the listed tunneling protocols that uses SSL, and users in the Chicago office must use SSL to connect to the remote access VPN servers.

Reference: VPN Tunneling Protocols

[https://technet.microsoft.com/en-us/library/dd469817\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/dd469817(v=ws.10).aspx)

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**Question: 4**

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## HOTSPOT

You need to recommend a storage configuration for the Hyper-V hosts.

What should you recommend? To answer, select the appropriate options in the answer area.

### Answer Area

File system type:

Volume type:

### Answer Area

File system type:   
FAT32  
NTFS  
REFS

Volume type:   
Basic volume  
Dynamic volume  
Storage spaces volume

---

**Answer:**

---

### Answer Area

File system type:   
FAT32  
NTFS  
REFS

Volume type:   
Basic volume  
Dynamic volume  
Storage spaces volume

Scenario: The required time to create new fixed virtual hard disks (VHDs) on the SANs must be minimized

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## Question: 5

You need to recommend a deployment method for Proseware.

What is the best approach to achieve the goal? More than one answer choice may achieve the goal. Select the BEST answer.

- A. A WDS Deployment server and Multicast transmissions
- B. A WDS Deployment server and Unicast transmissions
- C. A WDS Transport server and Multicast transmissions
- D. A WDS Transport server and Unicast transmissions

---

**Answer: A**

---

A WDS deployment server is appropriate in this scenario with three offices that will have 50 new clients each. As the WAN links are fast the computers can be deployed through multicast.

Incorrect:

Not B: As the offices are connected through high-bandwidth, low-latency WAN links unicast is not necessary.

Not C, Not D: As each office only will have 50 client computers, a small network, a deployment through a WDS transport server is not required.

Reference: Windows Deployment Services Overview

<https://technet.microsoft.com/en-us/library/hh831764.aspx>

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**Question: 6**

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You need to recommend a solution for the remote access servers. What should you include in the recommendation?

- A. Network address translation (NAT)
- B. Logging levels
- C. Packet filtering
- D. Packet tracing

---

**Answer: C**

---

Scenario: The remote access servers must be able to restrict outgoing traffic based on IP addresses.

Packet filtering can be used to restrict outgoing traffic with the help of an output filter.

Note: Packet filtering consists of creating a series of definitions called filters, which define for the router what types of traffic are allowed or disallowed on each interface. Filters can be set for incoming and outgoing traffic.

\* Input filters define what inbound traffic on that interface the router is allowed to route or process.

\* Output filters define what traffic the router is allowed to send from that interface.

Incorrect:

Not A: NAT is not able to restrict outgoing traffic. NAT supports static filters can be added to the private interface to protect against threats from internal clients.

Reference: Filters and Remote Access Configurations

[https://technet.microsoft.com/en-us/library/Cc754895\(v=WS.10\)](https://technet.microsoft.com/en-us/library/Cc754895(v=WS.10))

---

**Question: 7**

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DRAG DROP

You need to recommend changes for the Active Directory infrastructure.

What should you recommend? To answer, drag the appropriate domain and forest functional levels for proseware.com to the correct locations. Each functional level may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Functional Levels	Answer Area
Windows Server 2008	Domain functional level for proseware.com: Functional level
Windows Server 2008 R2	Forest functional level for proseware.com: Functional level
Windows Server 2012	
Windows Server 2012 R2	

---

**Answer:**

---

Domain functional level for proseware.com:	Windows Server 2008 R2
Forest functional level for proseware.com:	Windows Server 2008 R2

Explanation:

From the scenario we have that Domain controllers that run Windows Server 2012 R2 and Windows Server 2008 R2 must be able to be deployed to the proseware.com domain. We should therefore set both domain functional level and forest functional level to Windows Server 2008 R2.

Box 1: Windows Server 2008 R2

We can set the domain functional level for proseware.com to Windows Server 2008 R2 as only Domain controllers that run Windows Server 2012 R2 and Windows Server 2008 R2 must be able to be deployed to the proseware.com domain.



Box 2: Windows Server 2008 R2

As we cannot set the domain functional level to a value that is lower than the forest functional level we should set the forest function level to Windows Server 2008 R2 as well.

Reference: Understanding Active Directory Domain Services (AD DS) Functional Levels

[https://technet.microsoft.com/library/understanding-active-directory-functional-levels\(WS.10\).aspx](https://technet.microsoft.com/library/understanding-active-directory-functional-levels(WS.10).aspx)

---

### Question: 8

You need to recommend a solution for the RODC.

Which attribute should you include in the recommendation?

- A. systemFlags
- B. searchFlags
- C. policy-Replication-Flags
- D. flags

---

### Answer: B

You can modify the searchFlags value for a read-only domain controller (RODC) to indicate confidential data on order to exclude specific data from replicating to RODCs in the forest. This meets the requirement as it is stated that RODCs must not contain personal user information.

Reference: Customize the RODC Filtered Attribute Set

[https://technet.microsoft.com/en-us/library/cc754794\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc754794(v=ws.10).aspx)

---

### Question: 9

You run the Get-DNSServer cmdlet on DC01 and receive the following output:

```
ServerCache:
=====

IsReverseLookupZone False
IsDsIntegrated True
IsReadOnly False
MaxNegativeTtl 00:15:00
ZoneName .
MaxTtl 1.00:00:00
StoreEmptyAuthenticationResponse True
ZoneType Cache
IsPaused False
IsShutdown False
DistinguishedName DC=RootDNSServers,cn=MicrosoftDNS,DC=...
EnablePollutionProtection True
LockingPercent 50
MaxKBSize 0
IsAutoCreated False
```

You need to recommend changes to DC01. Which attribute should you recommend modifying?

- A. EnablePollutionProtection
- B. isReadOnly
- C. Locking Percent
- D. ZoneType

---

### Answer: C

\* Scenario: The DNS servers must be prevented from overwriting the existing DNS entries that have been stored in cache.

\* Cache locking is configured as a percent value. For example, if the cache locking value is set to 50, then the DNS server will not overwrite a cached entry for half of the duration of the TTL. By default, the cache locking percent value is 100. This means that cached entries will not be overwritten for the entire duration of the TTL. The cache locking value is stored in the CacheLockingPercent registry key.

If the registry key is not present, then the DNS server will use the default cache locking value of 100.

Reference: DNS Cache Locking

<https://technet.microsoft.com/en-us/library/ee649148%28v=ws.10%29.aspx>

### **Case Study: 3**

#### **Litware, Inc**

##### **Overview**

Litware, Inc., is a manufacturing company. The company has a main office and two branch offices. The main office is located in Seattle. The branch offices are located in Los Angeles and Boston.

##### **Existing Environment**

###### **Active Directory**

The network contains an Active Directory forest named litwareinc.com. The forest contains a child domain for each office. The child domains are named boston.litwareinc.com and la.litwareinc.com. An Active Directory site exists for each office.

In each domain, all of the client computer accounts reside in an organizational unit (OU) named AllComputers and all of the user accounts reside in an OU named AllUsers.

All domain controllers run Windows Server 2008 R2 and are configured as DNS servers.

The functional level of the domain and the forest is Windows Server 2008.

###### **Network Infrastructure**

The main office has the following servers:

- Five physical Hyper-V hosts that run Windows Server 2012
- Three virtual file servers that run Windows Server 2008 R2
- One physical DHCP server that runs Windows Server 2008 R2
- Ten physical application servers that run Windows Server 2012
- One virtual IP Address Management (IPAM) server that runs Windows Server 2012
- One virtual Windows Server Update Services (WSUS) server that runs Windows Server 2008 R2
- One physical domain controller and two virtual domain controllers that run Windows Server 2008 R2

Each branch office has following servers:

- One virtual file server that runs Windows Server 2008 R2
- Two physical Hyper-V hosts that run Windows Server 2012
- One physical DHCP server that runs Windows Server 2008 R2
- One physical domain controller and two virtual domain controllers that run Windows Server 2008 R2

All of the offices have a high-speed connection to the Internet. The offices connect to each other by using T1 leased lines.

The IPAM server in the main office gathers data from the DNS servers and the DHCP servers in all of the offices.

##### **Requirements**

###### **Planned Changes**

The company plans to implement the following changes:

- Implement the Active Directory Recycle Bin.

- Implement Network Access Protection (NAP).
- Implement Folder Redirection in the Boston office only.
- Deploy an application named Appl to all of the users in the Boston office only.
- Migrate to IPv6 addressing on all of the servers in the Los Angeles office. Some application servers in the Los Angeles office will have only IPv6 addresses.

### **Technical Requirements**

The company identifies the following technical requirements:

- Minimize the amount of administrative effort whenever possible.
- Ensure that NAP with IPSec enforcement can be configured.
- Rename boston.litwareinc.com domain to bos.litwareinc.com.
- Migrate the DHCP servers from the physical servers to a virtual server that runs Windows Server 2012.
- Ensure that the members of the Operators groups in all three domains can manage the IPAM server from their client computer.

### **VPN Requirements**

You plan to implement a third-party VPN server in each office. The VPN servers will be configured as RADIUS clients. A server that runs Windows Server 2012 will perform RADIUS authentication for all of the VPN connections.

### **Visualization Requirements**

The company identifies the following visualization requirements:

- Virtualize the application servers.
- Ensure that the additional domain controllers for the branch offices can be deployed by using domain controller cloning.
- Automatically distribute the new virtual machines to Hyper-V hosts based on the current resource usage of the Hyper-V hosts.

### **Server Deployment Requirements**

The company identifies the following requirements for the deployment of new servers on the network:

- Deploy the new servers over the network.
- Ensure that all of the server deployments are done by using multicast.

### **Security Requirements**

A new branch office will open in Chicago. The new branch office will have a single read-only domain controller (RODC). Confidential attributes must not be replicated to the Chicago office.

---

## **Question: 1**

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You need to recommend a server deployment strategy for the main office that meets the server

deployment requirements.

What should you recommend installing in the main office?

- A. Windows Deployment Services (WDS)
- B.The Windows Automated Installation Kit (Windows AIK)
- C.The Express Deployment Tool (EDT)
- D.The Windows Assessment and Deployment Kit (Windows ADK)

---

**Answer: A**

---

WDS is a server role that enables you to remotely deploy Windows operating systems. You can use it to set up new computers by using a network-based installation. This means that you do not have to install each operating system directly from a CD, USB drive, or DVD.

Reference: What's New in Windows Deployment Services in Windows Server

---

### Question: 2

---

You need to recommend changes to the Active Directory site topology to support on the company's planned changes.

What should you include in the recommendation?

- A. A new site
- B.A new site link bridge
- C.A new site link
- D.A new subnet

---

**Answer: D**

---

Explanation:

From the Planned Changes section of the scenario we find that a migration to IPv6 addressing in the Los Angeles office will happen.

A new subnet would be needed to implement this change.

Incorrect:

Not A: A new branch office will open in Chicago, and this would require a new site. However, this change is classified as Security Requirements, not as Planned Changes.

Reference: Understanding Sites, Subnets, and Site Links

<http://technet.microsoft.com/en-us/library/cc754697.aspx>

---

### Question: 3

---

You need to recommend changes to the Active Directory environment to support the virtualization requirements.

What should you include in the recommendation?

- A. Raise the functional level of the domain and the forest.
- B.Upgrade the domain controller that has the domain naming master role to Windows Server 2012.
- C.Implement Administrator Role Separation.
- D.Upgrade the domain controllers that have the PDC emulator master role to Windows Server 2012.

---

**Answer: D**

---

\* From

Topic, Ensure that the additional domain controllers for the branch offices can be deployed by using domain controller cloning.

\* To support DC cloning the PDC emulator role holder must be online and available to the cloned DC and must be running Windows Server 2012.

Reference: Virtual Domain Controller Cloning in Windows Server 2012

<https://blogs.technet.microsoft.com/askpfeplat/2012/10/01/virtual-domain-controller-cloning-in-windows-server-2012/>

---

#### Question: 4

---

You need to recommend a change to the Active Directory environment to support the company's planned changes.

What should you include in the recommendation?

- A. Raise the functional level of the domain and the forest.
- B. Implement Administrator Role Separation.
- C. Upgrade the domain controllers that have the PDC emulator master role to Windows Server 2012.
- D. Upgrade the domain controller that has the domain naming master role to Windows Server 2012.

---

**Answer: A**

---

Explanation:

\* Scenario planned changes include: Implement the Active Directory Recycle Bin.

The functional level of the domain and the forest is Windows Server 2008.

\* To support the Active Directory Recycle Bin, the functional level of your AD LDS configuration set to Windows Server 2008 R2 or higher.

Incorrect:

Not C: All domain controllers, not just the ones with the PDC emulator role, must be upgraded to Windows Server 2012.

Not D: All domain controllers, not just the ones domain naming master role, must be upgraded to Windows Server 2012.

Reference: Requirements for Active Directory Recycle Bin

[https://technet.microsoft.com/en-us/library/dd379484\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/dd379484(v=ws.10).aspx)

---

#### Question: 5

---

You need to recommend an IPAM management solution for the Operators groups. The solution must meet the technical requirements.

What should you include in the recommendation?

- A. Run the Invoke-IpamGpoProvisioningcmdlet in all three domains. Add the computers used by the members of the Operators group to the IPAM server.
- B. Modify the membership of the IPAM Administrators group and the WinRMRemoteWMIUsers\_ group on the IPAM server.
- C. Run the Set-IpamConfigurationcmdlet and modify the membership of the WinRMRemoteWMIUsers\_ group on the IPAM server.
- D. Run the Set-IpamConfigurationcmdlet on the IPAM server. Run the Invoke-IpamGpoProvisioningcmdlet in all three domains.

---

**Answer: B**

---

Explanation:

Scenario: Ensure that the members of the Operators groups in all three domains can manage the

IPAM server from their client computer.

---

**Question: 6**

---

You need to recommend a solution that meets the security requirements.  
Which schema attribute properties should you recommend modifying?

- A. isIndexed
- B. searchFlags
- C. isCriticalSystemObject
- D. schemaFlagsEx

---

**Answer: B**

---

Explanation:

\* Scenario: Confidential attributes must not be replicated to the Chicago office.

\* Applies To: Windows Server 2008, Windows Server 2012

This topic includes procedures for adding an attribute to the filtered attribute set (FAS) for a readonly domain controller (RODC) and marking the attribute as confidential data. You can perform these procedures to exclude specific data from replicating to RODCs in the forest.

Because the data is not replicated to any RODCs, you can be assured that the data will not be revealed to an attacker who manages to successfully compromise an RODC. In most cases, adding an attribute to the RODC FAS is completed by the developer of the application that added the attribute to the schema.

- Determine and then modify the current searchFlags value of an attribute
- Verify that an attribute is added to the RODC FAS

- Determine and then modify the current searchFlags value of an attribute

To add an attribute to an RODC FAS, you must first determine the current searchFlags value of the attribute that you want to add, and then set the following values for searchflags:

- To add the attribute to the RODC FAS, set the 10th bit to 0x200.
- To mark the attribute as confidential, set the 7th bit to 0x080.

Reference: Adding Attributes to the RODC Filtered Attribute Set

[http://technet.microsoft.com/en-us/library/cc754794\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc754794(v=ws.10).aspx)

---

**Question: 7**

---

You need to recommend a migration strategy for the DHCP servers. The strategy must meet the technical requirements.

Which Windows PowerShell cmdlet should you recommend running on the physical DHCP servers?

- A. Import-SmigServerSetting
- B. Export-SmigServerSetting
- C. Receive-SmigServerData
- D. Send-SmigServerData

---

**Answer: B**

---

\* Scenario:

/ Main office: One physical DHCP server that runs Windows Server 2008 R2

/ each branch office: One physical DHCP server that runs Windows Server 2008 R2

/ The IPAM server in the main office gathers data from the DNS servers and the DHCP servers in all of the offices.

\* Example:

Command Prompt: C:\PS>

Export-SmigServerSetting -Feature "DHCP" -User All -Group -Path "c:\temp\store" -Verbose

This sample command exports the Dynamic Host Configuration Protocol (DHCP) Server and all other Windows features that are required by DHCP Server.

Reference: DHCP Server Migration: Migrating the DHCP Server Role

<https://technet.microsoft.com/en-us/library/dd379483%28v=ws.10%29.aspx>

---

### Question: 8

---

You need to implement the technical requirements for the boston.litwareinc.com domain.

Which tools should you use?

- A. Gpfixup and Gpupdate
- B. Rendom and Gpfixup
- C. Gpupdate and Dcgpofix
- D. Adprep and Rendom

---

**Answer: B**

---

Explanation:

\* Scenario, technical requirements include:

Minimize the amount of administrative effort whenever possible

Rename boston.litwareinc.com domain to bos.litwareinc.com

\* Rendom.exe is a command-line tool that is used to rename Active Directory domains.

Gpfixup fixes domain name dependencies in Group Policy Objects and Group Policy links after a domain rename operation.

Reference: Rendom

[http://technet.microsoft.com/en-us/library/cc732097\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc732097(v=ws.10).aspx)

Reference: Gpfixup

<https://technet.microsoft.com/en-us/library/hh852336.aspx>

---

### Question: 9

---

You need to recommend a server virtualization strategy that meets the technical requirements and the virtualization requirements.

What should you include in the recommendation?

- A. Windows Server Backup
- B. The Microsoft Virtual Machine Converter
- C. Microsoft System Center 2012 Virtual Machine Manager (VMM)
- D. Disk2vhd

---

**Answer: C**

---

Explanation:

\* Scenario:

Virtualize the application servers.

Automatically distribute the new virtual machines to Hyper-V hosts based on the current resource usage of the Hyper-V hosts.

The main office has the following servers: Five physical Hyper-V hosts that run Windows Server 2012

\* System Center Virtual Machine Manager 2012: VMM Gets Major Upgrade

Expanded hypervisor support, virtual application support and a myriad of other upgrades are coming in the new VMM 2012.

Note: There's no doubt that Microsoft is making System Center Virtual Machine Manager (VMM) a key component of the System Center suite. The scope of the product is being expanded so much that it could be renamed "System Center Virtual Datacenter Manager." The new version of VMM is currently in beta and is scheduled for release in the second half of 2011.

VMM can now do bare-metal installations on fresh hardware, create Hyper-V clusters instead of just managing them, and communicate directly with your SAN arrays to provision storage for your virtual machines (VMs). The list of supported hypervisors has also grown—it includes not only Hyper-V and VMware vSphere Hypervisor, but

Reference: System Center Virtual Machine Manager 2012: VMM Gets Major Upgrade

<http://technet.microsoft.com/en-gb/magazine/hh300651.aspx>

---

### Question: 10

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You need to recommend a remote access solution that meets the VPN requirements.  
Which role service should you include in the recommendation?

- A. Routing
- B. Network Policy Server
- C. DirectAccess and VPN (RAS)
- D. Host Credential Authorization Protocol

---

**Answer: B**

---

Explanation:

Scenario:

A server that runs Windows Server 2012 will perform RADIUS authentication for all of the VPN connections.

Ensure that NAP with IPsec enforcement can be configured.

Network Policy Server

Network Policy Server (NPS) allows you to create and enforce organization-wide network access policies for client health, connection request authentication, and connection request authorization. In addition, you can use NPS as a Remote Authentication Dial-In User Service (RADIUS) proxy to forward connection requests to a server running NPS or other RADIUS servers that you configure in remote RADIUS server groups.

NPS allows you to centrally configure and manage network access authentication, authorization, are client health policies with the following three features: RADIUS server. NPS performs centralized authorization, authorization, and accounting for wireless, authenticating switch, remote access dial-up and virtual private network (VPN) connections. When you use NPS as a RADIUS server, you configure network access servers, such as wireless access points and VPN servers, as RADIUS clients in NPS. You also configure network policies that NPS uses to authorize connection requests, and you can configure RADIUS accounting so that NPS logs accounting information to log files on the local hard disk or in a Microsoft SQL Server database.

Reference: Network Policy Server

<http://technet.microsoft.com/en-us/library/cc732912.aspx>

---

### Question: 11

---

You need to recommend a Group Policy strategy to support the company's planned changes.  
What should you include in the recommendation?

- A. Link a Group Policy object (GPO) to the AllComputers OU in each domain.
- B. Link a Group Policy object (GPO) to litwareinc.com and configure filtering.
- C. Link a Group Policy object (GPO) to each domain.



D. Link a Group Policy object (GPO) to the Boston site.

---

**Answer: D**

---

Explanation:

We link a GPO, which implements folder redirection and deploys App1 for the Boston Users.

\* Scenario:

Implement Folder Redirection in the Boston office only.

Deploy an application named Appl to all of the users in the Boston office only.

---

### **Question: 12**

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You need to ensure that NAP meets the technical requirements.

Which role services should you install?

- A. Network Policy Server, Health Registration Authority and Host Credential Authorization Protocol
- B. Health Registration Authority, Host Credential Authorization Protocol and Online Responder
- C. Certification Authority, Network Policy Server and Health Registration Authority
- D. Online Responder, Certification Authority and Network Policy Server

---

**Answer: C**

---

Explanation:

\* Scenario:

Implement Network Access Protection (NAP).

Ensure that NAP with IPsec enforcement can be configured.

\* Health Registration Authority

Applies To: Windows Server 2008 R2, Windows Server 2012

Health Registration Authority (HRA) is a component of a Network Access Protection (NAP) infrastructure that plays a central role in NAP Internet Protocol security (IPsec) enforcement.

HRA obtains health certificates on behalf of NAP clients when they are compliant with network health requirements. These health certificates authenticate NAP clients for IPsec-protected communications with other NAP clients on an intranet. If a NAP client does not have a health certificate, the IPsec peer authentication fails and the NAP client cannot initiate communication with other IPsec-protected computers on the network.

HRA is installed on a computer that is also running Network Policy Server (NPS) and Internet Information Services (IIS). If they are not already installed, these services will be added when you install HRA.

Reference: Health Registration Authority

### **Case Study: 4**

#### **Northwind Traders**

##### **Overview**

Northwind Traders is a retail company.

The company has offices in Montreal and San Diego. The office in Montreal has 1,000 client computers. The office in San Diego has 100 computers. The computers in the San Diego office are often replaced. The offices connect to each other by using a slow WAN link. Each office connects directly to the Internet.

##### **Existing Environment**

##### **Active Directory Environment**

The network contains an Active Directory forest named northwindtraders.com. The forest contains two domains named northwindtraders.com and west.northwindtraders.com. All servers run Windows Server 2012 R2.

All client computers run Windows 7.

Each office is configured as an Active Directory site. The site in the Montreal office is named Site1. The site in the San Diego office is named Site2.

The forest contains four domain controllers. The domain controllers are configured as shown in the following table.

Domain controllers name	Domain	Site	Role
DC1	Nothwindtraders.com	Site1	<ul style="list-style-type: none"><li>• DNS server</li><li>• Global catalog server</li></ul>
DC2	Northwindtraders.com	Site1	<ul style="list-style-type: none"><li>• DNS server</li><li>• Global catalog server</li></ul>
DC3	West.northwindtraders.com	Site1	DNS server
RODC1	West.northwindtraders.com	Site2	DNS server

DC1, DC2, and DC3 are writable domain controllers. RODC1 is read-only domain controller (RODC). All DNS zones are Active Directory-integrated. All zones replicate to all of the domain controllers.

All of the computers in the San Diego office are configured to use RODC1 as their only DNS server.

The northwindtraders.com domain contains a Group Policy object (GPO) named GP01. GP01 is applied to all of the users in the Montreal office.

All of the user accounts for the Montreal users are in the northwindtraders.com domain. All of the user accounts for the San Diego users are in the west.northwindtraders.com domain.

### Network Environment

Site1 contains the member servers in the northwindtraders.com domain shown in the following table.

Server name	Component
Server1	Hyper-V host
Server2	System Center 2012 R2 Virtual Machine Manager (VMM) server
Server3	IP Address Management (IPAM) server File server
Server4	Routing and Remote Access server
Server5	Web server

Server1 connects to SAN storage that supports Offloaded Data Transfer (ODX). All virtual hard disks (VHDs) are stored on the SAN.

A web application named App1 is installed on Servers.

Server3 has a shared folder that contains sales reports. The sales reports are read frequently by the users in both offices. The reports are generated automatically once per week by an enterprise resource planning (ERP) system.

A perimeter network in the Montreal office contains two standalone servers. The servers are configured as shown in the following table.

Server name	Component
Server6	Web application proxy
Server7	Web Server (IIS) server role

The servers in the perimeter network are accessible from the Internet by using a domain name suffix of public.northwindtraders.com.

Each administrator has a management computer that runs Windows 8.1.

## Requirements

### Planned Changes

Northwind Traders plans to implement the following changes:

On Server1, create four virtual machines that run Windows Server 2012 R2. The servers will be configured as shown in the following table.

Virtual machine name	Generation	Controller type	VHD format
VM1	Generation 1	IDE	VHDX
VM2	Generation 2	SCSI	VHD
VM3	Generation 1	SCSI	VHD
VM4	Generation 2	SCSI	VHDX

- Configure IP routing between Site1 and the network services that Northwind Traders hosts in Windows Azure.
- Place a domain controller for the northwindtraders.com domain in Windows Azure.
- Upgrade all of the computers in the Montreal office to Windows 8.1.
- Purchase a subscription to Microsoft Office 365.
- Configure a web application proxy on Server6.
- Configure integration between VMM and IPAM.
- Apply GPO1 to all of the San Diego users.
- Connect Site1 to Windows Azure.

### Technical Requirements

Northwind Traders must meet the following technical requirements:

- All virtual machines must use ODX.
- Users must be able to access App1 from the Internet.
- GPO1 must not be applied to computers that run Windows 8.1.
- All DNS zones must replicate only to DC1, DC2, and DC3.
- All computers must be able to resolve names by using a local DNS server.
- If a WAN link fails, users must be able to access all of the sales reports.
- The credentials for accessing Windows Azure must be permanently stored.
- The on-premises network must be connected to Windows Azure by using Server4.
- The administrators must be able to manage Windows Azure by using Windows PowerShell.
- The number of servers and services deployed in the San Diego office must be minimized.
- Active Directory queries for the objects in the forest must not generate WAN traffic, whenever possible.

## Security Requirements

Northwind Traders identifies the following security requirements:

- Ensure that all DNS zone data is encrypted when it is replicated.
- Minimize the number of permissions assigned to users and administrators, whenever possible. Prevent an Active Directory Domain Services (AD DS) attribute named SSNumber from replicating to Site2.
- Ensure that users can use their northwindtraders.com user account to access the resources hosted in Office 365.
- Prevent administrators from being required to re-enter their credentials when they manage Windows Azure from approved management computers.

---

### Question: 1

---

You need to recommend an Office 365 integration solution.  
What should you include in the recommendation?

- A. Active Directory directory synchronization
- B.The Active Directory Migration Tool (ADMT)
- C.Windows Identity Foundation (WIF) 3.5
- D.The Sync Framework Toolkit

---

**Answer: A**

---

\* Scenario: Each office is configured as an Active Directory site.

Reference: Synchronizing your directory with Office 365 is easy

<https://blogs.office.com/2014/04/15/synchronizing-your-directory-with-office-365-is-easy/>

---

### Question: 2

---

You need to recommend a solution for the sales reports.  
What should you include in the recommendation?

- A. BranchCache in distributed cache mode
- B.Offline files
- C.BranchCache in hosted cache mode
- D.Distributed File System (DFS)

---

**Answer: D**

---

DFS to increase the availability of data by storing the data on multiple servers. DFS could make the sales reports available, even if the WAN link is down.

\* Scenario: Server3 has a shared folder that contains sales reports. The sales reports are read frequently by the users in both offices. The reports are generated automatically once per week by an enterprise resource planning (ERP) system.

If a WAN link fails, users must be able to access ALL of the sales reports

Incorrect:

Not A, Not C: Branchcache (hosted or distributed) does not work when content server is not reachable (link down).

Not B: According to the scenario, the computers in the San Diego office are often replaced, so offline caching will not make the reports available all the time if WAN link goes down.

Reference: What Is DFS?

[https://technet.microsoft.com/en-us/library/cc779627\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc779627(v=ws.10).aspx)

---

### Question: 3

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#### HOTSPOT

You are evaluating the virtual machine environment.

In the table below, identify which virtual machines currently support ODX and which virtual machines require a configuration change to support ODX. Make only one selection in each row.

Virtual machine	Currently supports ODX	Requires a configuration change to support ODX
VM1	<input type="radio"/>	<input type="radio"/>
VM2	<input type="radio"/>	<input type="radio"/>
VM3	<input type="radio"/>	<input type="radio"/>
VM4	<input type="radio"/>	<input type="radio"/>

---

#### Answer:

---

Virtual machine	Currently supports ODX	Requires a configuration change to support ODX
VM1	<input type="radio"/>	<input checked="" type="radio"/>
VM2	<input checked="" type="radio"/>	<input type="radio"/>
VM3	<input checked="" type="radio"/>	<input type="radio"/>
VM4	<input checked="" type="radio"/>	<input type="radio"/>

\* VM1 uses IDE and does not support ODX. The other VMs are ok.

\* ID requirements include:

Must be connected by using one of the following protocols:

iSCSI

Fibre Channel

Fibre Channel over Ethernet

Serial Attached SCSI (SAS)

Note: Windows Offloaded Data Transfer (ODX) functionality in Windows maximizes an enterprise's investment in intelligent storage arrays by enabling the arrays to directly transfer data within or between compatible storage devices, bypassing the host computer.

Reference: Windows Offloaded Data Transfers Overview

<https://technet.microsoft.com/en-us/library/hh831375.aspx>

---

### Question: 4

---

You need to recommend a solution for GPO1.

What is the best approach to achieve the goal? More than one answer choice may achieve the goal. Select the BEST answer.

- A. In west.northwindtraders.com, create a copy of GPO1 and link the new GPO to Site2. Apply a WMI filter to the new GPO.
- B. In west.northwindtraders.com, create a copy of GPO1 and link the new GPO to west.northwindtraders.com. Configure security filtering on the new GPO.
- C. Link GPO1 to west.northwindtraders.com and configure security filtering on GPO1.
- D. Link GPO1 to Site2 and apply a WMI filter to GPO1.

---

**Answer: D**

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\* Scenario:

The northwindtraders.com domain contains a Group Policy object (GPO) named GPO1. GPO1 is applied to all of the users in the Montreal office.

Apply GPO1 to all of the San Diego users.

GPO1 must not be applied to computers that run Windows 8.1.

\* WM Filter for Operating Systems. Example:

Windows 8.1 64 bit

SELECT version FROM Win32\_OperatingSystem WHERE Version LIKE "6.3%" and ProductType = "1"  
AND OSArchitecture = "64-bit"

---

### Question: 5

---

You need to recommend a solution for the replication of Active Directory.

What should you recommend modifying?

- A. The Active Directory Schema
- B. The properties of Site1
- C. The RODC1 computer account
- D. The properties of Site2

---

**Answer: A**

---

An AD Schema can be configured to prevent specific information from being replicated. You add an attribute to the RODC filtered attribute set, and then mark it as confidential.

\* Scenario: Prevent an Active Directory Domain Services (AD DS) attribute named SSNumber from replicating to Site2.

Reference: Appendix D: Steps to Add an Attribute to the RODC Filtered Attribute Set

[https://technet.microsoft.com/en-us/library/cc772331\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc772331(v=ws.10).aspx)

---

### Question: 6

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DRAG DROP

You need to recommend a solution for managing Windows Azure.

Which three actions should you recommend performing in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
Run the <b>Import-AzurePublishSettingsFile</b> cmdlet.	
Run the <b>Add-AzureAccount</b> cmdlet.	
Run the <b>Set-AzureStorageAccount</b> cmdlet.	
Run the Microsoft Web Platform Installer (Web PI).	
Run the <b>Register-PSSessionConfiguration</b> cmdlet.	
Run the <b>Get-AzurePublishSettingsFile</b> cmdlet.	
Install Microsoft .NET Framework 3.5.	

---

**Answer:**

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Box 1:

Run the Microsoft Web Platform Installer (Web PI).

Box 2:

Run the **Get-AzurePublishSettingsFile** cmdlet.

Box 3:

Run the **Import-AzurePublishSettingsFile** cmdlet.

Explanation:

Reference: Step-By-Step: Manage Windows Azure using PowerShell

<http://blogs.technet.com/b/canitpro/archive/2013/11/06/set-by-step-manage-windows-azure-using-powershell.aspx>

---

### Question: 7

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You need to implement a solution for DNS replication. Which cmdlets should you run?

- A. Set-DnsServer and Invoke-DnsServerZoneSign
- B. ConvertTo-DnsServerPrimaryZone and Register-DnsServerDirectoryPartition
- C. UnRegister-DnsServerDirectoryPartition and Add-DnsServerForwarder
- D. Set-DnsServerDnsSecZoneSetting and Invoke-DnsServerZoneSign

---

**Answer: C**

---

Currently DNS zones are replicated to all Domain Controllers, but they should only replicate only to DC1, DC2, and DC3. We can unregister other DNS servers (RODC1) with the help of UnRegister-DnsServerDirectoryPartition cmdlet, which deregisters a Domain Name System (DNS) server from a

specified DNS application directory partition.

RODC1 is still used as a DNS server, but does not receive zone replication, but it should still function as a DNS server as all computers need to resolve names by using a local DNS server. We configure RODC1 to forward DNS requests to DC1, DC2 or DC3 with the help of the Add-DnsServerForwarder command.

\* Scenario. Technical Requirement related to DNS:

Ensure that all DNS zone data is encrypted when it is replicated

All computers must be able to resolve names by using a local DNS server

All DNS zones must replicate only to DC1, DC2, and DC3

Reference: UnRegister-DnsServerDirectoryPartition, Add-DnsServerForwarder

---

## Question: 8

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### HOTSPOT

You are planning the certificates for Northwind Traders.

You need to identify the certificate configurations required for App1.

How should you configure the certificate request? To answer, select the appropriate options in the answer area.

### Answer Area

Certificate common name:

Enhanced key usage:

### Answer Area

Certificate common name:

\*.northwindtraders.com  
App1.public.northwindtraders.com  
Server6.northwindtraders.com

Enhanced key usage:

Client authentication  
Lifetime Signing  
Platform Certificate  
Server authentication

---

### Answer:

---

### Answer Area

Certificate common name:

\*.northwindtraders.com  
**App1.public.northwindtraders.com**  
Server6.northwindtraders.com

Enhanced key usage:

Client authentication  
Lifetime Signing  
Platform Certificate  
**Server authentication**

Explanation:

Box 1: App1.public.northwindtraders.com

\* From the scenario:

Users must be able to access App1 from the Internet.



The servers in the perimeter network are accessible from the Internet by using a domain name suffix of public.northwindtraders.com.

Configure a web application proxy on Server6.

Box 2: Server Authentication

Certificates that server programs use to authenticate themselves to clients

\* From the scenario:

Configure a web application proxy on Server6.

Reference: How CA Certificates Work

[https://technet.microsoft.com/en-us/library/cc737264\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc737264(v=ws.10).aspx)

---

### Question: 9

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HOTSPOT

You need to recommend a solution for communicating to Windows Azure services.

What should you recommend? To answer, select the appropriate options in the answer area.

#### Answer Area

Protocol to use on Server4:

Object to create on Server4:

#### Answer Area

Protocol to use on Server4:

  
IKEv2  
PPoE  
PPTP  
SSTP

Object to create on Server4:

  
A site-to-site interface  
A route to a VPN connection  
A custom route to the BGP routing table  
An entry point to a multi-site deployment

---

**Answer:**

---

#### Answer Area

Protocol to use on Server4:

  
IKEv2  
PPoE  
PPTP  
SSTP

Object to create on Server4:

  
A site-to-site interface  
A route to a VPN connection  
A custom route to the BGP routing table  
An entry point to a multi-site deployment

Reference: Creating a site to site (S2S) VPN to Azure with RRAS, one physical NIC and a NAT gateway

<http://blogs.technet.com/b/diegoviso/archive/2014/10/28/creating-a-site-to-site-s2s-vpn-to-azure-with-rras-and-one-physical-nic.aspx>

---

### Question: 10

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HOTSPOT

On Server2, you create a Run As Account named Account1. Account1 is associated to an Active Directory account named VMMIPAM.

You need to implement an IPAM solution.

What should you do? To answer, select the appropriate configuration for each server in the answer area.

### Answer Area

Server2:

Server3:

### Answer Area

Server2:

- Create a service.
- Create a user role.
- Add a network service.
- Create a logical network.
- Add an infrastructure server.

Server3:

- Add VMMIPAM to IPAM Administrators.
- Add VMMIPAM to IPAM MSM Administrators.
- Add VMMIPAM to IPAM Users and WinRMRemoteWMIUsers\_\_.
- Add VMMIPAM to IPAM ASM Administrators and Remote Management Users.
- Add VMMIPAM to IPAM IP Audit Administrators and Network Configuration Operators.

---

**Answer:**

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### Answer Area

Server2:

- Create a service.
- Create a user role.
- Add a network service.
- Create a logical network.
- Add an infrastructure server.

Server3:

- Add VMMIPAM to IPAM Administrators.
- Add VMMIPAM to IPAM MSM Administrators.
- Add VMMIPAM to IPAM Users and WinRMRemoteWMIUsers\_\_.
- Add VMMIPAM to IPAM ASM Administrators and Remote Management Users.
- Add VMMIPAM to IPAM IP Audit Administrators and Network Configuration Operators.

Explanation:

Box 1: Add a network service

On the VMM server use the Add Network Service Wizard to setup a service, which runs with the newly created VMMIPAM account, and which connects to IPAM server on Server3.

Box 2:

On the IPAM server add the new VMMIPAM account to the IPAM ASM Administrators and to the Remote Management Users groups. This ensures that the Network Service which is run with the VMMIPAM account has the required permissions to access the IPAM server.

Scenario:

Server2 is running System Center 2012 R2 Virtual Machine Manager (VMM) server.

Server3 is running IPAM server.

Reference: How to Add an IPAM Server in VMM in System Center 2012 R

<https://technet.microsoft.com/en-us/library/Dn249418.aspx>

## Case Study: 5

### Alpine Ski

#### Overview

Alpine Ski House provides vacation travel accommodations. Its main office is in Vancouver. Alpine Ski House also has branch offices in Montreal, Denver, and New York.

An additional sales office is located in Los Angeles. This office has client devices only.

All servers in each office run Windows Server 2012 R2. All client devices in each office run Windows 8.1.

Alpine Ski House plans to acquire another company named Margie's Travel. Margie's Travel has an AD DS domain named margiestravel.com.

#### Danner and New York

The Denver and New York offices have their own child domain named us.alpineskihouse.com. The domain controllers are displayed in the following table:

Name	Roles	Location	IP address
US-DC01	Domain controller DNS server DHCP server	Denver	10.10.0.10/24
US-DC02	Domain controller DNS server	Denver	10.10.0.11/24
US-DC03	Domain controller DNS server DHCP server	New York	10.20.0.10/24
US-DC04	Domain controller DNS server	New York	10.20.0.11/24

#### Vancouver and Montreal

Alpine Ski House has an Active Directory Domain Services (AD DS) domain named aplineskihouse.com for the Vancouver and Montreal offices. The forest and domain functional levels are set to Windows Server 2008. The domain controllers in the domain contain Dynamic Host Configuration Protocol (DHCP) servers and DNS servers. The domain controllers are displayed in the following table:

Name	Roles	Location	IP address
ALP-DC01	Domain controller DNS server DHCP server	Vancouver	172.16.0.10/24
ALP-DC02	Domain controller DNS server	Vancouver	172.16.0.11/24
ALP-DC03	Domain controller DNS server DHCP server	Montreal	192.168.10.10/24
ALP-DC04	Domain controller DNS server	Montreal	192.168.10.11/24

The Vancouver office also has a certification authority (CA) installed on a server named ALP-CA01.

#### Business Requirements

##### Growth

An additional branch office is planned in an extremely remote, mountainous location that does not have traditional access to the Internet.

The remote branch office location will use a high-latency, low-bandwidth satellite connection

to the Denver and Vancouver offices.

The Los Angeles office will be expanded to include sales and billing staff. The Los Angeles location will not contain IT staff.

### **File Management**

Currently, each office has a dedicated file share that is hosted on a domain controller. The company plans to implement a new file sharing capability to synchronize data between offices and to maximize performance for locating files that are saved in a different branch office. Sales users in the Los Angeles office must also be able to retrieve file data from each branch office.

### **Recovery time objective**

The business requires that the data stored in AD DS must be recovered within an hour. This data includes user accounts, computer accounts, groups, and other objects. Any customized attributes must also be recovered. The current backup solution uses a tape drive, which requires a minimum of two hours between notification and recovery.

### **Office 365**

Alpine Ski House purchased Office 365 Enterprise E3 licenses for all users in the organization.

### **Technical Requirements**

#### **Existing environment**

Users in the Montreal office of Alpine Ski House report slow times to log on to their devices. An administrator determines that users in the Montreal location occasionally authenticate to a domain controller with an IP address of 172.16.0.10/24. All authentication requests must first be attempted in the same location as the client device that is being authenticated.

#### **Growth**

The remote branch office must have a single domain controller named REMOTE-DC01.us.aplineskihouse.com.

The replication between domains must either use best-effort or low-cost replication. After the expansion, authentication must occur locally.

Any server placed in the Los Angeles office must not contain cached passwords.

#### **File management**

Where possible, the new file management solution must be centralized. If supported, the data must be stored in a single location in each branch office.

#### **Acquisition**

After acquiring Margie's Travel, all AD DS objects, including user account passwords, must be migrated to the alpineskihouse.com domain. Alpine Ski House plans to use the Active Directory Migration Tool (ADMT) to complete the migration process.

The password complexity requirements for the margiestravel.com domain are unknown. Users should not be forced to change their passwords after migrating their user accounts. Some computer objects will be renamed during the migration.

### **Office 365**

Alpine Ski House must use Microsoft Azure to facilitate directory synchronization (DirSync) with Office 365. The DirSync utility must be installed on a virtual machine in Microsoft Azure.

---

**Question: 1**

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You need to perform the directory synchronization with Office 365.  
What should you do first?

- A. Set the domain functional level to Windows Server 2012.
- B. Upgrade the Office 365 licenses to Enterprise E4.
- C. Set the forest functional level to Windows Server 2012.
- D. Create a site-to-site VPN.
- E. Install the DirSync utility in the on-premises environment.

---

**Answer: E**

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**Question: 2**

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You need to design a solution for the recovery-time objective.  
Which two actions should you perform? Each correct answer presents part of the solution.

- A. Schedule a task to create a snapshot of the NTDS database before the existing backup job runs.
- B. Enable the KDC support for claims, compound authentication, and Kerberos armoring administrative template policy.
- C. Set the functional level for each domain to Windows Server 2012.
- D. Set the functional level of the forest to Windows Server 2008 R2.
- E. Enable the Active Directory Recycle Bin.

---

**Answer: A, E**

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**Question: 3**

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You need to configure the connection between the new remote branch office and the existing branch offices.  
What should you create?

- A. SMTP site link
- B. Forest trust
- C. Certification authority
- D. IP subnet

---

**Answer: A**

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---

**Question: 4**

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You need to plan the expansion of the Los Angeles office.  
What should you do?

- A. Install a read-only domain controller in Los Angeles.
- B. Install a domain controller in Los Angeles.
- C. Create and apply a filtered attribute set to the Los Angeles site.
- D. Create and apply a Group Policy object to the Los Angeles site.

---

**Answer: D**

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---

**Question: 5**

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**HOTSPOT**

You need to design the acquisition strategy for Margie's Travel.

What should you do? To answer, select the appropriate option for each action in the answer area.

**Answer Area**

Action	
Install the Active Directory Migration Tool on server:	<div><div>▼</div><div>ALP-CA01 ALP-DC01 ALP-DC02 ALP-DC03 ALP-DC04</div></div>
Specify the following user account option:	<div><div>▼</div><div>Account is disabled Password never expires User cannot change password Do not require Kerberos preauthentication Store password using reversible encryption User must change password at next logon</div></div>

---

**Answer:**

---

**Answer Area**

Action	
Install the Active Directory Migration Tool on server:	<div><div>▼</div><div>ALP-CA01 <b>ALP-DC01</b> ALP-DC02 ALP-DC03 ALP-DC04</div></div>
Specify the following user account option:	<div><div>▼</div><div>Account is disabled <b>Password never expires</b> User cannot change password Do not require Kerberos preauthentication Store password using reversible encryption User must change password at next logon</div></div>

---

**Question: 6**

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**DRAG DROP**

You need to design the file management solution.

What should you do? To answer, drag the appropriate technology to the correct office. Each technology may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

**Technologies**

BranchCache Hosted Mode

BranchCache Distributed Mode

DirectAccess

Distributed File System Replication

**Answer Area**

Office	Technology
New York	Technology
Denver	Technology
Montreal	Technology
Los Angeles	Technology

**Answer:****Technologies**

BranchCache Hosted Mode

BranchCache Distributed Mode

DirectAccess

Distributed File System Replication

**Answer Area**

Office	Technology
New York	BranchCache Hosted Mode
Denver	Distributed File System Replication
Montreal	BranchCache Distributed Mode
Los Angeles	DirectAccess

**Question: 7**

DRAG DROP

You need to resolve the Apline Ski House authentication issue.

Which objects should you create? To answer, drag the appropriate object to the correct office.

Active Directory Domain Services Sites and Subnet	Office	
Active Directory Domain Services IP site link	Vancouver	
Active Directory Domain Services SMTP site link	Montreal	
Domain trust		
Group Policy object		

**Answer:**

Vancouver - Domain trust

Montreal - Active Directory Domain Services IP site link

**Case Study: 6****Contoso Ltd, Case B****Background****Overview**

Contoso, Ltd., is a software development company. Contoso has a main office in London and



two branch offices, one in Madrid and the other in Dublin. The company is in the process of adopting Microsoft Azure to host business critical resources and applications.

Contoso has an Active Directory Domain Services (AD DS) domain named contoso.com. All devices in the three offices are members of the domain. Each office has a dedicated organizational unit (OU) in the root of the domain named London, Madrid, and Dublin, respectively. Each office OU has three child OUs named Computers, Users, and Groups.

The local Administrator account is disabled on all client devices in the domain by using a Group Policy object (GPO) named SecurityConfiguration that is linked to the root of the domain. Contoso's security department also has a GPO named WSUSConfiguration. WSUSConfiguration defines the configuration of Windows Update Services on the Windows Server Update Services (WSUS) server named WSUS1.

You have a GPO named RemoteSales that uses a WMI filter. The GPO prevents users from launching applications that are not approved.

### **DNS Services**

Contoso uses a DNS service that is installed on two domain controllers in the main office. The domain controllers are named DO and DC2. Both DO and DC2 run Windows Server 2008 R2. Both domain controllers host Active Directory integrated zones named contoso.com and lab.contoso.com. The zones are configured to allow only secure updates.

### **Research**

Contoso creates a new research department to develop integration between Contoso's software and public cloud services.

### **Finance Department**

Users in the finance department use a client-server application named App1. App1 uses custom Active Directory attributes to store encryption keys. App1 is a business critical application that must be migrated to Windows Azure.

A server named SERVER2 hosts App1. SERVER2 runs Windows Server 2008 R2. The disk configuration for SERVER2 is shown in the following table:

Volume	Drive letter	Capacity	Contents	Free space
System	C:\	120 GB	system files	40%
App	D:\	20 GB	App1	10%
AppData	E:\	1024 GB	App1 data	30%

A server named SERVER1 hosts a database that is used by App1. SERVER1 runs Windows Server 2008 R2 and SQL Server 2008 R2. The disk configuration for SERVER1 is shown in the following table:

Volume	Drive letter	Capacity	Contents	Free space
System	C:\	120 GB	system files	40%
Data	D:\	4096 GB	database files	5%

The Contoso management team plans to increase the use of App1. To accommodate these plans, the size of the database must be increased

### **Sales Department**

Users in the sales department use laptop computers when they travel. Salespeople use a legacy application named ContosoSales on their laptop computers. Salespeople can use a



pool of shared desktop computers in each office.

The ContosoSales app is dependent on a specific registry key that is frequently overwritten by third-party applications. This causes the ContosoSales app to stop working.

### **Business Requirements**

All DNS servers must be placed in a physically secure location.

### **Software development department**

All software developers must migrate their servers and workstations to the DNS domain lab.contoso.com to ensure that frequent changes to DNS do not interfere with the production environment.

### **Finance department**

All servers that host App1 must be migrated to Windows Azure. A new Azure virtual machine (VM) named CL0UD2 must be deployed to Windows Azure.

### **Sales department**

Users in the sales department should not be able to run applications on their laptop computers that are not approved by the security department. Users in the sales department should have no such restrictions while they work on the desktop computers in the office.

### **Technical Requirements**

#### **App1 requirements**

You have the following requirements:

- The size of the database for App1 must be increased to 8 TB.
- The encryption keys for App1 should not be replicated to the offices where physical server security is not guaranteed.
- The amount of disk space that is used by Windows Azure must be minimized.

#### **Infrastructure requirements**

You have the following requirements:

- The lab.contoso.com DNS domain zone must not be replicated or transferred to DNS servers outside of the London office.
- A new DNS domain zone named research.contoso.com must be deployed for users in the research department.
- The research.contoso.com DNS domain zone must be protected by using DNS Security Extensions (DNSSEC).
- All computers in the London and Madrid offices must install Windows Updates from the server WSUS1.
- A new domain controller for the contoso.com domain must be deployed in the Madrid office.
- Replication traffic must be minimized when the new domain controllers are deployed.
- New WMI filters must not conflict with existing WMI filters.

---

### **Question: 1**

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DRAG DROP

You need to configure DNS for the Dublin office.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
On DC1, configure a replication scope for lab.contoso.com.	
On DC2, change the DNS Zone type for lab.contoso.com to <b>Stub Zone</b> .	
On DC3, unregister the DomainDnsZones application partition.	
On DC1, change the DNS Zone type for lab.contoso.com to <b>Secondary Zone</b> .	
Install a new domain controller named <b>DC3</b> .	
On DC1, create a new DNS application partition.	

---

**Answer:**

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Answer Area	
1	On DC1, create a new DNS application partition.
2	On DC1, configure a replication scope for lab.contoso.com.
3	On DC2, change the DNS Zone type for lab.contoso.com to <b>Stub Zone</b> .

---

## Question: 2

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You need to plan the migration of App1. What should you do?

- A. Install App1 on drive C. Move all of the data that supports App1 to drive D.
- B. Expand the size of drive C Install App1 and all of the data that supports the app on drive C
- C. Install App1 on drive D. Move all of the data that supports App1 to an additional data drive.
- D. Install App1 on drive C. Move all of the data that supports App1 to an additional data drive.

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**Answer: C**

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## Question: 3

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HOTSPOT

You need to configure Windows Updates.

How should you complete the relevant Windows PowerShell commands? To answer, select the