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# Microsoft

**70-414 PRACTICE EXAM**

**Implementing an Advanced Server Infrastructure**

# Product Questions: 243

## Version: 21.0

### Case Study: 1

#### Contoso, Ltd Case A

##### Overview

Contoso, Ltd., is a recruiting and staffing company that has offices throughout North America. The company has a main office and six branch offices. The main office is located in Miami. The branch offices are located in New York, Seattle, Los Angeles, Montreal, Toronto, and Vancouver.

##### Existing Environment

###### Network Infrastructure

The network contains one Active Directory domain named contoso.com.

The main office has the following servers:

- One file server that maintains multiples shares
- Two domain controllers configured as DNS servers
- One Windows Server Update Services (WSUS) server
- Two DHCP servers that each have a scope for all of the subnets
- Two servers that have Failover Clustering configured and are used as virtualization hosts
- One server that has Microsoft SQL Server 2012 installed and maintains a customer relationship management (CRM) database

Each branch office has the following servers:

- One domain controller configured as a DNS server
- One DHCP server that has a single scope for its respective office

Each office has a single subnet. The network speed of the local area network (LAN) is 1 gigabit per second. All of the offices have a high-speed connection to the Internet. The offices connect to each other by using VPN appliances.

##### Current Issues

Users report that it can take a long time to download files from network shares in the main office.

A root cause analysis identifies that network traffic peaks when the users experience this issue.

##### Requirements

###### Planned Changes

The company plans to implement the following changes:

- Replace all of the domain controllers with new servers that run Windows Server 2012.
- Upgrade the CRM application to use a web-based application that connects to the current CRM database. The web application will store session data in the memory of each web server.
- Initially, deploy two front-end web servers to two virtual machines. Additional virtual web servers will be deployed in the future.
- Monitor the availability of the CRM application and create alerts when the overall availability is less than 99 percent.
- Implement Microsoft System Center 2012 to manage the new environment.

## **Business Requirements**

The company identifies the following business requirements:

- Minimize hardware costs and software costs whenever possible.
- Minimize the amount of network traffic over the VPN whenever possible.
- Ensure that the users in the branch offices can access files currently on the main office file server if an Internet link fails.

## **Technical Requirements**

The company identifies the following technical requirements:

- Provide a highly available DHCP solution.
- Maintain a central database that contains the security events from all of the servers. The database must be encrypted.
- Ensure that an administrator in the main office can manage the approval of Windows updates and updates to third-party applications for all of the users.
- Ensure that all of the domain controllers have the ReliableTimeSource registry value in HKEY\_LOCAL\_MACHINE \SYSTEM\CurrentControlSet\Services\W32Time\Parameters set to 1, even if an administrator changes that value manually.

## **Virtualization Requirements**

The company identifies the following virtualization requirements:

- Minimize the number of permissions and privileges assigned to users.
- Ensure that the members of a group named Group2 can add a WSUS server to the fabric.
- Ensure that a diagram view of the virtualization environment can be generated dynamically.
- Minimize the amount of administrative effort required to manage the virtualization environment.
- Prevent the failure of a front-end web server from affecting the availability of the CRM application.
- Ensure that the members of a group named Group1 can create new virtual machines in the Los Angeles office only.
- Only create virtual machine templates by using objects that already exist in the System Center 2012 Virtual Machine Manager (VMM) library.
- On the failover cluster in the main office, apply limited distribution release (LDR) updates to the virtualization hosts without disrupting the virtual machines hosted on the virtualization hosts.

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### **Question: 1**

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You need to recommend a solution that manages the security events. The solution must meet the technical requirements.

Which configuration should you include in the recommendation?

- A. Object access auditing by using a Group Policy object (GPO)
- B. Event rules by using System Center 2012 Operations Manager
- C. Event forwarding by using Event Viewer
- D. Audit Collection Services (ACS) by using System Center 2012

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**Answer: D**

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### **Question: 2**

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You are planning the delegation for the virtualization environment. The delegation must meet the virtualization requirements.

Which user role profile should you select for Group2?

- A. Administrators
- B. Read-Only Administrator
- C. Self-Service User
- D. Delegated Administrator

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**Answer: A**

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### **Question: 3**

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You need to recommend a solution that resolves the current file server issue. The solution must meet the business requirements.

What should you include in the recommendation?

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

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**Answer: D**

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### **Question: 4**

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You need to recommend a solution for managing updates. The solution must meet the technical requirements.

What should you include in the recommendation?

- A. A System Center 2012 Configuration Manager management point in the main office and a WSUS downstream server in each office
- B. A System Center 2012 Configuration Manager software update point in the main office and a System Center 2012 Configuration Manager distribution point in each office
- C. A System Center 2012 Configuration Manager management point in the main office and a System Center 2012 Configuration Manager distribution point in each office
- D. A WSUS upstream server in the main office and a WSUS downstream server in each office

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**Answer: B**

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### **Question: 5**

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You are planning the deployment of System Center 2012 Virtual Machine Manager (VMM).

You need to identify which additional System Center 2012 product is required to meet the virtualization requirements. What should you include in the recommendation?

- A. App Controller
- B. Operations Manager
- C. Configuration Manager

D. Service Manager

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**Answer: B**

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**Question: 6**

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You need to recommend a solution that meets the technical requirements for DHCP.

What should you include in the recommendation for each office?

- A. DHCP failover
- B. Network Load Balancing (NLB)
- C. DHCP server policies
- D. IP Address Management (IPAM)

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**Answer: A**

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**Question: 7**

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You need to create a virtual machine template for the web servers used by the CRM application.

The solution must meet the virtualization requirements.

What should you use?

- A. An .iso image
- B. A virtual machine
- C. A Windows PowerShell script
- D. A virtual hard disk (VHD)

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**Answer: D**

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Explanation:

| Business Requirements | Technical Requirements | Virtualization Requirements | All |
|-----------------------|------------------------|-----------------------------|-----|
|-----------------------|------------------------|-----------------------------|-----|

The company identifies the following virtualization requirements:

- Minimize the number of permissions and privileges assigned to users.
- Ensure that the members of a group named Group2 can add a WSUS server to the fabric.
- Ensure that a diagram view of the virtualization environment can be generated dynamically.
- Minimize the amount of administrative effort required to manage the virtualization environment.
- Prevent the failure of a front-end web server from affecting the availability of the CRM application.
- Ensure that the members of a group named Group1 can create new virtual machines in the Los Angeles office only.
- Only create virtual machine templates by using objects that already exist in the System Center 2012 Virtual Machine Manager (VMM) library.
- On the failover cluster in the main office, apply limited distribution release (LDR) updates to the virtualization hosts without disrupting the virtual machines hosted on the virtualization hosts.

A Virtual Machine Manager template provides a standardized group of hardware and software settings that can be used repeatedly to create new virtual machines configured with those settings. In Library view in the Administrator Console, you can use the **New template** action to open the New Template Wizard used to create a virtual machine template.

Although you can use a number of methods to create a template, you cannot create a template that does not include an operating system. Virtual Machine Manager supports the use of either Windows Server 2003 or Windows 2000 Server. If you want to create a virtual machine with a blank virtual hard disk on which you install an operating system later, you must use the New Virtual Machine Wizard rather than the New Template Wizard that is described in this topic. For more information about using the New Virtual Machine Wizard, see [Creating Virtual Machines](#).

Reference: <http://technet.microsoft.com/en-us/library/bb740838.aspx>

## **Question: 8**

You need to recommend a solution for updating the virtualization hosts. The solution must meet the visualization requirements.

What should you include in the recommendation?

- A. Cluster-Aware Updating
- B. WSUS
- C. System Center Updates Publisher 2011
- D. System Center 2012 Configuration Manager

**Answer: A**

Explanation:

| Business Requirements | Technical Requirements | Virtualization Requirements | All |
|-----------------------|------------------------|-----------------------------|-----|
|-----------------------|------------------------|-----------------------------|-----|

The company identifies the following virtualization requirements:

- Minimize the number of permissions and privileges assigned to users.
- Ensure that the members of a group named Group2 can add a WSUS server to the fabric.
- Ensure that a diagram view of the virtualization environment can be generated dynamically.
- Minimize the amount of administrative effort required to manage the virtualization environment.
- Prevent the failure of a front-end web server from affecting the availability of the CRM application.
- Ensure that the members of a group named Group1 can create new virtual machines in the Los Angeles office only.
- Only create virtual machine templates by using objects that already exist in the System Center 2012 Virtual Machine Manager (VMM) library.
- On the failover cluster in the main office, apply limited distribution release (LDR) updates to the virtualization hosts without disrupting the virtual machines hosted on the virtualization hosts.

## **Cluster-Aware Updating Overview**

2 out of 2 rated this helpful - Rate this topic

Published: February 29, 2012

Updated: August 15, 2012

Applies To: Windows Server 2012

This topic provides an overview of **Cluster-Aware Updating** (CAU), a new feature for failover clusters in Windows Server 2012 that automates the software updating process on clustered servers while maintaining availability. It describes scenarios and applications for using CAU, and provides links to content that details how to integrate CAU into other IT automation and management processes.

Reference: <http://technet.microsoft.com/en-us/magazine/ee677580.aspx>

## **Question: 9**

You need to ensure that Group1 can perform the required tasks. The solution must meet the visualization requirements.

What should you create?

- A. A collection
- B. A host group
- C. An organizational unit (OU)
- D. A site

**Answer: B**

**Explanation:**

| Business Requirements | Technical Requirements | Virtualization Requirements | All |
|-----------------------|------------------------|-----------------------------|-----|
|-----------------------|------------------------|-----------------------------|-----|

The company identifies the following virtualization requirements:

- Minimize the number of permissions and privileges assigned to users.
- Ensure that the members of a group named Group2 can add a WSUS server to the fabric.
- Ensure that a diagram view of the virtualization environment can be generated dynamically.
- Minimize the amount of administrative effort required to manage the virtualization environment.
- Prevent the failure of a front-end web server from affecting the availability of the CRM application.
- Ensure that the members of a group named Group1 can create new virtual machines in the Los Angeles office only.
- Only create virtual machine templates by using objects that already exist in the System Center 2012 Virtual Machine Manager (VMM) library.
- On the failover cluster in the main office, apply limited distribution release (LDR) updates to the virtualization hosts without disrupting the virtual machines hosted on the virtualization hosts.

Applies To: System Center 2012 - Virtual Machine Manager, System Center 2012 SP1 - Virtual Machine Manager

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

The procedures in this section describe how to create a host group structure in System Center 2012 – Virtual Machine Manager (VMM), and how to configure host group properties. You can use host groups to group virtual machine hosts in meaningful ways, often based on physical site location and resource allocation. When you design a host group structure, consider the following:

Reference: <http://technet.microsoft.com/en-us/library/gg610645.aspx>.

**Question: 10**

You need to recommend an automated remediation solution for the ReliableTimeSource registry value. The solution must meet the technical requirements.

What should you include in the recommendation?

- A. A System Center 2012 Configuration Manager configuration baseline.
- B. A System Center 2012 Operations Manager performance counter rule.
- C. A System Center 2012 Configuration Manager maintenance task.
- D. A System Center 2012 Operations Manager event rule.

**Answer: A****Explanation:**

| Business Requirements | Technical Requirements | Virtualization Requirements | All |
|-----------------------|------------------------|-----------------------------|-----|
|-----------------------|------------------------|-----------------------------|-----|

The company identifies the following technical requirements:

- Provide a highly available DHCP solution.
- Maintain a central database that contains the security events from all of the servers. The database must be encrypted.
- Ensure that an administrator in the main office can manage the approval of Windows updates and updates to third-party applications for all of the users.
- Ensure that all of the domain controllers have the ReliableTimeSource registry value in HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters set to 1, even if an administrator changes that value manually.

- View configuration baselines that have been deployed to the client, initiate compliance evaluation, and view compliance reports.

Reference: <http://technet.microsoft.com/en-US/library/gg682106.aspx>

**Question: 11**

You need to create a service template for the web servers used by the CRM application.

What should you include in the service template?

- A. A VIP template
- B. A host profile
- C. Guest OS profile
- D. A capability profile

**Answer: A**

Explanation:

| Overview   | Existing Environment Network Infrastructure | Current Issues              | Planned Changes |
|--|---|-----------------------------|-----------------|
| The company plans to implement the following changes:  |   |                             |                 |
| <ul style="list-style-type: none"> <li>- Replace all of the domain controllers with new servers that run Windows Server 2012.</li> <li>- Upgrade the CRM application to use a web-based application that connects to the current CRM database. The web application will store session data in the memory of each web server.</li> <li>- Initially, deploy two front-end web servers to two virtual machines. Additional virtual web servers will be deployed in the future.</li> <li>- <b>Monitor the availability of the CRM application and create alerts when the overall availability is less than 99 percent.</b></li> <li>- Implement Microsoft System Center 2012 to manage the new environment.</li> </ul> |   |                             |                 |
| Business Requirements  | Technical Requirements                      | Virtualization Requirements | All             |

The company identifies the following virtualization requirements:

- Minimize the number of permissions and privileges assigned to users.
- Ensure that the members of a group named Group2 can add a WSUS server to the fabric.
- Ensure that a diagram view of the virtualization environment can be generated dynamically.
- Minimize the amount of administrative effort required to manage the virtualization environment.
- Prevent the failure of a front-end web server from affecting the availability of the CRM application.
- Ensure that the members of a group named Group1 can create new virtual machines in the Los Angeles office only.
- **Only create virtual machine templates by using objects that already exist in the System Center 2012 Virtual Machine Manager (VMM) library.**
- On the failover cluster in the main office, apply limited distribution release (LDR) updates to the virtualization hosts without disrupting the virtual machines hosted on the virtualization hosts.

Updated: September 10, 2012

Applies To: System Center 2012 - Virtual Machine Manager, System Center 2012 SP1 - Virtual Machine Manager

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

You can use the following procedure to create a virtual IP (VIP) template for a hardware load balancer. A virtual IP template contains load balancer-related configuration settings for a specific type of network traffic. For example, you could create a template that specifies the load balancing behavior for HTTPS traffic on a specific load balancer manufacturer and model. These templates represent the best practices from a load balancer configuration standpoint.

**Note**

For information about how to create a virtual IP template for Microsoft Network Load Balancing (NLB), see How to Create VIP Templates for Network Load Balancing (NLB) in VMM.

Reference: <http://technet.microsoft.com/library/gg610569.aspx>

## Question: 12

You need to recommend a solution for deploying the web servers for the CRM application.

The solution must meet the visualization requirements.

What should you include in the recommendation?

- A. Network Load Balancing (NLB) without affinity
- B. Failover Clustering with one active node
- C. Failover Clustering with two active nodes
- D. Network Load Balancing (NLB) with client affinity

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**Answer: D**

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**Explanation:**

| Business Requirements | Technical Requirements | Virtualization Requirements | All |
|-----------------------|------------------------|-----------------------------|-----|
|-----------------------|------------------------|-----------------------------|-----|

The company identifies the following virtualization requirements:

- Minimize the number of permissions and privileges assigned to users.
- Ensure that the members of a group named Group2 can add a WSUS server to the fabric.
- Ensure that a diagram view of the virtualization environment can be generated dynamically.
- Minimize the amount of administrative effort required to manage the virtualization environment.
- Prevent the failure of a front-end web server from affecting the availability of the CRM application.
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- Only create virtual machine templates by using objects that already exist in the System Center 2012 Virtual Machine Manager (VMM) library.
- On the failover cluster in the main office, apply limited distribution release (LDR) updates to the virtualization hosts without disrupting the virtual machines hosted on the virtualization hosts.

Reference: <http://technet.microsoft.com/library/hh831698>

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**Question: 13**

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You need to deploy the dedicated storage servers to support the new web application servers.

What should you do?

- A. Install Windows Storage Server 2012 R2 Standard on STORAGE1 and STORAGE2. Use STORAGE1 and STORAGE2 as iSCSI target servers.
- B. Install Windows Storage Server 2012 R2 Standard on STORAGE1 and STORAGE2. Use STORAGE1 and STORAGE2 as scale-out file servers.
- C. Install Windows Storage Server 2012 R2 Workgroup on STORAGE1 and STORAGE2. Use STORAGE1 and STORAGE2 as scale-out file servers.
- D. Install Windows Storage Server 2012 R2 Workgroup on STORAGE1 and STORAGE2. Use STORAGE1 and STORAGE2 as iSCSI target servers.

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**Answer: C**

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**Case Study: 2****Proseware Inc****General Overview**

Proseware Inc., is a manufacturing company that has 4,000 employees.

Proseware works with a trading partner named Fabrikam, Inc.

**Physical Locations**

Proseware has a main office and two branch offices. The main office is located in London. The branch offices are located in Madrid and Berlin. Proseware has a sales department based in the London office and a research department based in the Berlin office.

The offices connect to each other by using a WAN link. Each office connects directly to the Internet.

Proseware rents space at a hosting company. All offices have a dedicated WAN link to the hosting company. Web servers that are accessible from the Internet are located at the hosting company.

**Active Directory**

The Proseware network contains an Active Directory forest named proseware.com. The forest contains a single domain. The forest functional level is Windows Server 2012.

Each office contains three domain controllers. An Active Directory site is configured for each office.

System state backups are performed every day on the domain controllers by using System Center 2012 R2 Data Protection Manager (DPM).

### **Virtualization**

Proseware has Hyper-V hosts that run Windows Server 2012 R2. Each Hyper-V host manages eight to ten virtual machines. The Hyper-V hosts are configured as shown in the following table.

| <b>Server name</b> | <b>Location</b> |
|--------------------|-----------------|
| HyperV1            | London          |
| HyperV2            | London          |
| HyperV3            | Madrid          |
| HyperV4            | Madrid          |
| HyperV5            | Berlin          |
| HyperV6            | Berlin          |
| HyperV7            | Hosting company |
| HyperV8            | Hosting company |
| VDI1               | London          |
| VDI2               | London          |

All of the Hyper-V hosts store virtual machines on direct-attached storage (DAS).

### **Servers**

All servers run Windows Server 2012 R2. All of the servers are virtualized, except for the Hyper-V hosts. VDI1 and VDI2 use locally attached storage to host virtual hard disk (VHD) files. The VHDs use the .vhdx format.

A line-of-business application named SalesApp is used by the sales department and runs on a server named APP1. APP1 is hosted on HyperV2.

A server named CA1 has the Active Directory Certificate Services server role installed and is configured as an enterprise root certification authority (CA) named ProsewareCA.

Ten load-balanced web servers hosted on HyperV7 and HyperV8 run the Internet-facing web site that takes orders from Internet customers.

System Center 2012 R2 Operations Manager is used to monitor the health of the servers on the network.

All of the servers are members of the proseware.com domain, except for the servers located in the perimeter network.

### **Client Computers**

All client computers run either Windows 8.1 or Windows 7. Some of the users in the London office connect to pooled virtual desktops hosted on VDI1 and VDI2.

### **Problem Statements**

Proseware identifies the following issues on the network:

Virtualization administrators report that the load on the Hyper-V hosts is inconsistent. The virtualization administrators also report that administrators fail to account for host utilization when creating new virtual machines.

Users in the sales department report that they experience issues when they attempt to access SalesApp from any other network than the one in the London office.

Sometimes, configuration changes are not duplicated properly across the web servers, resulting in customer ordering issues. Web servers are regularly changed.

Demand for virtual desktops is increasing. Administrators report that storage space is becoming an issue as they want to add more virtual machines.

In the past, some personally identifiable information (PII) was exposed when paper shredding procedures were not followed.

## **Requirements**

### **Planned Changes**

Proseware plans to implement the following changes on the network:

- Implement a backup solution for Active Directory.
- Relocate the sales department to the Madrid office.
- Implement System Center 2012 R2 components, as required.
- Protect email attachments sent to Fabrikam that contain PII data so that the attachments cannot be printed.
- Implement System Center 2012 R2 Virtual Machine Manager (VMM) to manage the virtual machine infrastructure. Proseware does not plan to use private clouds in the near future.
- Deploy a new Hyper-V host named RESEARCH1 to the Berlin office. RESEARCH1 will be financed by the research department. All of the virtual machines deployed to RESEARCH1 will use VMM templates.

### **Technical Requirements**

Proseware identifies the following virtualization requirements:

- The increased demand for virtual desktops must be met.
- Once System Center is deployed, all of the Hyper-V hosts must be managed by using VMM.
- If any of the Hyper-V hosts exceeds a set number of virtual machines, an administrator must be notified by email.
- Network administrators in each location must be responsible for managing the Hyper-V hosts in their respective location. The management of the hosts must be performed by using VMM.
- The network technicians in each office must be able to create virtual machines in their respective office. The network technicians must be prevented from modifying the host server settings.
- New virtual machines must be deployed to RESEARCH1 only if the virtual machine template used to create the machine has a value specified for a custom property named CostCenter' that matches Research'.

The web site configurations must be identical on all web servers.

### **Security Requirements**

Proseware identifies the following security requirements:

- All email messages sent to and from Fabrikam must be encrypted by using digital certificates issued to users by the respective CA of their company. No other certificates must be trusted between the organizations.
- Microsoft Word documents attached to email messages sent from Proseware to Fabrikam must be protected.
- Privileges must be minimized, whenever possible.

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### **Question: 1**

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HOTSPOT

You need to recommend a design that meets the technical requirements for managing the Hyper-V hosts by using VMM.

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

**Answer Area**

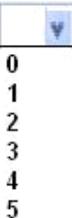
Minimum number of host groups in the London office:  

Minimum number of host groups in the Madrid office:  

User roles required to administer the Hyper-V hosts in each office:

**Answer Area**

Minimum number of host groups in the London office:    
0  
1  
2  
3  
4  
5

Minimum number of host groups in the Madrid office:    
0  
1  
2  
3  
4  
5

User roles required to administer the Hyper-V hosts in each office:

Application Administrator  
Fabric Administrator  
Read-Only Administrator  
Tenant Administrator

**Answer:** \_\_\_\_\_

### Answer Area

Minimum number of host groups in the London office:

|   |
|---|
| 0 |
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

Minimum number of host groups in the Madrid office:

|   |
|---|
| 0 |
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

User roles required to administer the Hyper-V hosts in each office:

|                           |
|---------------------------|
| Application Administrator |
| Fabric Administrator      |
| Read-Only Administrator   |
| Tenant Administrator      |

### Question: 2

#### DRAG DROP

You need to recommend a monitoring solution for Proseware.

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 |
|---|-------------|
| Configure a notification subscription.  |             |
| Configure an availability monitor.  |             |
| From the Virtual Machine Manager console, configure Operations Manager integration. |             |
| From the Operations Manager console, configure VMM integration.                     |             |
| Install the Operations Manager console on the VMM server.                           |             |
| Install the Virtual Machine Manager console on the Operations Manager server.       |             |

Answer:

Box 1:

Install the Operations Manager console on the VMM server.

Box 2:

From the Virtual Machine Manager console, configure Operations Manager integration.

Box 3:

Configure a notification subscription.

### **Question: 3**

You need to recommend changes to the virtual desktop infrastructure (VDI) environment. What should you recommend?

- A. Implement Hyper-V replication between VDI1 and VDI2.
- B. Create new VDI virtual machines that are Generation 2 virtual machines.
- C. Convert the existing VHDs to .vhdx format.
- D. Move the VHDs to a Cluster Shared Volume (CSV) and implement Data Deduplication on the CSV.

**Answer: D**

### **Question: 4**

You need to recommend changes to the existing environment to meet the web server requirement. Which two actions should you recommend? Each correct answer presents part of the solution.

- A. On one web server, run the Start-DSCConfiguration cmdlet. Create and run a configuration script.
- B. On all of the web servers, install the Windows PowerShell Web Access feature, and then run the Set-DscLocalConfigurationManager cmdlet.
- C. On all of the web servers, configure the Local Configuration Manager settings, and then run the Set-DscLocalConfigurationManager cmdlet.
- D. On one web server, install the Windows PowerShell Desired State Configuration (DSC) feature. Create and run a configuration script.

**Answer: C, D**

### **Question: 5**

You are evaluating the use of VMM to migrate APP1 for the sales users. You need to identify the effects of the migration.

What should you identify?

- A. The VHDs and the virtual machine configuration files will move. The sales users' access to APP1 will be interrupted.
- B. The VHDs will move but the virtual machine configuration files will remain in the original location. The sales users will continue to have uninterrupted access to APP1.
- C. The virtual machine configuration files will move but the VHDs will remain in the original location. The sales users' access to APP1 will be interrupted.
- D. The VHDs and the virtual machine configuration files will move. The sales users will continue to have uninterrupted

access to APP1.

---

**Answer: D**

---

**Question: 6**

---

You need to recommend changes to the existing environment to meet the PII requirement.

What should you recommend?

- A. In the Default Domain Policy, configure auto-enrollment for the S/MIME certificates from ProsewareCA
- B. Create an AD RMS cluster in Proseware, and then provision the user accounts in Proseware for the Fabrikam users.
- C. Configure Active Directory Federation Services (AD FS) in Fabrikam, and then install a web application proxy in Proseware.
- D. In the Default Domain Policy, configure auto-enrollment for the S/MIME certificates from FabrikamCA

---

**Answer: B**

---

**Question: 7**

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You need to ensure that RESEARCH1 only contains the required virtual machines.

What should you do?

- A. Create an availability set.
- B. Create a custom placement rule.
- C. Set RESEARCH1 as a possible owner.
- D. Set RESEARCH1 as a preferred owner.

---

**Answer: B**

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**Question: 8**

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You need to recommend changes to the existing environment to meet the email requirement.

What should you recommend?

- A. Implement a two-way forest trust that has selective authentication.
- B. Implement qualified subordination.
- C. Deploy the FabrikamCA root certificate to all of the client computers.
- D. Deploy a user certificate from FabrikamCA to all of the users.

---

**Answer: B**

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**Question: 9**

---

You need to implement a solution for the email attachments.

Both organizations exchange root CA certificates and install the certificates in the relevant stores.

You duplicate the Enrollment Agent certificate template and generate a certificate based on the new template. Which additional two actions should you perform? Each correct answer presents part of the solution.

- A. Request cross-certification authority certificates.

- B. Create Capolicy.inf files.
- C. Request subordinate CA certificates.
- D. Create Policy.inf files.

---

**Answer: A, D**

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### **Case Study: 3**

#### **Northwind Traders**

##### **Overview**

Northwind Traders is an IT services and hosting provider.

Northwind Traders has two main data centers in North America. The data centers are located in the same city. The data centers connect to each other by using high-bandwidth, low-latency WAN links. Each data center connects directly to the Internet.

Northwind Traders also has a remote office in Asia that connects to both of the North American data centers by using a WAN link. The Asian office has 30 multipurpose servers.

Each North American data center contains two separate network segments. One network segment is used to host the internal servers of Northwind Traders. The other network segment is used for the hosted customer environments.

##### **Existing Environment**

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

The network contains an Active Directory forest named northwindtraders.com. The forest contains a single domain. All servers run Windows Server 2012 R2.

###### **Server Environment**

The network has the following technologies deployed:

- Service Provider Foundation
- Windows Azure Pack for Windows Server
- System Center 2012 R2 Virtual Machine Manager (VMM)
- An Active Directory Rights Management Services (AD RMS) cluster
- An Active Directory Certificate Services (AD CS) enterprise certification authority (CA)

All newly deployed servers will include the following components:

- Dual 10-GbE Remote Direct Memory Access (RDMA)-capable network adapters
- Dual 1-GbE network adapters
- 128 GB of RAM

##### **Requirements**

###### **Business Goals**

Northwind Traders will provide hosting services to two customers named Customer1 and Customer2. The network of each customer is configured as shown in the following table.

| Infrastructure component                             | Customer1 | Customer2 |
|--|-----------|-----------|
| System Center 2012 R2 Virtual Machine Manager (VMM)  | Yes       | No        |
| System Center 2012 R2 App Controller                 | Yes       | No        |
| Active Directory Certificate Services (AD CS)        | No        | No        |
| Active Directory Rights Management Services (AD RMS) | Yes       | Yes       |

### Planned Changes

Northwind Traders plans to implement the following changes:

- Deploy System Center 2012 R2 Operations Manager.
- Deploy Windows Server 2012 R2 iSCSI and SMB-based storage.
- Implement Hyper-V Recovery Manager to protect virtual machines.
- Deploy a certificate revocation list (CRL) distribution point (CDP) on the internal network.
- For Customer 1, install server authentication certificates issued by the CA of Northwind Traders on the virtual machine in the hosting networks.

### General Requirements

Northwind Traders identifies the following requirements:

- Storage traffic must use dedicated adapters.
- All storage and network traffic must be load balanced.
- The amount of network traffic between the internal network and the hosting network must be minimized.
- The publication of CRLs to CDPs must be automatic.
- Each customer must use dedicated Hyper-V hosts.
- Administrative effort must be minimized, whenever possible.
- All servers and networks must be monitored by using Operations Manager.
- Anonymous access to internal file shares from the hosting network must be prohibited.
- All Hyper-V hosts must use Cluster Shared Volume (CSV) shared storage to host virtual machines.
- All Hyper-V storage and network traffic must remain available if single network adapter fails.
- The Hyper-V hosts connected to the SMB-based storage must be able to make use of the RDMA technology.
- The number of servers and ports in the hosting environment to which the customer has access must be minimized.

### Customer1 Requirements

Northwind Traders identifies the following requirements for Customer1:

- Customer1 must use SMB-based storage exclusively.
- Customer1 must use App Controller to manage hosted virtual machines.
- The virtual machines of Customer1 must be recoverable if a single data center fails.
- Customer1 must be able to delegate self-service roles in its hosted environment to its users.
- Customer1 must be able to check for the revocation of certificates issued by the CA of Northwind Traders.

- The users of Customer1 must be able to obtain use licenses for documents protected by the AD RMS of Northwind Traders.
- Certificates issued to the virtual machines of Customer1 that reside on the hosted networks must be renewed automatically.

### **Customer2 Requirements**

Northwind Traders identifies the following requirements for Customer2:

- Customer2 must use iSCSI-based storage exclusively.
- All of the virtual machines of Customer2 must be migrated by using a SAN transfer.
- None of the metadata from the virtual machines of Customer2 must be stored in Windows Azure.
- The network configuration of the Hyper-V hosts for Customer2 must be controlled by using logical switches.
- The only VMM network port profiles and classifications allowed by Customer2 must be low-bandwidth, medium-bandwidth, or high-bandwidth.
- The users at Northwind Traders must be able to obtain use licenses for documents protected by the AD RMS cluster of Customer2. Customer2 plans to decommission its AD RMS cluster during the next year.

### **Question: 1**

#### **HOTSPOT**

You need to recommend changes to allow Customer1 to delegate permissions in its hosting environment to its users. Where should you recommend performing each task? To answer, select the appropriate location for each task in the answer area.

#### **Answer Area**

Create a tenant and a stamp:

Create a Tenant Administrator user role:

Create an Application Administrator (Self-Service User) user role:

Create an association between the tenant and the self-service user role:

### Answer Area

Create a tenant and a stamp:

|                                    |
|------------------------------------|
| Service Provider Foundation<br>VMM |
|------------------------------------|

Create a Tenant Administrator user role:

|                                    |
|------------------------------------|
| Service Provider Foundation<br>VMM |
|------------------------------------|

Create an Application Administrator (Self-Service User) user role:

|                                    |
|------------------------------------|
| Service Provider Foundation<br>VMM |
|------------------------------------|

Create an association between the tenant and the self-service user role:

|                                    |
|------------------------------------|
| Service Provider Foundation<br>VMM |
|------------------------------------|

**Answer:**

### Answer Area

Create a tenant and a stamp:

|                                    |
|------------------------------------|
| Service Provider Foundation<br>VMM |
|------------------------------------|

Create a Tenant Administrator user role:

|                                    |
|------------------------------------|
| Service Provider Foundation<br>VMM |
|------------------------------------|

Create an Application Administrator (Self-Service User) user role:

|                                    |
|------------------------------------|
| Service Provider Foundation<br>VMM |
|------------------------------------|

Create an association between the tenant and the self-service user role:

|                                    |
|------------------------------------|
| Service Provider Foundation<br>VMM |
|------------------------------------|

### Question: 2

#### HOTSPOT

You need to recommend a solution that meets the AD RMS requirements of Customer1 and Customer2.

Which actions should you recommend performing for each customer? To answer, select the appropriate customer for each action in the answer area.

**Answer Area**

Configure a trusted publishing domain on the AD RMS cluster of Northwind Traders:

Configure a trusted user domain on the AD RMS cluster of Northwind Traders:

Modify the DNS record of the AD RMS cluster of the customer:

Allow communication to the AD RMS licensing cluster of Northwind Traders:

**Answer Area**

Configure a trusted publishing domain on the AD RMS cluster of Northwind Traders:

|           |
|-----------|
| Customer1 |
| Customer2 |

Configure a trusted user domain on the AD RMS cluster of Northwind Traders:

|           |
|-----------|
| Customer1 |
| Customer2 |

Modify the DNS record of the AD RMS cluster of the customer:

|           |
|-----------|
| Customer1 |
| Customer2 |

Allow communication to the AD RMS licensing cluster of Northwind Traders:

|           |
|-----------|
| Customer1 |
| Customer2 |

**Answer:****Answer Area**

Configure a trusted publishing domain on the AD RMS cluster of Northwind Traders:

|           |
|-----------|
| Customer1 |
| Customer2 |

Configure a trusted user domain on the AD RMS cluster of Northwind Traders:

|           |
|-----------|
| Customer1 |
| Customer2 |

Modify the DNS record of the AD RMS cluster of the customer:

|           |
|-----------|
| Customer1 |
| Customer2 |

Allow communication to the AD RMS licensing cluster of Northwind Traders:

|           |
|-----------|
| Customer1 |
| Customer2 |

**Question: 3**

You need to recommend a monitoring solution for Northwind Traders.

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

- A. Three Operations Manager management servers and two Operations Manager gateway servers
- B. One Operations Manager management server
- C. Two Operations Manager management servers and three Operations Manager gateway servers
- D. Five Operations Manager management servers

---

**Answer: C**

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#### **Question: 4**

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You plan to implement a solution that meets the certificate requirements of Customer1. You need to identify which role services must be deployed to the hosting environment.

Which two role services should you identify? Each correct answer presents part of the solution.

- A. Certification Authority Web Enrollment
- B. Online Responder
- C. Certificate Enrollment Policy Web Service
- D. Certificate Enrollment Web Service

---

**Answer: C, D**

---

#### **Question: 5**

---

**DRAG DROP**

You need to prepare for the migration of virtual machines across the Hyper-V hosts of Customer2.

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.

| <b>Actions</b>  | <b>Answer Area</b> |
|---|--------------------|
| Install the iSCSI Target Server role service on the Hyper-V hosts.  |                    |
| From the Virtual Machine Manager console, add iSCSI arrays to the Hyper-V hosts.                          |                    |
| Install the Multipath I/O (MPIO) feature on the Hyper-V hosts.  |                    |
| From the Virtual Machine Manager console, add disks to the Hyper-V hosts.                                 |                    |
| From the Virtual Machine Manager console, assign a stored virtual machine path to the cloud of Customer2. |                    |

**Answer:**

| Actions   | Answer Area  |
|---|--|
| Install the iSCSI Target Server role service on the Hyper-V hosts.  | From the Virtual Machine Manager console, add iSCSI arrays to the Hyper-V hosts. |
|   | From the Virtual Machine Manager console, add disks to the Hyper-V hosts.        |
| From the Virtual Machine Manager console, assign a stored virtual machine path to the cloud of Customer2. | Install the Multipath I/O (MPIO) feature on the Hyper-V hosts.                   |

<http://blogs.technet.com/b/keithmayer/archive/2013/03/12/speaking-iscsi-with-windows-server-2012-and-hyper-v.aspx>

### Question: 6

#### HOTSPOT

You need to recommend a network configuration for the newly deployed Hyper-V hosts used by Customer1. On which network adapter should you recommend performing each configuration? To answer, select the appropriate network adapter for each configuration in the answer area.

#### Answer Area

|   |                      |
|---|----------------------|
| Create a team:  | <input type="text"/> |
| Create a virtual switch and virtual network adapters: | <input type="text"/> |
| Assign IP addresses to the physical adapters:         | <input type="text"/> |
| Assign IP addresses to virtual adapters:              | <input type="text"/> |

**Answer Area**

Create a team:

|                         |
|-------------------------|
| 1-GbE network adapters  |
| 10-GbE network adapters |

Create a virtual switch and virtual network adapters:

|                         |
|-------------------------|
| 1-GbE network adapters  |
| 10-GbE network adapters |

Assign IP addresses to the physical adapters:

|                         |
|-------------------------|
| 1-GbE network adapters  |
| 10-GbE network adapters |

Assign IP addresses to virtual adapters:

|                         |
|-------------------------|
| 1-GbE network adapters  |
| 10-GbE network adapters |

**Answer:****Answer Area**

Create a team:

|                         |
|-------------------------|
| 1-GbE network adapters  |
| 10-GbE network adapters |

Create a virtual switch and virtual network adapters:

|                         |
|-------------------------|
| 1-GbE network adapters  |
| 10-GbE network adapters |

Assign IP addresses to the physical adapters:

|                         |
|-------------------------|
| 1-GbE network adapters  |
| 10-GbE network adapters |

Assign IP addresses to virtual adapters:

|                         |
|-------------------------|
| 1-GbE network adapters  |
| 10-GbE network adapters |

**Question: 7****HOTSPOT**

You need to recommend which setting must be applied to the virtualization infrastructure of Northwind Traders to minimize the impact of multiple virtual machines starting concurrently.

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

**Answer Area**

(  ).  =

**Answer Area**

|   |   |    |   |   |                                |
|---|---|----|---|---|--------------------------------|
| ( | Get-Cluster<br>Get-VMHost<br>Set-ClusterParameter<br>Set-VMHost | ). | BlockCacheSize<br>ClusSvcRegroupOpeningTimeout<br>ClusterGroupWaitDelay<br>HangRecoveryAction | = | 0<br>8192<br>\$false<br>\$true |
|---|---|----|---|---|--------------------------------|

**Answer:****Answer Area**

|   |   |    |   |   |                                |
|---|---|----|---|---|--------------------------------|
| ( | Get-Cluster<br>Get-VMHost<br>Set-ClusterParameter<br>Set-VMHost | ). | BlockCacheSize<br>ClusSvcRegroupOpeningTimeout<br>ClusterGroupWaitDelay<br>HangRecoveryAction | = | 0<br>8192<br>\$false<br>\$true |
|---|---|----|---|---|--------------------------------|

**Question: 8**

DRAG DROP

You need to prepare the required Hyper-V virtual network components for Customer2.

Which four objects should you create and configure in sequence? To answer, move the appropriate objects from the list of objects to the answer area and arrange them in the correct order.

| Objects                | Answer Area |
|------------------------|-------------|
| a network site         |             |
| an uplink port profile |             |
| a logical network      |             |
| a logical switch       |             |
| a virtual port profile |             |

**Answer:**

Box 1:

a logical network

Box 2:

a network site

Box 3:

a virtual port profile

Box 4:

a logical switch

### Question: 9

DRAG DROP

You need to implement a Hyper-V Recovery Manager solution in the hosting environment of Northwind Traders. Which four 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 |
|--|-------------|
| From the Windows Azure Management Portal, upload a .cer file.  |             |
| On the VMM server, download and install the Hyper-V Recovery Manager Provider.   |             |
| From the Virtual Machine Manager console, select the <b>Synchronize cloud data with the vault</b> option.  |             |
| From the Windows Azure Management Portal, create a Hyper-V Recovery Manager vault.   |             |
| From the Virtual Machine Manager console, enable the <b>Send configuration data about this cloud to the Windows Azure Hyper-V Recovery Manager</b> option. |             |

**Answer:**

Box 1:

From the Windows Azure Management Portal, create a Hyper-V Recovery Manager vault.

Box 2:

From the Windows Azure Management Portal, upload a .cer file.

Box 3:

On the VMM server, download and install the Hyper-V Recovery Manager Provider.

Box 4:

From the Virtual Machine Manager console, select the **Synchronize cloud data with the vault** option.

### Question: 10

**HOTSPOT**

You need to recommend a configuration for the CA extensions of Northwind Traders that meets the certificate revocation requirement of Customer1.

What should you recommend? To answer, select the appropriate prefix of the target location for the each extension settings in the answer area.

**Answer Area**

Publish CRLs to this location:

Include in the CDP extension of issued certificates:

**Answer Area**

Publish CRLs to this location:



Include in the CDP extension of issued certificates:




---

**Answer:**

---

**Answer Area**

Publish CRLs to this location:



Include in the CDP extension of issued certificates:


**Case Study: 4****A.Datum Corporation****Overview**

A. Datum Corporation is an accounting company.

The company has a main office and two branch offices. The main office is located in Miami. The branch offices are located in New York and Seattle.

**Existing Environment****Network Infrastructure**

The network contains an Active Directory domain named adatum.com. All servers run Windows Server 2008 R2. The main office has the following servers and client computers:

- Two domain controllers configured as DNS servers and DHCP servers
- One file server that has multiples shares
- One thousand client computers that run Windows 7

Each branch office has the following servers and client computers:

- One domain controller configured as a DNS server and a DHCP server
- Five hundred to 800 client computers that run Windows XP

Each office has multiple subnets. The network speed of the local area network (LAN) is 1 gigabit per second. The offices connect to each other by using a WAN link. The main office is connected to the Internet.

### **Current Issues**

The WAN link between the Miami office and the Seattle office is a low bandwidth link with high latency. The link will not be replaced for another year.

### **Requirements**

#### **Application Requirements**

The company is developing an application named App1. App1 is a multi-tier application that will be sold as a service to customers.

Each instance of App1 is comprised of the following three tiers:

- A web front end
- A middle tier that uses Windows Communication Foundation (WCF)
- A Microsoft SQL Server 2008 R2 database on the back end

Each tier will be hosted on one or more virtual machines. Multiple tiers cannot coexist on the same virtual machine.

When customers purchase App1, they can select from one of the following service levels:

- Standard: Uses a single instance of each virtual machine required by App1. If a virtual machine becomes unresponsive, the virtual machine must be restarted.
- Enterprise: Uses multiple instances of each virtual machine required by App1 to provide high-availability and fault tolerance.

All virtual hard disk (VHD) files for App1 will be stored in a file share. The VHDs must be available if a server fails.

You plan to deploy an application named App2. App2 is comprised of the following two tiers:

- A web front end
- A dedicated SQL Server 2008 R2 database on the back end

App2 will be hosted on a set of virtual machines in a Hyper-V cluster in the Miami office. The virtual machines will use dynamic IP addresses. A copy of the App2 virtual machines will be maintained in the Seattle office.

App2 will be used by users from a partner company named Trey Research. Trey Research has a single Active Directory domain named [treyresearch.com](http://treyresearch.com). [Treyresearch.com](http://treyresearch.com) contains a server that has the Active Directory Federation Services server role and all of the Active Directory Federation Services (AD FS) role services installed.

### **Planned Changes**

A. Datum plans to implement the following changes:

- Replace all of the servers with new servers that run Windows Server 2012.
- Implement a private cloud by using Microsoft System Center 2012 to host instances of App1.
- In the Miami office, deploy four new Hyper-V hosts to the perimeter network.
- In the Miami office, deploy two new Hyper-V hosts to the local network.
- In the Seattle office, deploy two new Hyper-V hosts.
- In the Miami office, implement a System Center 2012 Configuration Manager primary site that has

all of the system roles installed.

- Implement a public key infrastructure (PKI).

### **Notification Requirements**

A. Datum identifies the following notification requirements:

- Help desk tickets must be created and assigned automatically when an instance of App1 becomes unresponsive.
- Customers who select the Enterprise service level must receive an email notification each time a help desk ticket for their instance of App1 is opened or closed.

### **Technical Requirements**

A. Datum identifies the following technical requirements:

- Minimize costs whenever possible.
- Minimize the amount of WAN traffic
- Minimize the amount of administrative effort whenever possible.
- Provide the fastest possible failover for the virtual machines hosting App2.
- Ensure that administrators can view a consolidated report about the software updates in all of the offices.
- Ensure that administrators in the Miami office can approve updates for the client computers in all of the offices.

### **Security Requirements**

A. Datum identifies the following security requirements:

- An offline root certification authority (CA) must be configured.
- Client computers must be issued certificates by a server in their local office.
- Changes to the CA configuration settings and the CA security settings must be logged.
- Client computers must be able to renew certificates automatically over the Internet.
- The number of permissions and privileges assigned to users must be minimized whenever possible.
- Users from a group named Group1 must be able to create new instances of App1 in the private cloud.
- Client computers must be issued new certificates when the computers are connected to the local network only.
- The virtual machines used to host App2 must use BitLocker Drive Encryption (BitLocker).
- Users from Trey Research must be able to access App2 by using their credentials from [treyresearch.com](http://treyresearch.com).

---

### **Question: 1**

---

You need to recommend a solution that meets the security requirements for Group1.

To which System Center 2012 Virtual Machine Manager (VMM) group should you assign Group1?

- A. Delegated Administrator
- B. Administrators
- C. Self-Service User
- D. Read-Only Administrator

---

**Answer: C**

---

**Question: 2**

You need to recommend which Certificate Services role service must be deployed to the perimeter network. The solution must meet the security requirements.

Which Certificate Services role services should you recommend?

- A. Online Responder and Network Device Enrollment Service
- B. Online Responder and Certificate Enrollment Web Service
- C. Certificate Enrollment Web Service and Certificate Enrollment Policy Web Service
- D. Certificate Enrollment Policy Web Service and Certification Authority Web Enrollment

---

**Answer: C**

---

**Question: 3**

You need to recommend a storage solution for the App1 VHDs. The solution must minimize downtime if a Hyper-V host fails.

What should you include in the recommendation?

- A. Distributed File System (DFS) Replication
- B. A clustered file server of the File Server for scale-out application data type
- C. A clustered file server of the File Server for general use type
- D. A Distributed File System (DFS) namespace

---

**Answer: B**

---

**Question: 4**

You need to recommend a solution that meets the notification requirements.

Which System Center 2012 components should you include in the recommendation?

- A. Service Manager, Orchestrator and App Controller
- B. Configuration Manager, Service Manager and Orchestrator
- C. App Controller, Configuration Manager and Operations Manager
- D. Operations Manager, Service Manager and Orchestrator

---

**Answer: D**

---

**Question: 5**

You are evaluating the deployment of a multi-site Hyper-V failover cluster in the Miami office and the Seattle office to host App2.

You need to identify which changes must be made to support the use of the multi-site cluster.

Which changes should you identify?

- A. Configure all of the virtual machines to use dynamic memory. Implement Distributed File System (DFS) Replication and store the virtual machine files in a replicated folder.

- B. Implement Distributed File System (DFS) Replication and store the virtual machine files in a replicated folder. Upgrade the WAN link between the Miami and Seattle offices.
- C. Purchase a storage solution that replicates the virtual machines. Configure all of the virtual machines to use dynamic memory.
- D. Upgrade the WAN link between the Miami and Seattle offices. Purchase a storage solution that replicates the virtual machines.

---

**Answer: C**

---

### **Question: 6**

You need to recommend a solution to maintain a copy of App2. The solution must meet the application requirements and must minimize additional hardware purchases.

What should you include in the recommendation?

- A. Single-site Failover Clustering
- B. Hyper-V replicas
- C. Multi-site Failover Clustering
- D. Distributed File System (DFS) Replication

---

**Answer: B**

---

### **Question: 7**

You need to recommend which type of clustered file server and which type of file share must be used in the Hyper-V cluster that hosts App2. The solution must meet the technical requirements and the security requirements.

Solution: You recommend a scale-out file server that uses an SMB share.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: A**

---

### **Question: 8**

You need to recommend which type of clustered file server and which type of file share must be used in the Hyper-V cluster that hosts App2. The solution must meet the technical requirements and the security requirements.

Solution: You recommend a scale-out file server that uses an NFS share.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

### **Question: 9**

In adatum.com, you install and configure a server that has the Active Directory Federation Services server role and all

of the AD FS role services installed.

You need to recommend which AD FS configurations must be performed in adatum.com to meet the security requirements.

Which configurations should you recommend before creating a trust policy?

- Export the server authentication certificate and provide the certificate to Trey Research. Import the token-signing certificate from Trey Research.
- Export the server authentication certificate and provide the certificate to Trey Research. Import the server authentication certificate from Trey Research.
- Export the token-signing certificate and provide the certificate to Trey Research. Import the server authentication certificate from Trey Research.
- Export the token-signing certificate and provide the certificate to Trey Research. Import the token-signing certificate from Trey Research.

---

### Answer: B

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**Explanation:**

| Planned Changes  | Notification Requirements | Technical Requirements | Security Requirements |
|--|---------------------------|------------------------|-----------------------|
| <b>A. Datum identifies the following security requirements:</b>  |                           |                        |                       |
| <ul style="list-style-type: none"> <li>- An offline root certification authority (CA) must be configured.</li> <li>- Client computers must be issued certificates by a server in their local office.</li> <li>- Changes to the CA configuration settings and the CA security settings must be logged.</li> <li>- Client computers must be able to renew certificates automatically over the Internet.</li> <li>- The number of permissions and privileges assigned to users must be minimized whenever possible.</li> <li>- Users from a group named Group1 must be able to create new instances of App1 in the private cloud.</li> <li>- Client computers must be issued new certificates when the computers are connected to the local network only.</li> <li>- The virtual machines used to host App2 must use BitLocker Drive Encryption (BitLocker).</li> <li>- Users from Trey Research must be able to access App2 by using their credentials from <a href="http://treyresearch.com">treyresearch.com</a>.</li> </ul> |                           |                        |                       |
| <a href="#">Overview</a> <a href="#">Existing Environment</a> <a href="#">Network Infrastructure</a> <a href="#">Current Issues</a> <a href="#">Application Requirements</a>   |                           |                        |                       |

The company is developing an application named App1. App1 is a multi-tier application that will be sold as a service to customers. Each instance of App1 is comprised of the following three tiers:

- A web front end
- A middle tier that uses Windows Communication Foundation (WCF)
- A Microsoft SQL Server 2008 R2 database on the back end Each tier will be hosted on one or more virtual machines. Multiple-tiers cannot coexist on the same virtual machine.

When customers purchase App1, they can select from one of the following service levels:

- Standard: Uses a single instance of each virtual machine required by App1. If a virtual machine becomes unresponsive, the virtual machine must be restarted.
- Enterprise: Uses multiple instances of each virtual machine required by App1 to provide high-availability and fault tolerance.

All virtual hard disk (VHD) files for App1 will be stored in a file share. The VHDs must be available if a server fails.

You plan to deploy an application named App2. App2 is comprised of the following two tiers:

- A web front end
- A dedicated SQL Server 2008 R2 database on the back end App2 will be hosted on a set of virtual machines in a Hyper-V cluster in the Miami office. The virtual machines will use dynamic IP addresses. A copy of the App2 virtual machines will be maintained in the Seattle office.

App2 will be used by users from a partner company named Trey Research. Trey Research has a single Active Directory domain named [treyresearch.com](http://treyresearch.com). [Treyresearch.com](http://treyresearch.com) contains a server that has the Active Directory Federation Services server role and all of the Active Directory Federation Services (AD FS) role services installed.

Updated: May 5, 2010

Applies To: Active Directory Federation Services (AD FS) 2.0

Every federation server in an Active Directory Federation Services (AD FS) 2.0 farm must have access to the private key of the server authentication certificate. If you are implementing a server farm of federation servers or Web servers, you must have a single authentication certificate. This certificate must be issued by an enterprise certification authority (CA), and it must have an exportable private key. The private key of the server authentication certificate must be exportable so that it can be made available to all the servers in the farm.

This same concept is true of federation server proxy farms in the sense that all federation server proxies in a farm must share the private key portion of the same server authentication certificate.

Reference: [http://technet.microsoft.com/en-us/library/dd807097\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/dd807097(v=ws.10).aspx)

## Question: 10

You need to recommend which type of clustered file server and which type of file share must be used in the Hyper-V cluster that hosts App2.

The solution must meet the technical requirements and the security requirements.

What should you recommend?

- A. A scale-out file server that uses an NFS share
- B. A file server that uses an SMB share
- C. A scale-out file server that uses an SMB share
- D. A file server that uses an NFS share

## Answer: C

Explanation:

| Planned Changes  | Notification Requirements | Technical Requirements | Security Requirements |
|--|---------------------------|------------------------|-----------------------|
| A. Datum identifies the following technical requirements:  |                           |                        |                       |
| - Minimize costs whenever possible.<br>- Minimize the amount of WAN traffic.<br>- Minimize the amount of administrative effort whenever possible.<br>- Provide the fastest possible failover for the virtual machines hosting App2.<br>- Ensure that administrators can view a consolidated report about the software updates in all of the offices.<br>- Ensure that administrators in the Miami office can approve updates for the client computers in all of the offices. |                           |                        |                       |

Applies To: Windows Server 2012

In Windows Server 2012, the following clustered file servers are available:

- **Scale-Out File Server for application data (Scale-Out File Server)** This clustered file server is introduced in Windows Server 2012 and lets you store server application data, such as Hyper-V virtual machine files, on file shares, and obtain a similar level of reliability, availability, manageability, and high performance that you would expect from a storage area network. All file shares are online on all nodes simultaneously. File shares associated with this type of clustered file server are called scale-out file shares. This is sometimes referred to as active-active.
- **File Server for general use** This is the continuation of the clustered file server that has been supported in Windows Server since the introduction of Failover Clustering. This type of clustered file server, and thus all the shares associated with the clustered file server, is online on one node at a time. This is sometimes referred to as active-passive or dual-active. File shares associated with this type of clustered file server are called clustered file shares.

Reference: <http://technet.microsoft.com/en-us/library/hh831349.aspx>

## Question: 11

You are configuring the Certification Authority role service. From the Certification Authority console, you enable

logging. You need to ensure that configuration changes to the certification authority (CA) are logged. Which audit policy should you configure?

- A. Audit policy change
- B. Audit privilege use
- C. Audit system events
- D. Audit object access

---

**Answer: D**

---

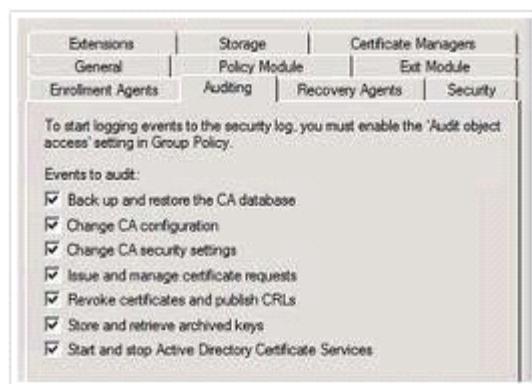
Explanation:

| Planned Changes   | Notification Requirements | Technical Requirements | Security Requirements |
|---|---------------------------|------------------------|-----------------------|
| <p>A. Datum identifies the following security requirements:</p> <ul style="list-style-type: none"> <li>- An offline root certification authority (CA) must be configured.</li> <li>- Client computers must be issued certificates by a server in their local office.</li> <li>- <b>Changes to the CA configuration settings and the CA security settings must be logged.</b></li> <li>- Client computers must be able to renew certificates automatically over the Internet.</li> <li>- The number of permissions and privileges assigned to users must be minimized whenever possible.</li> <li>- Users from a group named Group1 must be able to create new instances of App1 in the private cloud.</li> <li>- Client computers must be issued new certificates when the computers are connected to the local network only.</li> <li>- The virtual machines used to host App2 must use BitLocker Drive Encryption (BitLocker).</li> <li>- Users from Trey Research must be able to access App2 by using their credentials from <a href="http://treyresearch.com">treyresearch.com</a>.</li> </ul> |                           |                        |                       |

### How to enable Certification Authority Auditing on Windows Server

By default, the Auditing function is not enabled on the CA server. After the auditing is enabled, all the events will be logged in the "Security log". To enable the auditing, I need to modify the following settings.

1. On the CA server, log in as Administrator
2. Launch "Certification Authority".
3. Right-click the name of the CA, select "Properties".
4. Select "Auditing" tab.
5. Check the events which you want to audit.



6. Click "OK".
  7. Launch "Local Group Policy Editor".
  8. Expand "Computer Configuration > Windows Settings > Security Settings > Local Policies > Audit Policy".
  9. Double-click "Audit **object access**".
  10. Check "Success" and "Failure".
- Reference: <http://terrytlslau.tls1.cc/2012/05/how-to-enable-certification-authority.html>

**Question: 12**

You have a service template to deploy App1. You are evaluating the use of Network Load Balancing (NLB) for the front-end servers used by App1.

You need to recommend which component must be added to the service template.

What should you recommend?

- A. Guest OS profile
- B. A host profile
- C. A capability profile
- D. A VIP template

---

**Answer: D**

---

**Explanation:**

Overview | Existing Environment Network Infrastructure | Current Issues | Application Requirements

The company is developing an application named App1. App1 is a multi-tier application that will be sold as a service to customers.

Each instance of App1 is comprised of the following three tiers:

- A web front end
- A middle tier that uses Windows Communication Foundation (WCF)
- A Microsoft SQL Server 2008 R2 database on the back end Each tier will be hosted on one or more virtual machines. Multiple-tiers cannot coexist on the same virtual machine.

When customers purchase App1, they can select from one of the following service levels:

- Standard: Uses a single instance of each virtual machine required by App1. If a virtual machine becomes unresponsive, the virtual machine must be restarted.
- Enterprise: Uses multiple instances of each virtual machine required by App1 to provide high-availability and fault tolerance.

All virtual hard disk (VHD) files for App1 will be stored in a file share. The VHDs must be available if a server fails.

You plan to deploy an application named App2. App2 is comprised of the following two tiers:

- A web front end
- A dedicated SQL Server 2008 R2 database on the back end App2 will be hosted on a set of virtual machines in a Hyper-V cluster in the Miami office. The virtual machines will use dynamic IP addresses. A copy of the App2 virtual machines will be maintained in the Seattle office.

App2 will be used by users from a partner company named Trey Research. Trey Research has a single Active Directory domain named treyresearch.com. Treyresearch.com contains a server that has the Active Directory Federation Services server role and all of the Active Directory Federation Services (AD FS) role services installed.

Updated: September 10, 2012

Applies To: System Center 2012 - Virtual Machine Manager, System Center 2012 SP1 - Virtual Machine Manager

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

You can use the following procedure to create a virtual IP (VIP) template for a hardware load balancer. A virtual IP template contains load balancer-related configuration settings for a specific type of network traffic. For example, you could create a template that specifies the load balancing behavior for HTTPS traffic on a specific load balancer manufacturer and model. These templates represent the best practices from a load balancer configuration standpoint.

**Note**

For information about how to create a virtual IP template for Microsoft Network Load Balancing (NLB), see How to Create VIP Templates for Network Load Balancing (NLB) in VMM.

Reference: <http://technet.microsoft.com/library/gg610569.aspx>

**Question: 13**

You need to recommend a software update solution that meets the technical requirements. What should you recommend deploying to each branch office?

- A. An endpoint protection point
- B. A distribution point
- C. A management point
- D. An enrollment proxy point

**Answer: B**

**Explanation:**

Planned Changes | Notification Requirements | Technical Requirements | Security Requirements | All

- A. Datum identifies the following technical requirements:
- Minimize costs whenever possible.
  - Minimize the amount of WAN traffic.
  - Minimize the amount of administrative effort whenever possible.
  - Provide the fastest possible failover for the virtual machines hosting App2.
  - Ensure that administrators can view a consolidated report about the software updates in all of the offices.
  - Ensure that administrators in the Miami office can approve updates for the client computers in all of the offices.

Updated: November 1, 2012

Applies To: System Center 2012 Configuration Manager, System Center 2012 Configuration Manager SP1

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

Content management in System Center 2012 Configuration Manager provides the tools for you to manage content files for applications, packages, software updates, and operating system deployment. Configuration Manager uses distribution points to store files required for software to run on client computers. These distribution points function as distribution centers for the content files and let users download and run the software. Clients must have access to at least one distribution point from which they can download the files.

Reference: <http://technet.microsoft.com/en-us/library/gg712321.aspx>

**Case Study: 5****Contoso Ltd Case B****Background****Overview**

Contoso, Ltd., is a software development company. The company has a main office in Seattle and branch offices that are located in Los Angeles and New Delhi. Contoso's sales staff are all located in the Los Angeles office. Contoso's software developers are all located in the New Delhi office.

**Current Environment**

The network for the Seattle office contains:

- 2 domain controllers with integrated DNS
- 200 Windows workstations
- 14-node Hyper-V cluster
- 1 file server with multiple shares
- 1 Active Directory Rights Management Services (AD RMS) cluster

The network for the Los Angeles office contains:

- 2 domain controllers with integrated DNS
- 100 Windows workstations
- 1 file server with multiple shares

The network for the New Delhi office contains:

- 2 domain controllers with integrated DNS
- 300 Windows workstations
- 10 Hyper-V servers that host 100 development virtual machines (VMs)
- 50 production virtual machines that are hosted in Azure

All the Contoso offices connect to each other by using VPN links, and each office is connected to the Internet.

Contoso has a single Active Directory Domain Services (AD DS) domain named contoso.com. Contoso.com has a configured certification authority (CA). Contoso currently leverages System Center Virtual Machine Manager 2012 R2 to manage its virtual environment servers.

Contoso uses an application named HRApp1 for its human resources (HR) department. HR users report that the application stops responding and must be restarted before they can continue their work.

### **Fabrikam, Inc.**

Contoso has recently acquired Fabrikam, Inc. Fabrikam has a single office that is located in Seattle.

Fabrikam has a single AD DS domain named fabrikam.com.

The network for Fabrikam contains:

- 2 domain controllers with Active Directory-integrated DNS
- 150 Windows workstations
- 5 Hyper-V servers
- 1 file server with multiple shares

A two-way trust exists between Contoso.com and Fabrikam.com.

### **Business Requirements**

#### **Consolidation**

Contoso must complete the consolidation of the Contoso and Fabrikam networks. The consolidation of the two networks must:

- Minimize all hardware and software costs.
- Minimize WAN traffic.
- Enable the users by providing self-service whenever possible.

#### **Security**

Contoso requires that all Windows client devices must be encrypted with BitLocker by using the Trusted Platform.

The CA for the domain contoso.com must be designated as the resource forest. The domain fabrikam.com must leverage certificates that are issued by the domain contoso.com.

#### **Other Information**

##### **HRApp1**

- Each time HRApp1 stops responding and is restarted, an incident must be created and associated with the existing problem ticket.

##### **Development environment**

You have the following requirements:

- Developers must be able to manage their own VM checkpoints.
- You must implement a disaster recovery strategy for development virtual machines.

## **Technical Requirements**

### **Windows System Updates**

You have the following system update requirements:

- Consolidate reporting of all software updates in all offices.
- Software updates must be applied to all Windows devices.
- Ensure the ability to report on update compliance.

### **Monitoring**

You have the following monitoring requirements:

- Each time HRApp1 shows performance problems, ensure that a ticket is created.
- When performance problems are resolved, ensure that the ticket closes automatically.

### **Security**

You have the following security requirements:

- Ensure that all documents are protected.
- Ensure that contoso.com domain users get use licenses for RMS-protected documents from the domain contoso.com.
- Ensure that fabrikam.com domain users get use licenses for RMS-protected documents from the domain contoso.com.

---

### **Question: 1**

---

You need to ensure that the developers can manage their own virtual machines.

Solution: You perform the following actions:

In Virtual Machine Manager, you create a new user role named DevUsers that uses the Application Administrator profile.

You grant Checkpoint permissions to the DevUsers role.

You distribute the Self-Service Portal URL to the developers.

Does this meet the goal?

A. Yes

B. No

---

**Answer: B**

---

---

### **Question: 2**

---

You need to ensure that the developers can manage their own virtual machines.

Solution: You perform the following tasks:

In Virtual Machine Manager, you create a new user role named DevUsers that uses the Application Administrator profile.

You add the virtual machines to the DevUsers role.

You grant Checkpoint permissions to the DevUsers role.

You install and configure App Controller.

You distribute the App Controller console URL to the developers.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: A**

---

### **Question: 3**

---

This question consists of two statements: One is named Assertion and the other is named Reason. Both of these statements may be true; both may be false; or one may be true, while the other may be false.

To answer this question, you must first evaluate whether each statement is true on its own. If both statements are true, then you must evaluate whether the Reason (the second statement) correctly explains the Assertion (the first statement). You will then select the answer from the list of answer choices that matches your evaluation of the two statements.

**Assertion:**

You must implement Azure site recovery between the New Delhi and Seattle offices to meet the backup requirements.

**Reason:**

Azure site recovery allows replication and failover of virtual machines on host servers that are located in the Virtual Machine Manager cloud.

Evaluate the Assertion and Reason statements and choose the correct answer option.

- A. Both the Assertion and Reason are true, and the Reason is the correct explanation for the Assertion.
- B. Both the Assertion and Reason are true, but the Reason is not the correct explanation for the Assertion.
- C. The Assertion is true, but the Reason is false.
- D. The Assertion is false, but the Reason is true.
- E. Both the Assertion and the Reason are false.

---

**Answer: B**

---

### **Question: 4**

---

**DRAG DROP**

You need to implement the network Unlock feature to meet the BitLocker requirements.

In which order should you perform the actions? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

**Actions****Answer Area**

Create the Network Unlock certificate.

Deploy the private key and certificate to the Windows Deployment Server.

Configure a Group Policy in contoso.com for Network Unlock.

Install Windows Deployment Services on a new server in the contoso.com domain.

**Answer:****Answer Area**

1 Install Windows Deployment Services on a new server in the contoso.com domain.

2 Create the Network Unlock certificate.

3 Deploy the private key and certificate to the Windows Deployment Server.

4 Configure a Group Policy in contoso.com for Network Unlock.

**Question: 5**

This question consists of two statements: One is named Assertion and the other is named Reason. Both of these statements may be true; both may be false; or one may be true, while the other may be false.

To answer this question, you must first evaluate whether each statement is true on its own. If both statements are true, then you must evaluate whether the Reason (the second statement) correctly explains the Assertion (the first statement). You will then select the answer from the list of answer choices that matches your evaluation of the two statements.

**Assertion:**

You must implement a Windows Server Gateway in the Seattle office.

**Reason:**

A Windows Server Gateway will prevent users from saving documents outside of the Seattle location.

Evaluate the Assertion and Reason statements and choose the correct answer option.

- A. Both the Assertion and Reason are true, and the Reason is the correct explanation for the Assertion.
- B. Both the Assertion and Reason are true, but the Reason is not the correct explanation for the Assertion.
- C. The Assertion is true, but the Reason is false.
- D. The Assertion is false, but the Reason is true.

E. Both the Assertion and the Reason are false.

---

**Answer: C**

---

### Question: 6

---

You need to design a solution that meets all of the software update requirements.  
Which two actions should you perform? Each correct answer presents part of the solution.

- A. Implement System Center Service Manager.
- B. Deploy a configuration baseline to all devices.
- C. Implement System Center Operations Manager.
- D. Implement System Center Configuration Manager.

---

**Answer: B, C**

---

### Question: 7

---

DRAG DROP

You need to configure Active Directory Rights Management Services (AD RMS).

What should you do? To answer, drag the appropriate domain or option to the correct location.

Each domain or option 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.

| Answer Area  |                         |
|--|-------------------------|
| Action   | Domain                  |
| Deploy an AD RMS cluster to:   | Domain or Domain Option |
| Configure      Domain or Domain Option      as a<br>Domain or Domain Option      for the domain: | Domain or Domain Option |

**Domains and Domain Options**

- fabrikam.com
- trusted publishing domain
- contoso.com
- trusted user domain

---

**Answer:**

---

### Answer Area

| Action  | Domain       |
|---|--------------|
| Deploy an AD RMS cluster to:  | contoso.com  |
| Configure      fabrikam.com      as a<br>trusted publishing domain      for the domain: | fabrikam.com |

### Question: 8

---

You need to design a solution that meets the monitoring requirements.  
What should you do?

- A. In Operations Manager, create an override for the HR application monitor that will close any open HR application performance tickets in Service Manager.
- B. In Service Manager, create a queue that will open a new ticket or close any existing HR application performance ticket when the performance alert has been resolved in Operations Manager.
- C. In Service Manager, create a workflow that will open a new ticket or close any existing HR application performance ticket when the performance alert has been resolved in Operations Manager.
- D. In Service Manager, create an alert routing rule in the Operations Manager Alert connector that creates a new incident when the HR application produces a performance alert.

---

**Answer: C**

---

**Explanation:**

\* Scenario: You have the following monitoring requirements:

Each time HRAppl shows performance problems, ensure that a ticket is created.

When performance problems are resolved, ensure that the ticket closes automatically.

\* In System Center 2012 – Service Manager, a workflow is a sequence of activities that automate a business process.

Workflows can, for example, update incidents when various changes occur.

Reference: Configuring Workflows in System Center 2012 - Service Manager

<https://technet.microsoft.com/en-us/library/hh495667.aspx>

## **Case Study: 6**

### **Contoso Ltd Case C**

#### **Background**

#### **Overview**

Contoso, Ltd., is a manufacturing company. The company has offices in Chicago and Seattle. Each office contains two data centers. All of the data centers and sites for the company have network connectivity to each other. The company uses a single Active Directory Domain Services (AD DS) domain.

Contoso is growing rapidly and needs to expand its computer infrastructure.

#### **Current Environment Chicago Office**

The Chicago office contains a primary data center and a backup data center. A Hyper-V cluster named Cluster1.contoso.com resides in the primary data center. The cluster has a multiple network path configured. The cluster includes two unused SQL Server virtual machines (VMs) named SQL-SERVER1 and SQL-SERVER2. The cluster also includes a Hyper-V Host group named Chi-Primary.

Cluster1.contoso.com contains the following servers:

- CHI1-HVNODE1.contoso.com
- CHI1-HVNODE2.contoso.com
- CHI1-HVNODE3.contoso.com
- CHI1-HVNODE4.contoso.com

The backup data center for the Chicago office is located on a Hyper-V cluster named Cluster2.contoso.com. The cluster has a single network path configured. The cluster includes a Hyper-V Host group named Chi-Backup.

Cluster2.contoso.com contains the following servers:

- CHI2-HVNODE1.contoso.com
- CHI2-HVNODE2.contoso.com
- CHI2-HVNODE3.contoso.com
- CHI2-HVNODE4.contoso.com

In addition, the Chicago office contains two standalone Hyper-V servers named CHI-HVSERVER1.contoso.com and CHI-HVSERVER2.contoso.com.

There are also four newly built servers:

- CHI-SERVER1.contoso.com
- CHI-SERVER2.contoso.com
- CHI-SERVER3.contoso.com
- CHI-SERVER4.contoso.com

All the servers in the Chicago office run Windows Server 2012. Any future servers that are deployed in the Chicago office must also run Windows Server 2012.

All servers in the Chicago office use the subnet 10.20.xx.

### **Current Environment Seattle Office**

The Seattle office contains a primary data center and a backup data center. The primary data center is located on a Hyper-V cluster named Cluster3.contoso.com. The cluster has a multiple network path configured. The cluster includes two unused SQL Server virtual machines named SQL-SERVER3 and SQL-SERVERS. The cluster includes a Hyper-V Host group named Sea-Primary.

Cluster3.contoso.com contains the following servers:

- SEA3-HVNODE1.contoso.com
- SEA3-HVNODE2.contoso.com
- SEA3-HVNODE3.contoso.com
- SEA3-HVNODE4.contoso.com

The backup data center for the Seattle office is located on a Hyper-V cluster named Cluster4.contoso.com. The cluster has a single network path configured. The cluster includes a Hyper-V Host group named Sea-Backup.

Cluster4.contoso.com contains the following servers:

- SEA4-HVNODE1.contoso.com
- SEA4-HVNODE2.contoso.com
- SEA4-HVNODE3.contoso.com
- SEA4-HVNODE4.contoso.com

In addition, the Seattle office contains two standalone Hyper-V servers named SEA-HVSERVER1.contoso.com and SEA-HVSERVER2.contoso.com.

There are also four newly built servers:

- SEA-SERVER1.contoso.com
- SEA-SERVER2.contoso.com
- SEA-SERVER3.contoso.com
- SEA-SERVER4.contoso.com

All servers in the Seattle office run Windows Server 2012 R2. Any future servers that are deployed in the Seattle office must also run Windows Server 2012 R2.

All servers in the Seattle office use the subnet 10.10.x.x.

### **Business Requirements**

#### **Apps**

Contoso plans to deploy new applications to make its departments more efficient.

#### **App1**

Contoso must create a new application named App1 for the human resources (HR) department. The infrastructure for App1 must reside in a virtual environment and the data files for App1 must reside on a single shared disk. In addition, the infrastructure for App1 must meet the following requirements:

- maximize data protection
- withstand the loss of a single guest virtual machine
- withstand the loss of a single physical server

To support App1, Contoso must deploy a new cluster named App1cluster.contoso.com. The cluster has the following requirements:

- It must span multiple sites.
- It must support dynamic quorums.
- It must prevent failures caused by a 50% split.

## **App2**

Contoso must create a new application named App2. To support App2, Contoso must deploy a new SQL Server cluster. The cluster must not be part of the domain.

The server deployment team that will install the cluster has limited permissions. The server deployment team does not have the ability to create objects in Active Directory.

## **Virtualization and Storage**

### **New VMs**

Any new VMs that are deployed to the Hyper-V cluster in Cluster3.contoso.com have the following requirements:

- New SQL Server VMs must be deployed only to odd-numbered servers in the cluster.
- All other new VM guests must be deployed to any available server in the cluster.

### **New VDE**

The company needs a highly available file share cluster for a new Virtual Desktop Environment (VDE). It has the following requirements:

- The file share cluster must withstand the loss of a single server.
- The file share cluster must withstand the loss of a single network path.
- The file share cluster must use the least amount of disk space.

### **New virtualized SQL Server cluster**

Contoso must create a new application for manufacturing. The company needs a new virtualized SQL Server cluster named VM-SQLcluster1.contoso.com. It has the following requirements:

- The cluster must use a shared virtual hard disk.
- The cluster must have two nodes named VM-SQL-NODE1.contoso.com and VM-SQL-NODE2.contoso.com.

### **Highly available storage solution**

The company is deploying new hardware that will replace the existing Hyper-V clusters. The new file share cluster must have a highly available storage solution for a Hyper-V environment. It has the following requirements:

- The new file share cluster must support guest VM clusters.
- The storage cannot reside on any of the physical Hyper-V hosts.

---

### **Question: 1**

---

You need to implement a new highly available storage solution for the Hyper-V environment. Which servers should you include in the scale-out file cluster?

- A. CHI-SERVER1 and CHI-SERVER2
- B. SEA3-HVNODE1 and SEA3-HVNODE2
- C. SEA-SERVER1 and SEA-SERVER2
- D. CHI1-HVNODE1 and CHI1-HVNODE2

---

**Answer: C**

---

### Question: 2

---

DRAG DROP

You need to implement VM-SQLcluster1.contoso.com.

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

- Enable Quality of Service for the disk.
- On Cluster1, use the Failover Cluster Manager to add a SCSI controller to VM-SQL-NODE1.contoso.com.
- Create a VHDX virtual hard drive.
- Create a VHD virtual hard drive.
- On Cluster3, use the Failover Cluster Manager to add a SCSI controller to SQL-SERVER3.
- Enable virtual hard disk sharing.

#### Answer Area



---

**Answer:**

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#### Answer Area

- On Cluster3, use the Failover Cluster Manager to add a SCSI controller to SQL-SERVER3.
- Create a VHDX virtual hard drive.
- Enable virtual hard disk sharing.

### Question: 3

---

HOTSPOT

You need to deploy the new SQL cluster for App2.

How should you complete the relevant Windows PowerShell command? To answer, select the appropriate Windows PowerShell segment from each list in the answer area.

**Answer Area**

New-cluster

Cluster1.contoso.com`  
Cluster5.contoso.com`

-node CHI-SERVER1, CHI-SERVER2`  
-node SEA-SERVER1, SEA-SERVER2`

-StaticAddress 10.20.1.100`  
-StaticAddress 10.10.1.100`

-NoStorage`  
-IgnoreNetwork 10.0.0.0/8`

-AdministrativeAccessPoint DNS  
-AdministrativeAccessPoint ActiveDirectoryAndDNS  
-AdministrativeAccessPoint none

---

**Answer:**

---

**Answer Area****New-cluster**

|                      |
|----------------------|
| Cluster1.contoso.com |
| Cluster5.contoso.com |

|                                |
|--------------------------------|
| -node CHI-SERVER1, CHI-SERVER2 |
| -node SEA-SERVER1, SEA-SERVER2 |

|                            |
|----------------------------|
| -StaticAddress 10.20.1.100 |
| -StaticAddress 10.10.1.100 |

|                           |
|---------------------------|
| -NoStorage                |
| -IgnoreNetwork 10.0.0.0/8 |

|   |
|---|
| -AdministrativeAccessPoint DNS                          |
| <b>-AdministrativeAccessPoint ActiveDirectoryAndDNS</b> |
| -AdministrativeAccessPoint none                         |

**Question: 4****HOTSPOT**

You need to implement the file share for the new virtual desktop environment.

How should you configure the implementation? To answer, select the appropriate option from each list in the answer area.

**Answer Area**

| Requirement  | Option  |
|--------------|---|
| Data center  | <ul style="list-style-type: none"> <li>Chicago</li> <li>Seattle</li> </ul>  |
| Site         | <ul style="list-style-type: none"> <li>Site1</li> <li>Site2</li> <li>Site3</li> <li>Site4</li> </ul>  |
| Storage type | <ul style="list-style-type: none"> <li>Storage Spaces</li> <li>data deduplication</li> <li>iSCSI target block storage</li> <li>Distributed File System replication</li> </ul> |

**Answer:**

This should be Seattle, Site3, and Data Dedupe. VDI has heavy caching of temporary memory that can be mitigated a lot using the new data dedupe for CSV in 2012 R2. Chicago again is on 2012 and not R2.

**Question: 5****HOTSPOT**

You need to implement App1.

How should you configure the locations? To answer, select the appropriate option from each list in the answer area.

**Answer Area**

| Virtual machine location   | App1 data LUN location  |
|--|---|
| <ul style="list-style-type: none"> <li>Cluster1</li> <li>Cluster3</li> <li>CHI-HVSERVER1</li> <li>SEA-HVSERVER1</li> </ul> | <ul style="list-style-type: none"> <li>Use virtual Fibre Channel on guest virtual machines.</li> <li>Use iSCSI on guest virtual machines.</li> <li>Use Cluster Shared Volumes on the Hyper-V host.</li> <li>Use local storage on the C: drive of the Hyper-V host.</li> </ul> |

**Answer:**

This should be Cluster3 and use CSV on the Hyper-V Host.

App1 must support dynamic quorum which is a 2012R2 feature. Cluster1 is again 2012.

**Question: 6**

You need to enable virtual machine network health detection on all supported clusters.

What should you do?

- A. On the virtual machine settings page for Cluster4, select the Protect network checkbox for each virtual machine on the cluster.
- B. On the virtual machine settings page for Cluster1, select the Protect network checkbox for each virtual machine on the cluster.
- C. On each guest virtual machine in Cluster4, configure protected access for the network interface card.
- D. On each guest virtual machine in Cluster3, configure protected access for the network interface card.
- E. On the virtual machine settings page for Cluster3, select the Protect network checkbox for each virtual machine on the cluster.
- F. On each guest virtual machine in Cluster1, configure protected access for the network interface card.

---

**Answer: E**

---

Protected network option is available on the VM settings page for the cluster, not on each VM. Also Protected Network is a 2012R2 feature. Cluster1 is all 2012. And, Cluster4 is 2012R2, but only has a single network. The only option left is E with Cluster3.

---

**Question: 7**

---

DRAG DROP

You need to implement Windows Network Load Balancing (NLB).

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 |
|---|-------------|
| Start NLB Manager on DETROOTCA, and create the new NLB cluster.                       |             |
| Start NLB Manager on CHICRL01, and add CHICRL01 to the NLB cluster.                   |             |
| Create an entry in DNS for the NLB cluster using the name detcrl01.contoso.com.       |             |
| Create an entry in DNS for the NLB cluster using the name crl.contoso.com.            |             |
| Start NLB Manager on DETCRL01, and create a new NLB cluster.                          |             |
| Start NLB Manager on DETCRL01, and add the domain crl.contoso.com to the NLB cluster. |             |

---

**Answer:**

---

Start NLB Manager on DETCRL01, and create a new NLB cluster.

Start NLB Manager on CHICRL01, and add CHICRL01 to the NLB cluster.

Create an entry in DNS for the NLB cluster using the name  
crl.contoso.com.

### Question: 8

DRAG DROP

You need to configure access to the Certificate Revocation Lists (CRLs).

How should you configure the access? To answer, drag the appropriate protocol or servers to the correct network type. Each protocol or server 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.

#### Protocols and Servers

HTTP

HTTPS

DETROOTCA

DETCA01 and CHICA01

DETCRL01 and CHICRL01

#### Answer Area

| Network type     | Protocol           | Server or servers  |
|------------------|--------------------|--------------------|
| Internet         | Protocol or Server | Protocol or Server |
| Internal network | Protocol or Server | Protocol or Server |



### Answer:

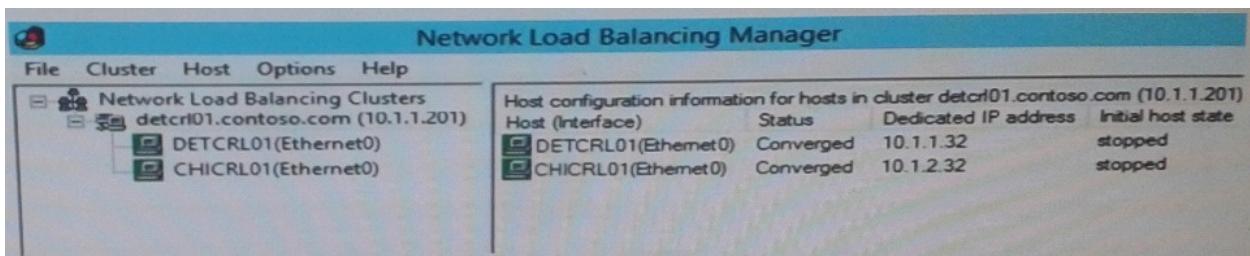
First line: Protocol: HTTP, Server or servers: DETCA01 and CHICA01

Second line: Protocol: HTTP, Server or servers: DETCA01 and CHICA01

### Question: 9

HOTSPOT

You plan to configure Windows Network Load Balancing (NLB) for a company. You display following Network Load Balancing Manager window:



Use the drop-down menus to select the answer choice that answers each question based on the information presented in the graphic.

### Answer Area

What is the health state of the NLB cluster?

|               |
|---------------|
| Healthy State |
| Warning State |
| Error State   |

the NLB cluster configured correctly According to the requirements?

|   |
|---|
| Yes, the cluster is correctly configured. |
| No, the name of the cluster is incorrect. |
| No, the wrong servers are in the cluster. |

DETCRL01 and CHICRL01 are rebooted, will the NLB cluster start automatically and be available?

|  |
|--|
| Yes, the NLB cluster will start automatically and be available.            |
| No, the NLB cluster nodes will need to be started manually after a reboot. |
| No, the NLB cluster nodes will need to be resumed after a reboot.          |

**Answer:**

Box 1: Healthy State

Box 2: Yes, the cluster is correctly configured.

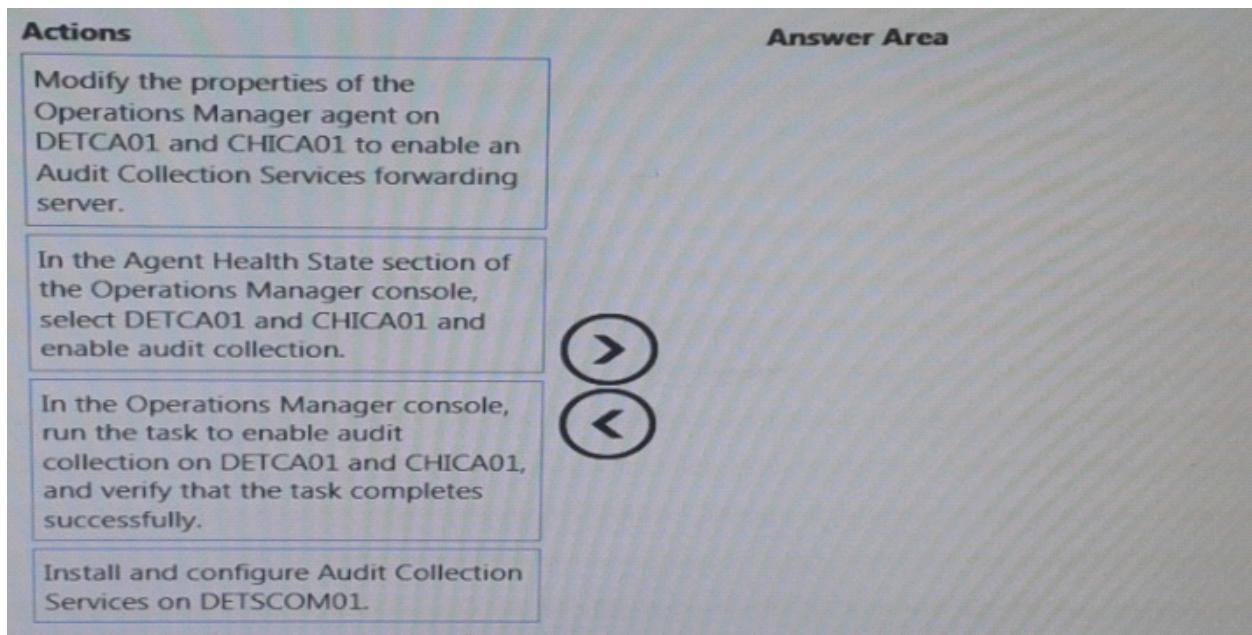
Box 3: Yes, the NLB cluster will start automatically and be available.

### Question: 10

DRAG DROP

You need to collect the required security logs.

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.

**Answer:**

Box 1: Install and configure Audit Collection Services on DETSCOM01.

Box 2: Modify the properties of the Operations Manager agent on DETCA01 and CHICA01 to enable an Audit Collection Services forwarding server.

Box 3: In the Agent Health State section of the Operations Manager console, select DETCA01 and CHICA01 and enable audit collection.

**Explanation:**

**Note:**

\* Audit collection services (Box 1)

In System Center 2012 – Operations Manager, Audit Collection Services (ACS) provides a means to collect records generated by an audit policy and store them in a centralized database.

ACS requires the following components: ACS Forwarders, ACS Collector, ACS Database

\* ACS Forwarders (box 2)

The service that runs on ACS forwarders is included in the Operations Manager agent. By default, this service is installed but not enabled when the Operations Manager agent is installed. You can enable this service for multiple agent computers at the same time using the Enable Audit Collection task.

\* (box 3) Enable audit collection

After you install the ACS collector and database you can then remotely enable this service on multiple agents through the Operations Manager console by running the Enable Audit Collection task.

To enable audit collection on Operations Manager agents (see step 5 below)

Log on to the computer with an account that is a member of the Operations Manager Administrators role. This account must also have the rights of a local administrator on each agent computer that you want to enable as an ACS forwarder.

In the Operations console, click Monitoring.

In the navigation pane, expand Operations Manager, expand Agent Details, and then click Agent Health State. This view has two panes, and the actions in this procedure are performed in the right pane.

In the details pane, click all agents that you want to enable as ACS forwarders. You can make multiple selections by pressing CTRL or SHIFT.

In the Actions pane, under Health Service Tasks, click Enable Audit Collection to open the Run Task - Enable Audit Collection dialog box.

Etc.

Reference: Collecting Security Events Using Audit Collection Services in Operations Manager; How to Enable Audit

Collection Services (ACS) Forwarders

---

### **Question: 11**

---

You need to prepare the environment for App1.

Which two actions should you perform? Each correct answer presents part of the solution.

A. Install a new cluster for App1 at the Seattle data center.

B. Install a new cluster for App1 at the Chicago data center.

C. Run the following Windows PowerShell cmdlet for each node in the backup data center site:

Set NodeWeight=1

D. Run the following Windows PowerShell cmdlet for each node in the backup data center site:

Set LowerQuorumPriorityNodeID=1

---

**Answer: AD**

---

---

### **Question: 12**

---

You need to deploy the new SQL Server virtual machines.

What should you do?

A. On the specified cluster nodes in the primary data center in Chicago, select the Host is available for placement check box.

B. On the specified cluster nodes in the primary data center in Chicago, run the following Windows PowerShell command:

Set-SCVMHost –AvailableForPlacement

C. On Sea-Primary, run the following Windows PowerShell cmdlet for the specific nodes:

Run Add-Sccustomplacementrule

D. On Chi-Primary, configure placement rules for the specified nodes.

---

**Answer: C**

---

Explanation:

\* Scenario: The Seattle office contains a primary data center and a backup data center. The primary data center is located on a Hyper-V cluster named Cluster3.contoso.com.

Any new VMs that are deployed to the Hyper-V cluster in Cluster3.contoso.com have the following requirements:

New SQL Server VMs must be deployed only to odd-numbered servers in the cluster.

\* The Add-SCCustomPlacementRule cmdlet adds a custom placement rule to the placement configuration for a host group.

---

### **Question: 13**

---

This question consists of two statements: One is named Assertion and the other is named Reason. Both of these statements may be true; both may be false; or one may be true, while the other may be false.

To answer this question, you must first evaluate whether each statement is true on its own. If both statements are true, then you must evaluate whether the Reason (the second statement) correctly explains the Assertion (the first statement). You will then select the answer from the list of answer choices that matches your evaluation of the two statements.

Assertion:

You must install and configure Network Device Enrollment Services (NDES) on CHICA01.

Reason:

NDES allows non-domain joined devices to obtain a Certificate Revocation List from an Active Directory-integrated certification authority, and then validate whether a certificate is valid.

Evaluate the Assertion and Reason statements and choose the correct answer option.

- A. Both the Assertion and Reason are true, and the Reason is the correct explanation for the Assertion.
- B. Both the Assertion and Reason are true, but the Reason is not the correct explanation for the Assertion.
- C. The Assertion is true, but the Reason is false.
- D. The Assertion is false, but the Reason is true.
- E. Both the Assertion and the Reason are false.

---

**Answer: D**

---

Explanation:

The Network Device Enrollment Service (NDES) allows software on routers and other network devices running without domain credentials to obtain certificates based on the Simple Certificate Enrollment Protocol (SCEP).

Reference: Network Device Enrollment Service Guidance  
<https://technet.microsoft.com/en-us/library/hh831498.aspx>

### **Question: 14**

---

You need to deploy the new SQL Server virtual machines.

What should you do?

- A. On the specified cluster nodes in the primary data center in Seattle, run the following Windows PowerShell command:  
`Set-SCVMHost -AvailableForPlacement`
- B. On the specified cluster nodes in the primary data center in Chicago, select the Host is available for placement check box.
- C. On Chi-Primary, run the following Windows PowerShell cmdlet for the specified nodes:  
`Add-Sccustomplacementrule`
- D. On Sea-Primary, configure placement rules for the specified nodes.

---

**Answer: C**

---

Explanation:

\* Scenario: A Hyper-V cluster named Cluster1.contoso.com includes two unused SQL Server virtual machines (VMs) named SQL-SERVER1 and SQL-SERVER2. The cluster also includes a Hyper-V Host group named Chi-Primary.

\* The Add-SCCustomPlacementRule adds a custom placement rule to the placement configuration for a host group.

Reference: Add-SCCustomPlacementRule

<https://technet.microsoft.com/en-us/library/hh801560.aspx>

## **Case Study: 7**

### **Contoso, Ltd Case D**

#### **Overview**

Contoso, Ltd., is a manufacturing company that makes several different components that are used in automobile production. Contoso has a main office in Detroit, a distribution center in Chicago, and branch offices in Dallas, Atlanta, and San Diego.

The contoso.com forest and domain functional level are Windows Server 2008 R2. All servers run Windows

Server 2012 R2, and all client workstations run Windows 7 or Windows 8. Contoso uses System Center 2012 Operations Manager and Audit Collection Services (ACS) to monitor the environment. There is no certification authority (CA) in the environment.

### **Current Environment**

The contoso.com domain contains the servers as shown in the following table:

| Server name | Server role                      | Server location |
|-------------|----------------------------------|-----------------|
| DETDC01     | Domain controller                | Detroit         |
| DETDC02     | Domain controller                | Detroit         |
| CHIDC01     | Domain controller                | Chicago         |
| DETSCOM01   | System Center Operations Manager | Detroit         |

Contoso sales staff travel within the United States and connect to a VPN by using mobile devices to access the corporate network. Sales users authenticate to the VPN by using their Active Directory usernames and passwords. The VPN solution also supports certification-based authentication.

Contoso uses an inventory system that requires manually counting products and entering that count into a database. Contoso purchases new inventory software that supports wireless handheld scanners and several wireless handheld scanners. The wireless handheld scanners run a third party operating system that supports the Network Device Enrollment Service (NDES).

### **Business Requirements**

#### **Security**

The wireless handheld scanners must use certification-based authentication to access the wireless network. Sales users who use mobile devices must use certification-based authentication to access the VPN. When sales users leave the company, Contoso administrators must be able to disable their VPN access by revoking their certificates.

#### **Monitoring**

All servers must be monitored by using System Center 2012 Operating Manager. In addition to monitoring the Windows operating system, you must collect security logs from the CA servers by using ACS, and monitor the services that run on the CA and Certificate Revocation List (CRL) servers, such as certification authority and web services.

### **Technical Requirements**

#### **CA Hierarchy**

Contoso requires a two-tier CA hierarchy. The CA hierarchy must include a stand-alone offline root and two Active Directory-integrated issuing CAs: one for issuing certificates to domain-joined devices, and one for issuing certificates to non-domain-joined devices by using the NDES. CRLs must be published to two web servers: one in Detroit and one in Chicago.

Contoso has servers that run Windows Server 2012 R2 to use for the CA hierarchy. The servers are described in the following table:

| Server name | Server role                              | Server location |
|-------------|--|-----------------|
| DETROOTCA   | Offline root CA                          | Detroit         |
| DETCA01     | Issuing CA for domain-joined devices     | Detroit         |
| CHICA01     | Issuing CA for non-domain-joined devices | Chicago         |
| DETCRL01    | Web server                               | Detroit         |
| CHICRL01    | Web server                               | Chicago         |

The IT security department must have the necessary permissions to manage the CA and CRL servers. A domain group named Corp-IT Security must be used for this purpose. The IT security department users are not domain admins.

### Fault Tolerance

The servers that host the CRL must be part of a Windows Network Load Balancing (NLB) cluster. The CRL must be available to users in all locations by using the hostname crl.contoso.com, even if one of the underlying web servers is offline.

#### Question: 1

---

##### DRAG DROP

You need to delegate permissions for DETCA01.

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 |
|---|-------------|
| Add Corp-IT-Security to the Domain Admins group.  | >           |
| Grant Corp-IT-Security the Manage CA permission.  | ^<br>▼      |
| On DETCA01, add Corp-IT-Security to the local Administrators group.                         | <           |
| Open the Properties window of the Certification Authority and navigate to the Security tab. | ^<br>▼      |
| On DETROOTCA, add Corp-IT-Security to the local Administrators group.                       | <           |
| On DETCA01, open the Certification Authority MMC snap-in.                                   | ^<br>▼      |
| On DETROOTCA, open the Certification Authority MMC snap-in.                                 | <           |

---

### **Answer:**

---

Box 1:

On DETCA01, add Corp-IT-Security to the local Administrators group.

Box 2:

On DETCA01, open the Certification Authority MMC snap-in.

Box 3:

Grant Corp-IT-Security the Manage CA permission.

Reference: Implement Role-Based Administration

<https://technet.microsoft.com/en-us/library/cc732590.aspx>

---

### **Question: 2**

---

You need to automatically restart the appropriate web service on DETCTRL01 and CHICRL01 if the web service is stopped.

Solution: You create a diagnostic task in SCOM and configure it to start the Server service.

Does this meet the goal?

- A. Yes
- B. No

---

### **Answer: B**

---

Explanation:

It is not the Server service that needs to be restarted. The Internet Information Services (IIS) World Wide Web Publishing Service (W3SVC), which manages the HTTP protocol and HTTP performance counters, needs to be restarted.

Reference: IIS World Wide Web Publishing Service (W3SVC)

[https://technet.microsoft.com/en-us/library/cc734944\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc734944(v=ws.10).aspx)

---

### **Question: 3**

---

You need to automatically restart the appropriate web service on DETCTRL01 and CHICRL01 if the web service is stopped.

Solution: You create a recovery task in SCOM and configure it to start the World Wide Web publishing service.

Does this meet the goal?

- A. Yes
- B. No

---

### **Answer: A**

---

Explanation:

The Internet Information Services (IIS) World Wide Web Publishing Service (W3SVC), sometimes referred to as the WWW Service, manages the HTTP protocol and HTTP performance counters.

The following is a list of the managed entities that are included in this managed entity:

\* IIS Web Site

An Internet Information Services (IIS) Web site is a unique collection of Web pages and Web applications that is hosted on an IIS Web server. Web sites have bindings that consist of a port number, an IP address, and an optional host name or names.

\* Active Server Pages (ASP)

Active Server Pages (ASP)

Reference: IIS World Wide Web Publishing Service (W3SVC)

[https://technet.microsoft.com/en-us/library/cc734944\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc734944(v=ws.10).aspx)

---

### **Question: 4**

---

You plan to allow users to run internal applications from outside the company's network. You have a Windows Server 2012 R2 that has the Active Directory Federation Services (AD FS) role installed. You must secure on-premises resources by using multi-factor authentication (MFA). You need to design a solution to enforce different access levels for users with personal Windows 8.1 or iOS 8 devices.

Solution: You install a local instance of MFA Server. You connect the instance to the Microsoft Azure MFA provider, and then run the following Windows PowerShell cmdlet.

`Enable-AdfsDeviceRegistration`

Does this meet the goal?

- A. Yes
- B. No

---

### **Answer: B**

---

Explanation:

We must install AD FS Adapter, not register a host for the Device Registration Service.

Note: The Enable-AdfsDeviceRegistration cmdlet configures a server in an Active Directory Federation Services (AD FS) farm to host the Device Registration Service.

Reference: Using Multi-Factor Authentication with Windows Server 2012 R2 AD FS

<https://msdn.microsoft.com/en-us/library/azure/dn807157.aspx>

---

### **Question: 5**

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An organization uses an Active Directory Rights Management Services (AD RMS) cluster named RMS1 to protect content for a project. You uninstall AD RMS when the project is complete. You need to ensure that the protected content is still available after AD RMS is uninstalled.

Solution: You enable the decommissioning service by using the AD RMS management console. You grant all users the Read & Execute permission to the decommission pipeline.

Does this meet the goal?

- A. Yes
- B. No

---

### **Answer: B**

---

Explanation:

The proper procedure is:

Inform your users that you are decommissioning the AD RMS installation and advise them to connect to the cluster to save their content without AD RMS protection. Alternatively, you could delegate a trusted person to decrypt all rights-protected content by temporarily adding that person to the AD RMS super users group.

After you believe that all of the content is unprotected and saved, you should export the server licensor certificate, and then uninstall AD RMS from the server.

---

### **Question: 6**

---

Your network contains an Active Directory domain named contoso.com.

You currently have an intranet web site that is hosted by two Web servers named Web1 and Web2. Web1 and Web2 run Windows Server 2012.

Users use the name intranet.contoso.com to request the web site and use DNS round robin.

You plan to implement the Network Load Balancing (NLB) feature on Web1 and Web2.

You need to recommend changes to the DNS records for the planned implementation.

What should you recommend?

- A. Delete one of the host (A) records named Intranet. Modify the remaining host (A) record named Intranet.
- B. Delete both host (A) records named Intranet. Create a pointer (PTR) record for each Web server.
- C. Create a new host (A) record named Intranet. Remove both host (A) records for Web1 and Web2.
- D. Create a service locator (SRV) record. Map the SRV record to Intranet.

---

### **Answer: A**

---

Reference: How to Configure Network Load Balancing for Configuration Manager Site Systems

<https://technet.microsoft.com/en-us/library/bb633031.aspx>

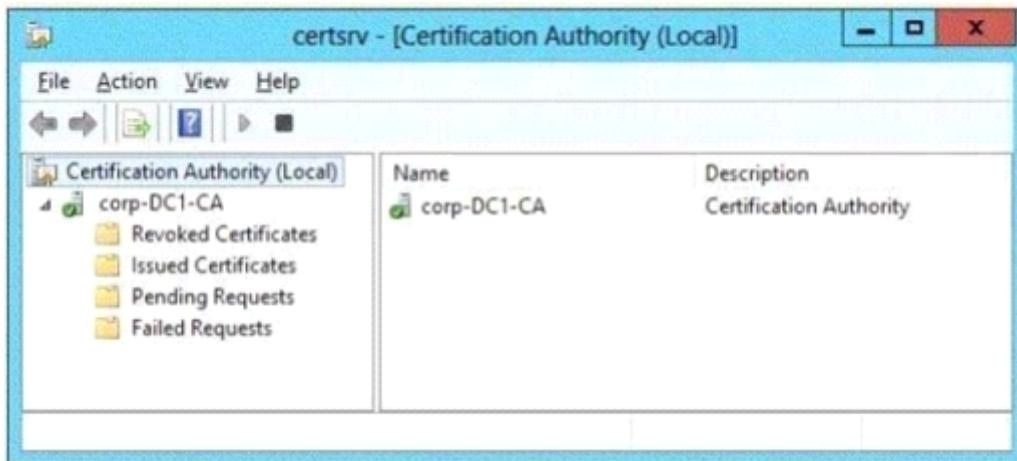
---

### **Question: 7**

---

Your network contains an Active Directory domain named contoso.com. The network contains two servers named Server1 and Server2.

You deploy Active Directory Certificate Services (AD CS). The certification authority (CA) is configured as shown in the exhibit. (Click the Exhibit button).



You need to ensure that you can issue certificates based on certificate templates.

What should you do?

- A. Configure Server2 as a standalone subordinate CA.
- B. On Server1, install the Network Device Enrollment service role service.
- C. Configure Server2 as an enterprise subordinate CA.
- D. On Server1, run the Add-CATemplate cmdlet.

---

**Answer: D**

---

**Explanation:**

The Add-CATemplate cmdlet adds a certificate template to the CA for issuing. Certificate templates allow for the customization of a certificate that can be issued by the CA.

**Example:** Adds a CA template with the template display name Basic EFS and the template name EFS.

Windows PowerShell

C:\PS>Add-CATemplate -Name EFS

### Question: 8

---

Your network contains an Active Directory domain named contoso.com.

Your company has an enterprise root certification authority (CA) named CA1.

You plan to deploy Active Directory Federation Services (AD FS) to a server named Server1.

The company purchases a Microsoft Office 365 subscription.

You plan to register the company's SMTP domain for Office 365 and to configure single sign-on for all users.

You need to identify which certificate is required for the planned deployment.

Which certificate should you identify?

- A. a server authentication certificate that is issued by a trusted third-party root CA and that contains the subject name server1.contoso.com
- B. a self-signed server authentication certificate for server1.contoso.com
- C. a server authentication certificate that is issued by a trusted third-party root CA and that contains the subject name Server1
- D. a server authentication certificate that is issued by CA1 and that contains the subject name Server1

---

**Answer: A**

---

Explanation:

Prepare Your Server and Install ADFS

You can install ADFS on a domain controller or another server. You'll first need to configure a few prerequisites. The following steps assume you're installing to Windows Server 2008 R2.

Using Server Manager, install the IIS role and the Microsoft .NET Framework. Then purchase and install a server-authentication certificate from a public certificate authority. Make sure you match the certificate's subject name with the Fully Qualified Domain Name of the server. Launch IIS Manager and import that certificate to the default Web site.

Reference: Geek of All Trades: Office 365 SSO: A Simplified Installation Guide

<https://technet.microsoft.com/en-us/magazine/jj631606.aspx>

---

**Question: 9**

---

Your network contains an Active Directory domain named contoso.com. All servers run Windows Server 2012 R2. The network contains a System Center 2012 R2 Data Protection Manager (DPM) deployment.

The domain contains six servers. The servers are configured as shown in the following table.

| Server name | Role                  | Node in cluster       |
|-------------|-----------------------|-----------------------|
| Server1     | Domain controller     | <i>Not applicable</i> |
| Server2     | Domain controller     | <i>Not applicable</i> |
| Server3     | Microsoft SQL Server  | Cluster1              |
| Server4     | Microsoft SQL Server  | Cluster1              |
| Server5     | <i>Not applicable</i> | Cluster2              |
| Server6     | <i>Not applicable</i> | Cluster2              |

You install System Center 2012 R2 Virtual Machine Manager (VMM) on the nodes in Cluster2.

You configure VMM to use a database in Cluster1. Server5 is the first node in the cluster.

You need to back up the VMM encryption key.

What should you back up?

- A. a system state backup of Server2
- B. a full system backup of Server6
- C. a system state backup of Server5
- D. a full system backup of Server3

---

**Answer: A**

---

Explanation:

Encryption keys in Active Directory Domain Services: If distributed key management (DKM) is configured, then you are storing VMM-related encryption keys in Active Directory Domain Services (AD DS). To back up these keys, back up Active Directory on a regular basis.

Reference: Back Up and Restore Virtual Machine Manager

[https://technet.microsoft.com/en-us/library/dn768227.aspx#BKMK\\_b\\_misc](https://technet.microsoft.com/en-us/library/dn768227.aspx#BKMK_b_misc)

---

**Question: 10**

---

This question consists of two statements: One is named Assertion and the other is named Reason. Both of these statements may be true; both may be false; or one may be true, while the other may be false.

To answer this question, you must first evaluate whether each statement is true on its own. If both statements are true, then you must evaluate whether the Reason (the second statement) correctly explains the Assertion (the first statement). You will then select the answer from the list of answer choices that matches your evaluation of the two statements.

**Assertion:**

You can manage VMware ESX hosts and virtual machines by using a System Center Virtual Machine Manager (SCVMM) server.

**Reason:**

SCVMM automatically imports ESX hosts and virtual machines when you add the corresponding VMware vCenter to the SCVMM server.

Evaluate the Assertion and Reason statements and choose the correct answer option.

- A. Both the Assertion and Reason are true, and the Reason is the correct explanation for the Assertion.
- B. Both the Assertion and Reason are true, but the Reason is not the correct explanation for the Assertion.
- C. The Assertion is true, but the Reason is false.
- D. The Assertion is false, but the Reason is true.
- E. Both the Assertion and the Reason are false.

---

**Answer: C**

---

**Explanation:**

\* Assertion: true

Virtual Machine Manager (VMM) enables you to deploy and manage virtual machines and services across multiple hypervisor platforms, including VMware ESX and ESXi hosts.

\* Reason: False

When you add a vCenter Server, VMM no longer imports, merges and synchronizes the VMware tree structure with VMM. Instead, after you add a vCenter Server, you can add selected ESX servers and hosts to any VMM host group. Therefore, there are fewer issues with synchronization.

Reference: Managing VMware ESX Hosts in VMM Overview

<https://technet.microsoft.com/en-us/library/gg610683.aspx>

---

### **Question: 11**

---

You administer an Active Directory Domain Services environment. There are no certification authorities (CAs) in the environment.

You plan to implement a two-tier CA hierarchy with an offline root CA.

You need to ensure that the issuing CA is not used to create additional subordinate CAs.

What should you do?

- A. In the CAPolicy.inf file for the issuing CA, enter the following constraint:  
PathLength=1
- B. In the CAPolicy.inf file for the root CA, enter the following constraint:  
PathLength=1
- C. In the CAPolicy.inf file for the root CA, enter the following constraint:  
PathLength=2
- D. In the CAPolicy.inf file for the issuing CA, enter the following constraint:  
PathLength=2

---

**Answer: B**

**Explanation:**

You can use the CA Policy.inf file to define the PathLength constraint in the Basic Constraints extension of the root CA certificate. Setting the PathLength basic constraint allows you to limit the path length of the CA hierarchy by specifying how many tiers of subordinate CAs can exist beneath the root. A PathLength of 1 means there can be at most one tier of CAs beneath the root. These subordinate CAs will have a PathLength basic constraint of 0, which means that they cannot issue any subordinate CA certificates.

Reference: Windows Server 2008 R2 CA Policy.inf Syntax

<http://blogs.technet.com/b/askds/archive/2009/10/15/windows-server-2008-r2-capolicy-inf-syntax.aspx>

---

**Question: 12**

You have a small Hyper-V cluster built on two hosts that run Windows Server 2012 R2 Hyper-V. You manage the virtual infrastructure by using System Center Virtual Machine Manager 2012.

Distributed Key Management is not installed. You have the following servers in the environment:

| <b>Server name</b> | <b>Role</b>  |
|--------------------|--|
| DC1                | Active Directory Domain Services domain controller |
| HYPERV1            | Hyper-V host with 40 virtual machines              |
| HYPERV2            | Hyper-V host with 25 virtual machines              |
| SQL1               | SQL Server 2012 database                           |
| DPM1               | Data Protection Manager (DPM) server               |
| VMM1               | Virtual Machine Manager (VMM) 2012                 |
| FILESERVER1        | File server, shared folders                        |
| FILESERVER2        | File server, VMM Library Server                    |

You have the following requirements:

You must back up virtual machines at the host level.

You must be able to back up virtual machines that are configured for live migration.

You must be able to restore the entire VMM infrastructure.

You need to design and implement the backup plan.

What should you do?

A. Run the following Windows PowerShell command:

Get-VM VMM1 | Checkpoint-VM-SnapshotName "VMM backup"

B. Run the following Windows PowerShell command:

Set-DPMGlobalProperty-DPMServerName DPM1-KnownVMMServers VMM1

C. Configure System State Backup for DCL.

D. Configure backup for all disk volumes on FILESERVER1

---

**Answer: B**

**Explanation:**

DPM can protect Hyper-V virtual machines V during live migration.

Connect servers—Run the Set-DPMGlobalProperty PowerShell command to connect all the servers that are

running Hyper-V to all the DPM servers. The cmdlet accepts multiple DPM server names.

Set-DPMGlobalProperty -dpmservername <dpmservername> -knownvmmsservers <vmmservername>

Reference: Set up protection for live migration

<https://technet.microsoft.com/en-us/library/jj656643.aspx>

---

### **Question: 13**

---

Your network contains an Active Directory domain named contoso.com. The domain contains four servers on a test network. The servers are configured as shown in the following table.

| <b>Server name</b> | <b>Role</b>               |
|--------------------|---------------------------|
| Server1            | Hyper-V                   |
| Server2            | File and Storage Services |
| Server3            | File and Storage Services |
| Server4            | File and Storage Services |

Server1 uses the storage shown in the following table.

| <b>Drive name</b> | <b>Type</b>  |
|-------------------|--|
| C                 | Locally attached IDE disk                                      |
| D                 | Locally attached SCSI disk                                     |
| E                 | Tiered storage space from locally attached SCSI and SSD drives |

You perform the following tasks:

On Server2, you create an advanced SMB share named Share2A and an applications SMB share named Share2B.

On Server3, you create an advanced SMB share named Share3.

On Server4, you create an applications SMB share named Share4.

You add Server3 and Server4 to a new failover cluster named Clus1.

On Clus1, you configure the File Server for general use role, you create a quick SMB share named Share5A, and then you create an applications SMB share named Share5B.

You plan to create a failover cluster of two virtual machines hosted on Server1. The clustered virtual machines will use shared .vhdx files.

You need to recommend a location to store the shared .vhdx files.

Where should you recommend placing the virtual hard disk (VHD)?

- A. \\Clus1\Share5A
- B. \\Server2\Share2A
- C. \\Server4\Share4
- D. the D drive on Server1

---

### **Answer: C**

---

Cluster1 is configured as a file share for general use and quick smb share. You can't place shared vhdx disks on quick smb, and it's not recommended to store Hyper-V stuff on general use file shares.

---

### **Question: 14**

---

A company has data centers in Seattle and New York. A high-speed link connects the data centers. Each data center runs a virtualization infrastructure that uses Hyper-V Server 2012 and Hyper-V Server 2012 R2. Administrative users from the Seattle and New York offices are members of Active Directory Domain Services groups named SeattleAdmins

and NewYorkAdmins, respectively.

You deploy one System Center Virtual Machine Manager (SCVMM) in the Seattle data center. You create two private clouds named SeattleCloud and NewYorkCloud in the Seattle and New York data centers, respectively.

You have the following requirements:

Administrators from each data center must be able to manage the virtual machines and services from their location by using a web portal.

Administrators must not apply new resource quotas or change resource quotas.

You must manage public clouds by using the existing SCVMM server.

You must use the minimum permissions required to perform the administrative tasks.

You need to configure the environment.

What should you do?

A. For both the Seattle and New York admin groups, create a User Role and assign it to the Application Administrator profile. Add the Seattle and New York private clouds to the corresponding User Role.

B. For both the Seattle and New York admin groups, create a User Role and assign it to the Tenant Administrator profile. Add the Seattle and New York private clouds to the corresponding User Role.

C. Add both SeattleAdmins and NewYorkAdmins to the Local Administrators group of each Hyper-V host in Seattle and New York, respectively.

D. Add both SeattleAdmins and NewYorkAdmins to the Local Administrators group of the SCVMM server.

---

**Answer: A**

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Explanation:

Members of the Application Administrator (Self-Service User) role can create, deploy, and manage their own virtual machines and services by using the VMM console or a Web portal.

---

**Question: 15**

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Your network contains an Active Directory domain named contoso.com. You currently have an intranet web site that is hosted by two Web servers named Web1 and Web2. Web1 and Web2 run Windows Server 2012. Users use the name intranet.contoso.com to request the web site and use DNS round robin.

You plan to implement the Network Load Balancing (NLB) feature on Web1 and Web2.

You need to recommend changes to the DNS records for the planned implementation.

What should you recommend?

A. Create one alias (CNAME) record named Intranet. Map the CNAME record to Intranet.

B. Delete both host (A) records named Intranet. Create a pointer (PTR) record for each Web server.

C. Create a new host (A) record named Intranet. Remove both host (A) records for Web1 and Web2.

D. Delete one of the host (A) records named Intranet. Modify the remaining host (A) record named Intranet.

---

**Answer: C**

---

**Case Study: 8**

**Mix Questions**

---

**Question: 1**

---

Your network contains two servers named Server1 and Server2 that run Windows Server 2012. Server1 and Server2 have the Hyper-V server role installed and are part of a host group named Group1 in Microsoft System Center 2012 Virtual Machine Manager (VMM).

Server1 and Server2 have identical hardware, software, and settings.

You configure VMM to migrate virtual machines if the CPU utilization on a host exceeds 65 percent. The current load on the servers is shown following table.

| <b>Server</b> | <b>Virtual machine</b> | <b>CPU utilization</b> |
|---------------|------------------------|------------------------|
| Server1       | VM1                    | 20 percent             |
| Server1       | VM2                    | 20 percent             |
| Server1       | VM3                    | 15 percent             |
| Server2       | VM4                    | 15 percent             |
| Server2       | VM5                    | 15 percent             |
| Server2       | VM6                    | 15 percent             |
| Server2       | VM7                    | 15 percent             |

You start a new virtual machine on Server2 named VM8. VM8 has a CPU utilization of 20 percent.

You discover that none of the virtual machines hosted on Server2 are migrated to Server1.

You need to ensure that the virtual machines hosted on Server2 are migrated to Server1.

What should you modify from the Dynamic Optimization configuration?

- A. The Host Reserve threshold
- B. The Power Optimization threshold
- C. The Aggressiveness level
- D. The Dynamic Optimization threshold

---

**Answer: C**

---

### **Question: 2**

---

Your network contains an Active Directory domain. The domain contains 10 file servers. The file servers connect to a Fibre Channel SAN. You plan to implement 20 Hyper-V hosts in a failover cluster.

The Hyper-V hosts will not have host bus adapters (HBAs).

You need to recommend a solution for the planned implementation that meets the following requirements:

The virtual machines must support live migration.

The virtual hard disks (VHDs) must be stored on the file servers.

Which two technologies achieve the goal? Each correct answer presents a complete solution.

- A. Cluster Shared Volume (CSV)
- B. An NFS share
- C. Storage pools
- D. SMB 3.0 shares

---

**Answer: C, D**

---

### **Question: 3**

---

Your network contains two data centers named DataCenter1 and DataCenter2. The two data centers are connected by using a low-latency high-speed WAN link.

Each data center contains multiple Hyper-V hosts that run Windows Server 2012. All servers connect to a Storage Area Network (SAN) in their local data center.

You plan to implement 20 virtual machines that will be hosted on the Hyper-V hosts.

You need to recommend a hosting solution for the virtual machines.

The solution must meet the following requirements:

Virtual machines must be available automatically on the network if a single Hyper-V host fails.

Virtual machines must be available automatically on the network if a single data center fails.

What should you recommend?

- A. One failover cluster in DataCenter1 and Hyper-V replicas to DataCenter2
- B. One failover cluster in DataCenter2 and one DFS Replication group in DataCenter1
- C. One failover cluster that spans both data centers and SAN replication between the data centers
- D. One failover cluster and one Distributed File System (DFS) Replication group in each data center

---

**Answer: C**

---

#### **Question: 4**

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You have a Hyper-V host named Hyper1 that has Windows Server 2012 installed. Hyper1 hosts 20 virtual machines.

Hyper1 has one physical network adapter.

You need to implement a networking solution that evenly distributes the available bandwidth on Hyper1 to all of the virtual machines.

What should you modify?

- A. The settings of the virtual switch
- B. The settings of the virtual network adapter
- C. The Quality of Service (QoS) Packet Scheduler settings of the physical network adapter
- D. The settings of the legacy network adapter

---

**Answer: A**

---

#### **Question: 5**

---

##### **HOTSPOT**

You plan to implement a virtualization solution to host 10 virtual machines. All of the virtual machines will be hosted on servers that run Windows Server 2012.

You need to identify which servers must be deployed for the planned virtualization solution.

The solution must meet the following requirements:

- Minimize the number of servers.
- Ensure that live migration can be used between the hosts.

Which servers should you identify?

To answer, select the appropriate servers in the answer area.

## Answer Area

Option 1

**Server name      Windows components**

|         |                     |
|---------|---------------------|
| Server1 | Hyper-V server role |
| Server2 | Hyper-V server role |

Option 2

**Server name      Windows Components**

|         |  |
|---------|--|
| Server1 | Hyper-V server role, Failover Clustering feature |
| Server2 | Hyper-V server role, Failover Clustering feature |
| Server3 | Hyper-V server role                              |

Option 3

**Server name      Windows components**

|         |                                |
|---------|--------------------------------|
| Server1 | Hyper-V server role            |
| Server2 | Hyper-V server role            |
| Server3 | File Server role service       |
| Server4 | Network Load Balancing feature |

Option 4

**Server name      Windows components**

|         |  |
|---------|--|
| Server1 | Hyper-V server role, Failover Clustering feature |
| Server2 | Hyper-V server role, Failover Clustering feature |
| Server3 | iSCSI Target Server role service                 |

**Answer:**

## Answer Area

Option 1

**Server name      Windows components**

|         |                     |
|---------|---------------------|
| Server1 | Hyper-V server role |
| Server2 | Hyper-V server role |

Option 2

**Server name      Windows Components**

|         |  |
|---------|--|
| Server1 | Hyper-V server role, Failover Clustering feature |
| Server2 | Hyper-V server role, Failover Clustering feature |
| Server3 | Hyper-V server role                              |

Option 3

**Server name      Windows components**

|         |                                |
|---------|--------------------------------|
| Server1 | Hyper-V server role            |
| Server2 | Hyper-V server role            |
| Server3 | File Server role service       |
| Server4 | Network Load Balancing feature |

Option 4

**Server name      Windows components**

|         |  |
|---------|--|
| Server1 | Hyper-V server role, Failover Clustering feature |
| Server2 | Hyper-V server role, Failover Clustering feature |
| Server3 | iSCSI Target Server role service                 |

## Explanation:

Just two server with Hyper-V installed is enough to perform a Live Migration. (Minimize the number of servers)

**Question: 6**

Your network contains a Hyper-V cluster named Cluster1.

You install Microsoft System Center 2012 Virtual Machine Manager (VMM).

You create a user account for another administrator named User1.

You plan to provide User1 with the ability to manage only the virtual machines that User1 creates.

You need to identify what must be created before you delegate the required permissions.

What should you identify?

- A. A service template
- B. A Delegated Administrator
- C. A cloud
- D. A host group

---

**Answer: D**

---

### **Question: 7**

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Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure.

You deploy a second System Center 2012 infrastructure in a test environment.

You create a service template named Template1 in both System Center 2012 infrastructures.

For self-service users, you create a service offering for Template1. The users create 20 instances of Template1.

You modify Template1 in the test environment. You export the service template to a file named Template1.xml.

You need to ensure that the changes to Template1 can be applied to the existing instances in the production environment.

What should you do when you import the template?

- A. Overwrite the current service template.
- B. Change the name of the service template.
- C. Create a new service template.
- D. Change the release number of the service template.

---

**Answer: D**

---

### **Question: 8**

---

Your network contains an Active Directory domain named contoso.com. The domain contains four servers on a test network. The servers are configured as shown in the following table.

| <b>Server name</b> | <b>Role</b>               |
|--------------------|---------------------------|
| Server1            | Hyper-V                   |
| Server2            | File and Storage Services |
| Server3            | File and Storage Services |
| Server4            | File and Storage Services |

Server1 uses the storage shown in the following table.

| <b>Drive name</b> | <b>Type</b>  |
|-------------------|--|
| C                 | Locally attached IDE disk                                      |
| D                 | Locally attached SCSI disk                                     |
| E                 | Tiered storage space from locally attached SCSI and SSD drives |

You perform the following tasks:

On Server2, you create an advanced SMB share named Share2A and an applications SMB share named Share2B.

On Server3, you create an advanced SMB share named Share3.

On Server4, you create an applications SMB share named Share4.

You add Server3 and Server4 to a new failover cluster named Clus1.

On Clus1, you configure the File Server for general use role, you create a quick SMB share named Share5A, and then you create an applications SMB share named Share5B.

You plan to create a failover cluster of two virtual machines hosted on Server1. The clustered virtual machines will use shared .vhdx files.

You need to recommend a location to store the shared .vhdx files.

Where should you recommend placing the virtual hard disk (VHD)?

- A. \\Server3\Share3
- B. \\Server2\Share2B
- C. \\Clus1\Share5B
- D. \\Server4\Share4

---

**Answer: C**

---

### **Question: 9**

---

Your network contains an Active Directory domain named contoso.com. All servers run Windows Server 2012 R2. The network contains a System Center 2012 R2 Data Protection Manager (DPM) deployment.

The domain contains six servers. The servers are configured as shown in the following table.

| <b>Server name</b> | <b>Role</b>           | <b>Node in cluster</b> |
|--------------------|-----------------------|------------------------|
| Server1            | Domain controller     | <i>Not applicable</i>  |
| Server2            | Domain controller     | <i>Not applicable</i>  |
| Server3            | Microsoft SQL Server  | Cluster1               |
| Server4            | Microsoft SQL Server  | Cluster1               |
| Server5            | <i>Not applicable</i> | Cluster2               |
| Server6            | <i>Not applicable</i> | Cluster2               |

You install System Center 2012 R2 Virtual Machine Manager (VMM) on the nodes in Cluster2.

You configure VMM to use a database in Cluster1. Server5 is the first node in the cluster.

You need to back up the VMM encryption key.

What should you back up?

- A. A full system backup of Server1
- B. A full system backup of Server3
- C. A backup of the Windows\DigitalLocker folder on Server5
- D. A backup of the Windows\DigitalLocker folder on Server1

---

**Answer: A**

---

### **Question: 10**

---

You have a Windows Server 2012 R2 failover cluster that contains four nodes. The cluster has Dynamic Optimization enabled. You deploy three highly available virtual machines to the cluster by using System Center 2012 R2 Virtual Machine Manager (VMM).

You need to prevent Dynamic Optimization from placing any of the three virtual machines in the same node.

What should you do?

- A. From the Virtual Machine Manager console, modify the Compatibility settings in the Hardware Configuration

- properties of the virtual machines.
- B. Set the Priority property of the virtual machine cluster role.
  - C. From the Virtual Machine Manager console, modify the Servicing Windows settings of the virtual machines.
  - D. From the Virtual Machine Manager console, modify the Availability settings in the Hardware Configuration properties of the virtual machines.

---

**Answer: D**

---

### **Question: 11**

Your network contains an Active Directory domain named contoso.com.  
You currently have an intranet web site that is hosted by two Web servers named Web1 and Web2. Web1 and Web2 run Windows Server 2012.  
Users use the name intranet.contoso.com to request the web site and use DNS round robin.  
You plan to implement the Network Load Balancing (NLB) feature on Web1 and Web2.  
You need to recommend changes to the DNS records for the planned implementation.  
What should you recommend?

- A. Create a service locator (SRV) record. Map the SRV record to Intranet.
- B. Delete both host (A) records named Intranet. Create a pointer (PTR) record for each Web server.
- C. Remove both host (A) records named Intranet. Create a new host (A) record named Intranet.
- D. Delete both host (A) records named Intranet. Create two new alias (CNAME) records named Intranet. Map each CNAME record to a Web server name.

---

**Answer: C**

---

### **Question: 12**

Your company has a main office and a branch office.  
You plan to implement a failover cluster named Cluster1 to host an application named App1. The data of App1 will replicate to all of the nodes in Cluster1.  
Cluster1 will contain two servers. The servers will be configured as shown in the following table.

| <b>Server name</b> | <b>Office</b> |
|--------------------|---------------|
| Server1            | Main          |
| Server2            | Main          |

The cluster nodes will not use shared storage.  
The branch office contains two file servers named Server3 and Server4.  
You need to ensure that App1 fails over automatically to another server if a single node in Cluster1 fails.  
What should you do?  
More than one answer choice may achieve the goal. Select the BEST answer.

- A. Add Server3 as a node in Cluster1.
- B. Add Server1, Server2, and Server3 to a Network Load Balancing (NLB) cluster.
- C. Add Server3 and Server4 to a new failover cluster named Cluster2. Install App1 on Cluster2.
- D. Add Server3 as a file share witness for Cluster1.

---

**Answer: D**

**Question: 13****DRAG DROP**

Your network contains servers that run Windows Server 2012. The network contains two servers named Server1 and Server2 that are connected to a SAS storage device. The device only supports two connected computers.

Server1 has the iSCSI Target Server role service installed. Ten application servers use their iSCSI Initiator to connect to virtual disks in the SAS storage device via iSCSI targets on Server1.

Currently, Server2 is used only to run backup software.

You install the iSCSI Target Server role service on Server2.

You need to ensure that the iSCSI targets are available if Server1 fails.

Which five actions should you perform?

To answer, move the five appropriate actions from the list of actions to the answer area and arrange them in the correct order.

| Actions   | Answer Area |
|---|-------------|
| Add the iSCSI Target Server cluster role.         |             |
| Create a cluster.                                 |             |
| Install the Failover Clustering feature.          |             |
| Install the Network Load Balancing (NLB) feature. |             |
| Reconfigure the iSCSI Initiator settings.         |             |
| Install the DFS Replication role service.         |             |
| Create iSCSI targets.                             |             |

**Answer:**

| Actions   | Answer Area                               |
|---|---|
|   | Install the Failover Clustering feature.  |
| Install the DFS Replication role service.         | Create a cluster.                         |
|   | Add the iSCSI Target Server cluster role. |
| Install the Network Load Balancing (NLB) feature. | Create iSCSI targets.                     |
|   | Reconfigure the iSCSI Initiator settings. |
|   |   |

Reference: <http://blogs.msdn.com/b/clustering/archive/2012/05/01/10299698.aspx>

**Question: 14****DRAG DROP**

Your network contains multiple servers that run Windows Server 2012.

You plan to implement three virtual disks. The virtual disks will be configured as shown in the following table.

| Virtual disk name | Configuration    |
|-------------------|------------------|
| VD1               | Two-way mirror   |
| VD2               | Parity           |
| VD3               | Three-way mirror |

You need to identify the minimum number of physical disks required for each virtual disk.

How many disks should you identify?

To answer, drag the appropriate number of disks to the correct virtual disk in the answer area.  
 a. Each number of disks may be used once, more than once, or not at all. Additionally, you may need to drag the split bar between panes or scroll to view content.

**Number of Disks**

two disks

three disks

four disks

five disks

**Answer Area**

VD1

Number of disks

VD2

Number of disks

VD3

Number of disks

**Answer:****Number of Disks**

two disks

three disks

four disks

five disks

**Answer Area**

VD1

two disks

VD2

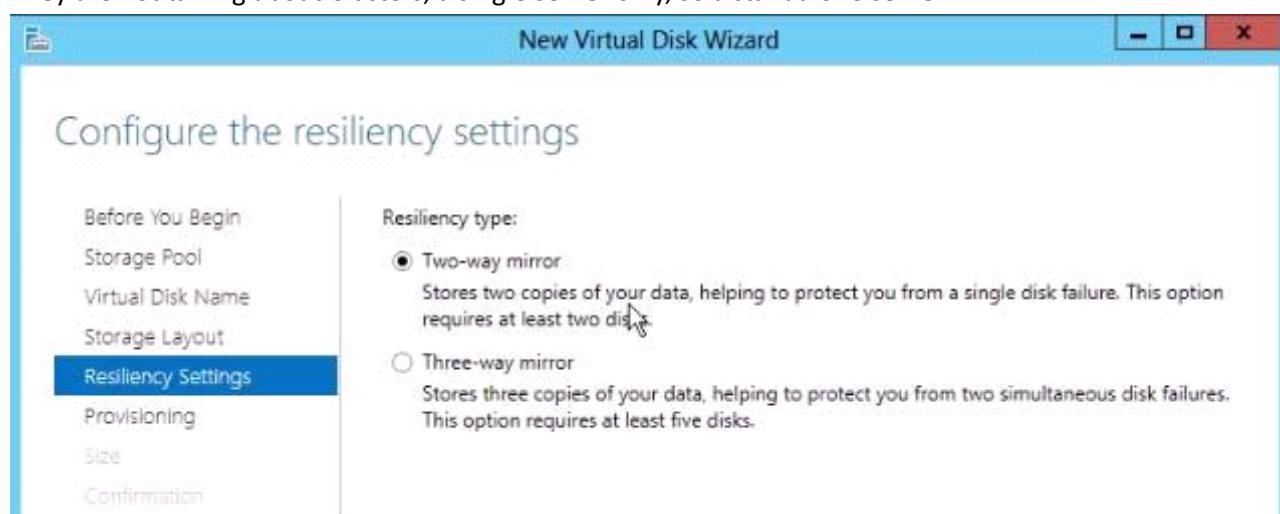
three disks

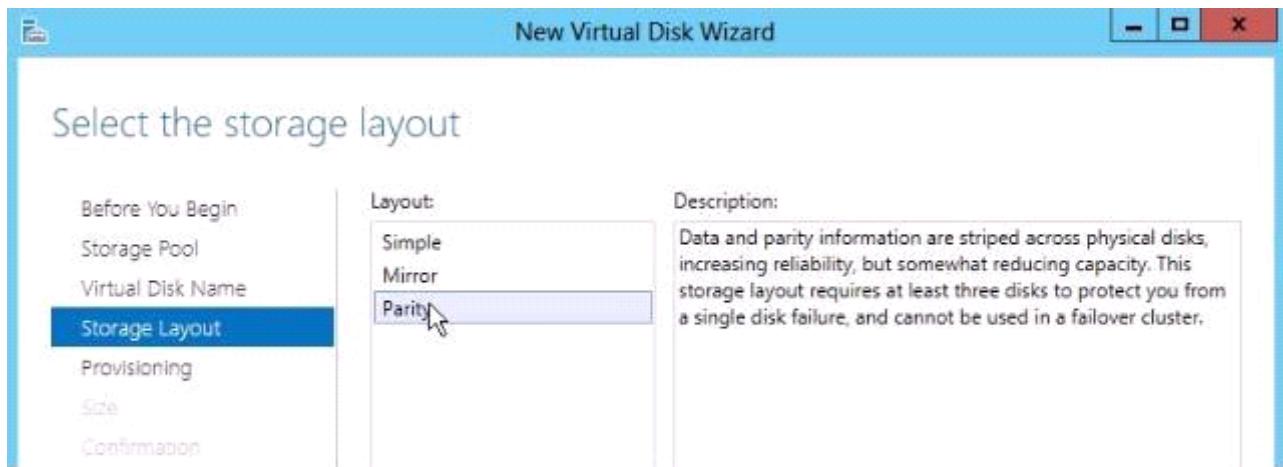
VD3

five disks

**Explanation:**<http://technet.microsoft.com/es-es/library/jj822938.aspx>

They are not talking about Clusters, a single server only, so a standalone server.





## Question: 15

Your Active Directory currently contains five virtualized domain controllers that run Windows Server 2012 R2. The system state of each domain controller is backed up daily. The backups are shipped to a remote location weekly. Your company recently implemented a disaster recovery site that contains several servers. The servers run Windows Server 2012 R2 and have the Hyper-V server role installed. The disaster recovery site has a high-speed WAN link to the main office.

You need to create an Active Directory recovery plan that meets the following requirements:

Restores the Active Directory if a catastrophe prevents all access to the main office.

Minimizes data loss.

What should you include in the plan?

- A. Hyper-V replicas
- B. Live migration
- C. Virtual machine checkpoints
- D. System state restores

**Answer: A**

## Question: 16

Your network contains an Active Directory domain named contoso.com. The domain contains several domain controllers. The domain controllers run either Windows Server 2012 or Windows Server 2008 R2.

The domain functional level is Windows Server 2008 R2. The forest functional level is Windows Server 2008.

The corporate compliance policy states that all items deleted from Active Directory must be recoverable from a Recycle Bin.

You need to recommend changes to the current environment to meet the compliance policy.

Which changes should you recommend? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Raise the forest functional level to Windows Server 2008 R2.
- B. Run the Enable-ADOptionalFeature cmdlet.
- C. Run the New-ADObject cmdlet.
- D. Run the Set-Server cmdlet
- E. Raise the domain functional level to Windows Server 2012.

---

**Answer: A, B**

**Explanation:**

You can enable Active Directory Recycle Bin only if the forest functional level of your environment is set to Windows Server 2008 R2.

**B: Enabling Active Directory Recycle Bin**

After the forest functional level of your environment is set to Windows Server 2008 R2, you can enable Active Directory Recycle Bin by using the following methods:

/ Enable-ADOptionalFeature Active Directory module cmdlet (This is the recommended method.)

/ Ldp.exe

Note: By default, Active Directory Recycle Bin in Windows Server 2008 R2 is disabled.

Reference: Enable Active Directory Recycle Bin

---

**Question: 17**

Your network contains 500 client computers that run Windows 7 and a custom application named App1. App1 uses data stored in a shared folder.

You have a failover cluster named Cluster1 that contains two servers named Server1 and Server2.

Server1 and Server2 run Windows Server 2012 and are connected to an iSCSI Storage Area Network (SAN).

You plan to move the shared folder to Cluster1.

You need to recommend which cluster resource must be created to ensure that the shared folder can be accessed from Cluster1.

What should you recommend?

More than one answer choice may achieve the goal. Select the BEST answer.

A. The Generic Application cluster role

B. The DFS Namespace Server cluster role

C. The clustered File Server role of the File Server for general use type

D. The clustered File Server role of the File Server for scale-out application data type

---

**Answer: C**

---

**Question: 18**

**HOTSPOT**

Your company has four offices. The offices are located in Montreal, Seattle, New York, and Miami.

Users access all of the web-based resources by using web proxy servers. The IP addresses of the web proxies at each office are configured as shown in the following table.

| Office   | Web proxy IP |
|----------|--------------|
| Montreal | 10.10.1.2    |
|          | 10.10.1.3    |
|          | 10.10.1.4    |
| Seattle  | 10.10.2.2    |
|          | 10.10.2.3    |
|          | 10.10.2.4    |
| New York | 10.10.3.2    |
|          | 10.10.3.3    |
|          | 10.10.3.4    |
| Miami    | 10.10.4.2    |
|          | 10.10.4.3    |
|          | 10.10.4.4    |

The connections to the web proxies are balanced by using round-robin DNS.

The company plans to deploy a new application. The new application has a farm of front-end web servers that connect to a back-end application server. When a session to a web server is established, the web server stores data until the session closes. Once the session closes, the data is sent to the application server.

You need to ensure that the incoming sessions to the web server farm are distributed among the web servers. The solution must ensure that if a web server fails, the users are NOT directed to the failed server.

How should you configure the port rule? To answer, select the appropriate options in the answer area.

### Answer Area

Filtering mode:

Affinity:

### Answer Area

Filtering mode:   
 Disable this port range  
 Multiple host  
 Single host

Affinity:   
 Network  
 None  
 Single

**Answer:**

### Answer Area

Filtering mode:   
 Disable this port range  
 Multiple host  
 Single host

Affinity:   
 Network  
 None  
 Single

### Question: 19

**HOTSPOT**

Your network contains an Active Directory domain named contoso.com. The domain contains a Network Load Balancing (NLB) cluster named Cluster1 that contains four nodes. Cluster1 hosts a web application named App1. The session state information of App1 is stored in a Microsoft SQL Server 2012 database.

The network contains four subnets.

You discover that all of the users from a subnet named Subnet1 always connect to the same NLB node.

You need to ensure that all of the users from each of the subnets connect equally across all of the nodes in Cluster1.

What should you modify from the port settings?

To answer, select the appropriate setting in the answer area.

**Add/Edit Port Rule**

Cluster IP address: 192.168.1.111 or All

Port range: From: 80 To: 80

Protocols:  TCP  UDP  Both

Filtering mode:  Multiple host Affinity:  None  Single  Network  
 Timeout(in minutes): 0

Single host

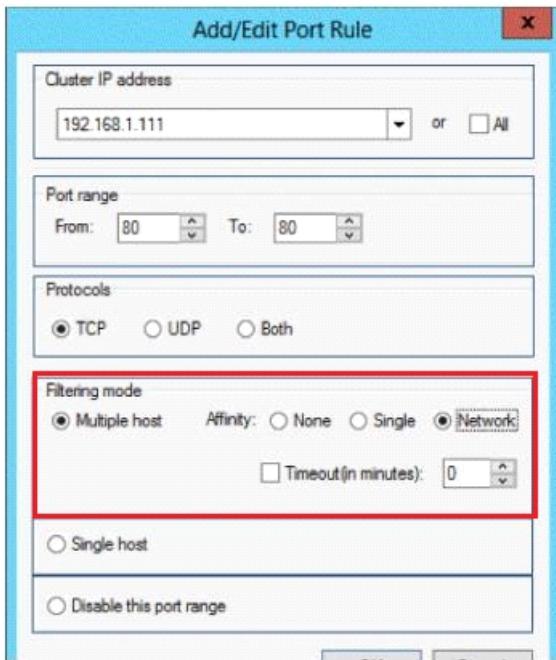
Disable this port range

Save

---

**Answer:**

---



### **Question: 20**

Your network contains five servers that run Windows Server 2012 R2.

You install the Hyper-V server role on the servers. You create an external virtual network switch on each server.

You plan to deploy five virtual machines to each Hyper-V server. Each virtual machine will have a virtual network adapter that is connected to the external virtual network switch and that has a VLAN identifier of 1.

Each virtual machine will run Windows Server 2012 R2. All of the virtual machines will run the identical web application.

You plan to install the Network Load Balancing (NLB) feature on each virtual machine and join each virtual machine to an NLB cluster. The cluster will be configured to use unicast only.

You need to ensure that the NLB feature can distribute connections across all of the virtual machines.

Solution: From the properties of each virtual machine, you enable MAC address spoofing for the existing virtual network adapter.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: A**

---

### **Question: 21**

Your network contains five servers that run Windows Server 2012 R2.

You install the Hyper-V server role on the servers. You create an external virtual network switch on each server.

You plan to deploy five virtual machines to each Hyper-V server. Each virtual machine will have a virtual network adapter that is connected to the external virtual network switch and that has a VLAN identifier of 1.

Each virtual machine will run Windows Server 2012 R2. All of the virtual machines will run the identical web application.

You plan to install the Network Load Balancing (NLB) feature on each virtual machine and join each virtual machine to an NLB cluster. The cluster will be configured to use unicast only.

You need to ensure that the NLB feature can distribute connections across all of the virtual machines.

Solution: On each Hyper-V server, you create a new external virtual network switch. From the properties of each

virtual machine, you add a second virtual network adapter and connect the new virtual network adapters to the new external virtual network switches.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

### **Question: 22**

Your network contains five servers that run Windows Server 2012 R2.

You install the Hyper-V server role on the servers. You create an external virtual network switch on each server.

You plan to deploy five virtual machines to each Hyper-V server. Each virtual machine will have a virtual network adapter that is connected to the external virtual network switch and that has a VLAN identifier of 1.

Each virtual machine will run Windows Server 2012 R2. All of the virtual machines will run the identical web application.

You plan to install the Network Load Balancing (NLB) feature on each virtual machine and join each virtual machine to an NLB cluster. The cluster will be configured to use unicast only.

You need to ensure that the NLB feature can distribute connections across all of the virtual machines.

Solution: On each Hyper-V server, you create a new private virtual network switch. From the properties of each virtual machine, you add a second virtual network adapter and connect the new virtual network adapters to the new private virtual network switches.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

### **Question: 23**

Your network contains five servers that run Windows Server 2012 R2.

You install the Hyper-V server role on the servers. You create an external virtual network switch on each server.

You plan to deploy five virtual machines to each Hyper-V server. Each virtual machine will have a virtual network adapter that is connected to the external virtual network switch and that has a VLAN identifier of 1.

Each virtual machine will run Windows Server 2012 R2. All of the virtual machines will run the identical web application.

You plan to install the Network Load Balancing (NLB) feature on each virtual machine and join each virtual machine to an NLB cluster. The cluster will be configured to use unicast only.

You need to ensure that the NLB feature can distribute connections across all of the virtual machines.

Solution: From the properties of each virtual machine, you add a second virtual network adapter. You connect the new virtual network adapters to the external virtual network switch and configure the new virtual network adapters to use a VLAN identifier of 2.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

**Question: 24**

---

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure.

You deploy a service named Service1 by using a service template. Service1 contains two virtual machines. The virtual machines are configured as shown in the following table.

| <b>Virtual machine name</b> | <b>Roles and software</b>  |
|-----------------------------|--|
| VM1                         | Web server<br>Windows Server 2012 R2<br>Operations Manager agent<br>Configuration Manager agent                |
| VM2                         | Windows Server 2012 R2<br>Operations Manager agent<br>Microsoft SQL Server 2012<br>Configuration Manager agent |

You need to recommend a monitoring solution to ensure that an administrator can review the availability information of Service1.

You need to recommend a monitoring solution to ensure that an administrator can review the availability information of Service1.

Solution: From Configuration Manager, you create a Collection and a Desired Configuration Management baseline.  
Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

---

**Question: 25**

---

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure.

You deploy a service named Service1 by using a service template. Service1 contains two virtual machines. The virtual machines are configured as shown in the following table.

| Virtual machine name | Roles and software   |
|----------------------|--|
| VM1                  | Web server<br>Windows Server 2012 R2<br>Operations Manager agent<br>Configuration Manager agent                |
| VM2                  | Windows Server 2012 R2<br>Operations Manager agent<br>Microsoft SQL Server 2012<br>Configuration Manager agent |

You need to recommend a monitoring solution to ensure that an administrator can review the availability information of Service1.

Solution: From Virtual Machine Manager (VMM), you modify the properties of the service template.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

### Question: 26

---

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure.

You deploy a service named Service1 by using a service template. Service1 contains two virtual machines. The virtual machines are configured as shown in the following table.

| Virtual machine name | Roles and software   |
|----------------------|--|
| VM1                  | Web server<br>Windows Server 2012 R2<br>Operations Manager agent<br>Configuration Manager agent                |
| VM2                  | Windows Server 2012 R2<br>Operations Manager agent<br>Microsoft SQL Server 2012<br>Configuration Manager agent |

You need to recommend a monitoring solution to ensure that an administrator can review the availability information of Service1.

Solution: From Operations Manager, you create a Distributed Application and a Service Level Tracking object.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: A**

---

**Question: 27**

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure.

You deploy a service named Service1 by using a service template. Service1 contains two virtual machines. The virtual machines are configured as shown in the following table.

| <b>Virtual machine name</b> | <b>Roles and software</b>  |
|-----------------------------|--|
| VM1                         | Web server<br>Windows Server 2012 R2<br>Operations Manager agent<br>Configuration Manager agent                |
| VM2                         | Windows Server 2012 R2<br>Operations Manager agent<br>Microsoft SQL Server 2012<br>Configuration Manager agent |

You need to recommend a monitoring solution to ensure that an administrator can review the availability information of Service1.

Solution: From Operations Manager, you create a Distributed Application and a Monitor Override.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

**Question: 28**

Your network contains an Active Directory domain named contoso.com. The network has an Active Directory Certificate Services (AD CS) infrastructure.

You need to issue a certificate to users to meet the following requirements:

Ensure that the users can encrypt files by using Encrypting File System (EFS).

Ensure that all of the users reenroll for their certificate every six months.

Solution: You create a copy of the User certificate template, and then you modify the extensions of the copy.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

**Question: 29**

Your network contains an Active Directory domain named contoso.com. The network has an Active Directory Certificate Services (AD CS) infrastructure.

You need to issue a certificate to users to meet the following requirements:

Ensure that the users can encrypt files by using Encrypting File System (EFS).

Ensure that all of the users reenroll for their certificate every six months.

Solution: From the properties of the Basic EFS template, you assign the Allow - Enroll permission to the Authenticated Users group.

Does this meet the goal?

A. Yes

B. No

---

**Answer: B**

---

### **Question: 30**

Your network contains an Active Directory domain named contoso.com. The network has an Active Directory Certificate Services (AD CS) infrastructure.

You need to issue a certificate to users to meet the following requirements:

Ensure that the users can encrypt files by using Encrypting File System (EFS).

Ensure that all of the users reenroll for their certificate every six months.

Solution: You create a copy of the Basic EFS certificate template, and then you modify the validity period of the copy.

Does this meet the goal?

A. Yes

B. No

---

**Answer: A**

---

### **Question: 31**

Your network contains an Active Directory domain named contoso.com. The network has an Active Directory Certificate Services (AD CS) infrastructure.

You need to issue a certificate to users to meet the following requirements:

Ensure that the users can encrypt files by using Encrypting File System (EFS).

Ensure that all of the users reenroll for their certificate every six months.

Solution: From the properties of the User certificate template, you assign the Allow - Enroll permission to the Authenticated Users group.

Does this meet the goal?

A. Yes

B. No

---

**Answer: B**

---

### **Question: 32**

Your network contains an Active Directory forest named contoso.com. The forest contains multiple servers that run Windows Server 2012. The network contains 1,000 client computers that run Windows 7. Two hundred remote users have laptop computers and only work from home.

The network does not provide remote access to users.

You need to recommend a monitoring solution to meet the following requirements:

Generate a list of updates that are applied successfully to all computers.  
Minimize the amount of bandwidth used to download updates.  
An administrator must approve the installation of an update on any client computer.  
What should you include in the recommendation? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Microsoft Asset Inventory Service (AIS)
- B. Windows InTune
- C. Windows Server Update Services (WSUS)
- D. Active Directory Federation Services (AD FS)
- E. Microsoft System Center 2012 Service Manager

---

**Answer: A, B, C**

---

### **Question: 33**

---

Your network contains a Microsoft System Center 2012 infrastructure.  
You use Virtual Machine Manager (VMM) to manage 20 Hyper-V hosts.  
You deploy a Windows Server Update Services (WSUS) server.  
You need to automate the remediation of non-compliant Hyper-V hosts. The solution must minimize the amount of time that virtual machines are unavailable.  
What should you do first?

- A. Configure the Hyper-V hosts to download Windows updates from the WSUS server by using a Group Policy object (GPO).
- B. Install the WSUS Administration console on the VMM server, and then add the WSUS server to the fabric.
- C. Install the Virtual Machine Manager console on the WSUS server, and then add the WSUS server to the fabric.
- D. Configure the Hyper-V hosts to download Windows updates from the VMM server by using a Group Policy object (GPO).

---

**Answer: B**

---

### **Question: 34**

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Your network contains an Active Directory domain named contoso.com. The domain contains a System Center 2012 R2 Virtual Machine Manager (VMM) deployment.  
The domain contains 20 Hyper-V hosts that run Windows Server 2012 R2. Currently, the computer accounts of all of the Hyper-V hosts are in organizational unit (OU) named Virtualization.  
You plan to create two private clouds by using VMM named Cloud1 and Cloud2. The virtual machines for Cloud1 will be hosted on two Hyper-V hosts named Server1 and Server2. The virtual machines for Cloud2 will be hosted on two Hyper-V hosts named Server3 and Server4.  
You need to recommend an administrative model for Cloud1 and Cloud2.  
Which technology best achieves the goal? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Two sites and two Application Administrator (Self-Service User) user roles
- B. Two host groups and two Application Administrator (Self-Service User) user roles
- C. Two OUs and two Application Administrator (Self-Service User) user roles
- D. Two logical units and two Tenant Administrator user roles

---

**Answer: B**

---

**Question: 35**

Your network contains an internal network and a perimeter network. The internal network contains an Active Directory domain named contoso.com. All client computers in the perimeter network are part of a workgroup. The internal network contains a Microsoft System Center 2012 infrastructure.

You plan to implement an update infrastructure to update the following:

Windows Server 2012  
System Center 2012  
Windows Server 2003  
Microsoft SQL Server 2012  
Third-party virtualization hosts  
Microsoft SharePoint Server 2010

Another administrator recommends implementing a single WSUS server to manage all of the updates. You need to identify which updates can be applied by using the recommended deployment of WSUS.

What should you identify? (Each correct answer presents part of the solution. Choose all that apply.)

- A. SQL Server 2012
- B. System Center 2012
- C. SharePoint Server 2010
- D. Windows Server 2012
- E. Third-party virtualization hosts
- F. Windows Server 2003

---

**Answer: B, C, D, E**

---

**Question: 36**

Your company has three offices. The offices are located in Seattle, London, and Tokyo.

The network contains an Active Directory domain named northwindtraders.com. Each office is configured as an Active Directory site.

System Center 2012 R2 Operations Manager is deployed to the domain. The servers in all three sites are monitored by using Operations Manager.

The company has a web site for its customers. The web site requires users to sign-in.

You need to recommend a solution to monitor the web site.

The solution must meet the following requirements:

Monitor the availability of the web site from locations in North America, Europe, Asia, and Australia.

Monitor multi-step requests to the web site.

Use a central console for monitoring.

What should you include in the recommendation?

- A. Import the System Center Global Services Monitoring Management Pack and add the Web Application Availability Monitoring monitoring type.
- B. Add the Web Application Transaction monitoring type and configure watcher nodes.
- C. Add the TCP Port monitoring type and configure watcher nodes.
- D. Import the System Center Global Services Monitor Management Pack and add the Visual Studio Web Test Monitoring monitoring type.

---

**Answer: D**

---

### **Question: 37**

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Your network contains an Active Directory domain named contoso.com.

You plan to implement Microsoft System Center 2012.

You need to identify which solution automates the membership of security groups for contoso.com. The solution must use workflows that provide administrators with the ability to approve the addition of members to the security groups. Which System Center 2012 roles should you identify?

- A. Configuration Manager and Orchestrator
- B. Service Manager and Virtual Machine Manager (VMM)
- C. Orchestrator and Service Manager
- D. Operations Manager and Orchestrator

---

**Answer: C**

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---

### **Question: 38**

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Your network contains an Active Directory domain named contoso.com.

The corporate security policy states that when new user accounts, computer accounts, and contacts are added to an organizational unit (OU) named Secure, the addition must be audited.

You need to recommend an auditing solution to meet the security policy.

What should you include in the recommendation? (Each answer presents part of the solution. Choose all that apply.)

- A. From the Default Domain Controllers Policy, enable the Audit directory services setting.
- B. Create a new Group Policy object (GPO) that is linked to the Secure OU, and then modify the Audit directory services setting.
- C. From the Secure OU, modify the Auditing settings.
- D. From the Default Domain Controllers Policy, enable the Audit object access setting.
- E. From the Secure OU, modify the Permissions settings.
- F. Create a new Group Policy object (GPO) that is linked to the Secure OU, and then modify the Audit object access setting.

---

**Answer: A, B**

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### **Question: 39**

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You have a System Center 2012 R2 Configuration Manager deployment.

All users have client computers that run Windows 8.1. The users log on to their client computers as standard users.

An application named App1 is deployed to the client computers by using System Center.

You need to recommend a solution to validate a registry key used by App1. If the registry key has an incorrect value, the value must be changed. The registry key must be validated every day. The solution must generate a report on non-compliant computers.

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

- A. Group Policy preferences
- B. A desired configuration baseline
- C. The Windows PowerShell Desired State Configuration (DSC) feature
- D. The Microsoft Baseline Security Analyzer (MBSA)

---

**Answer: B**

---

**Question: 40**

---

Your network contains 20 servers that run Windows Server 2012. The servers have the Hyper-V server role installed. You plan to deploy a management solution.

You need to recommend which Microsoft System Center 2012 roles must be deployed to meet the following requirements:

An administrator must be notified when an incident occurs, such as a serious error in the event log, on a Hyper-V host, or on a virtual machine.

An administrator must be able to assign an incident to a specific administrator for resolution.

An incident that remains unresolved for more than 10 hours must be escalated automatically to another administrator.

Administrators must be able to generate reports that contain the details of incidents and escalations.

Which System Center 2012 roles should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Operations Manager and Orchestrator
- B. Operations Manager and Service Manager
- C. Configuration Manager and Service Manager
- D. Service Manager and Virtual Machine Manager (VMM)

---

**Answer: B**

---

**Question: 41**

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Your company has a main office and a branch office. Each office contains several hundred computers that run Windows 2012.

You plan to deploy two Windows Server Update Services (WSUS) servers. The WSUS servers will be configured as shown in the following table.

| <b>Server name</b> | <b>Office</b> |
|--------------------|---------------|
| Server1            | Main          |
| Server2            | Branch        |

You need to implement the WSUS infrastructure to meet the following requirements:

All updates must be approved from a server in the main office.

All client computers must connect to a WSUS server in their local office.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Deploy a Group Policy object (GPO) that has the update location set to Server1.
- B. On Server2, configure WSUS in Replica mode.
- C. On Server1, configure WSUS in Replica mode.
- D. On Server2, configure WSUS in Autonomous mode.
- E. Deploy a Group Policy object (GPO) that has the update location set to Server2.
- F. On Server1, configure WSUS in Autonomous mode.

---

**Answer: A, B, E, F**

---

## **Question: 42**

Your company has a human resources department, a finance department, a sales department and an R&D department.

The company audits the access of documents that contain department-specific sensitive information.

You are planning an administrative model for the departments to meet the following requirements:

Provide R&D managers with the ability to back up all the files of their department only.

Provide finance managers with the ability to view the audit logs for the files of their department only.

Provide human resources managers with the ability to view the audit logs for the files of their department only.

Provide sales managers with the ability to modify the permissions on all the shared folders of their department only.

You need to identify the minimum amount of file servers required on the network to meet the requirements of each department.

How many file servers should you identify?

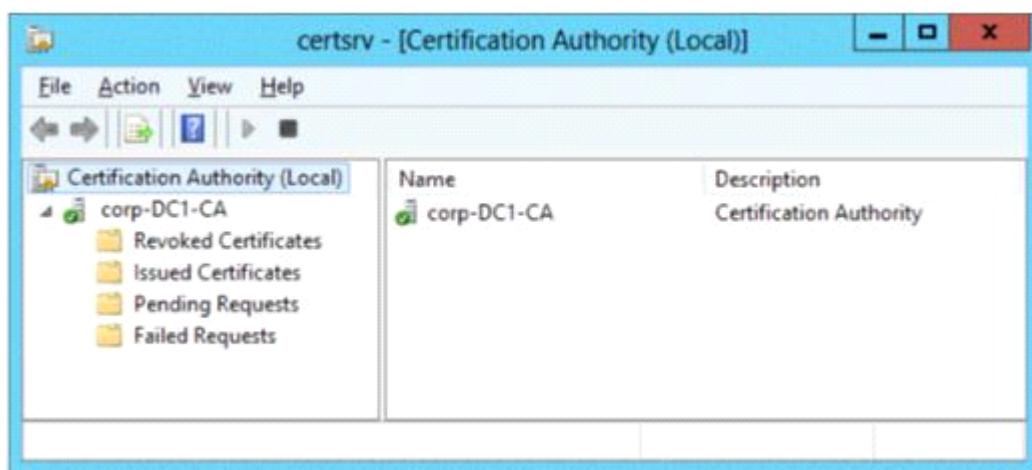
- A. 1
- B. 2
- C. 3
- D. 4

**Answer: C**

## **Question: 43**

Your network contains an Active Directory domain named contoso.com. The network contains two servers named Server1 and Server2.

You deploy Active Directory Certificate Services (AD CS). The certification authority (CA) is configured as shown in the exhibit. (Click the Exhibit button.)



You need to ensure that you can issue certificates based on certificate templates.

What should you do?

- A. On Server1, install the Network Device Enrollment Service role service.
- B. Configure Server2 as a standalone subordinate CA.
- C. On Server1, uninstall, and then reinstall AD CS.
- D. On Server1, run the Add-CertificateEnrollmentPolicyServer cmdlet.

**Answer: C**

**Explanation:**

In a typical CA infrastructure the Stand-alone CAs are primarily intended to be used as Trusted Offline RootCAs in a CA hierarchy or when extranets and the Internet are involved. In a stand-alone CA Certificate templates are not used. An enterprise CA uses certificate types, which are based on a certificate template.

---

**Question: 44**

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Your network contains an Active Directory forest named contoso.com.

Your company works with a partner company that has an Active Directory forest named fabrikam.com. Both forests contain domain controllers that run only Windows Server 2012 R2.

The certification authority (CA) infrastructure of both companies is configured as shown in the following table.

| <b>Forest</b> | <b>Server name</b> | <b>Role</b>                |
|---------------|--------------------|----------------------------|
| Contoso.com   | Server1            | Issuing enterprise root CA |
| Fabrikam.com  | Server2            | Offline root CA            |
| Fabrikam.com  | Server3            | Enterprise issuing CA      |

You need to recommend a certificate solution that meets the following requirements:

Server authentication certificates issued from fabrikam.com must be trusted automatically by the computers in contoso.com.

The computers in contoso.com must not trust automatically any other type of certificates issued from the CA hierarchy in fabrikam.com.

What should you include in the recommendation?

- A. Deploy a Group Policy object (GPO) that defines intermediate CAs. Import a certificate that has an application policy object identifier (OID) of CA Encryption Certificate.
- B. Deploy a Group Policy object (GPO) that defines an enterprise trust. Import a certificate that has an application policy object identifier (OID) of Microsoft Trust List Signing.
- C. Deploy a Group Policy object (GPO) that defines an enterprise trust. Import a certificate that has an application policy object identifier (OID) of CA Encryption Certificate.
- D. Deploy a Group Policy object (GPO) that defines intermediate CAs. Import a certificate that has an application policy object identifier (OID) of Microsoft Trust List Signing.

---

**Answer: B**

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**Question: 45**

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Your network contains an Active Directory domain named contoso.com.

Your company has an enterprise root certification authority (CA) named CA1.

You plan to deploy Active Directory Federation Services (AD FS) to a server named Server1.

The company purchases a Microsoft Office 365 subscription.

You plan to register the company's SMTP domain for Office 365 and to configure single sign-on for all users.

You need to identify which certificate or certificates are required for the planned deployment.

Which certificate or certificates should you identify? (Each correct answer presents a complete solution. Choose all that apply.)

- A. a server authentication certificate that is issued by a trusted third-party root CA and that contains the subject name server1.contoso.com
- B. a server authentication certificate that is issued by CA1 and that contains the subject name Server1
- C. a server authentication certificate that is issued by a trusted third-party root CA and that contains the subject name Server1

- D. a server authentication certificate that is issued by CA1 and that contains the subject name server1.contoso.com  
E. self-signed server authentication certificates for server1.contoso.com

---

**Answer: D, E**

---

### **Question: 46**

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Your network contains five Active Directory forests.

You plan to protect the resources in one of the forests by using Active Directory Rights Management Services (AD RMS).

Users in all of the forests will access the protected resources.

You need to identify the minimum number of AD RMS clusters required for the planned deployment.

What should you identify?

- A. Five root clusters
- B. Five licensing clusters
- C. One licensing cluster and five root clusters
- D. One root cluster and five licensing clusters

---

**Answer: A**

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### **Question: 47**

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#### **DRAG DROP**

Your network contains an Active Directory domain named contoso.com. The domain contains two domain controllers named DC1 and DC2. The domain contains a server named Server1.

Server1 is a certification authority (CA). All servers run Windows Server 2012 R2.

You plan to deploy BitLocker Drive Encryption (BitLocker) to all client computers. The unique identifier for your organization is set to Contoso.

You need to ensure that you can recover the BitLocker encrypted data by using a BitLocker data recovery agent. You must be able to perform the recovery from any administrative computer.

Which four 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.

| <b>Actions</b>   |
|--|
| Request the new certificate and export the certificate as a .pfx file.                               |
| Deploy the data recovery agent by using a Group Policy object (GPO).                                 |
| Install BitLocker on Server1.  |
| Copy the Basic EFS certificate template, modify the new template, and then publish the new template. |
| Request the new certificate and export the certificate as a .cer file.                               |
| Install BitLocker on a domain controller.  |

#### **Answer Area**

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**Answer:**

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Box 1:

Install BitLocker on a domain controller.

Box 2:

Copy the Basic EFS certificate template, modify the new template, and then publish the new template.

Box 3:

Request the new certificate and export the certificate as a .cer file.

Box 4:

Deploy the data recovery agent by using a Group Policy object (GPO).

---

### **Question: 48**

Your network contains an Active Directory domain named contoso.com. The network contains a perimeter network. The perimeter network and the internal network are separated by a firewall.

On the perimeter network, you deploy a server named Server1 that runs Windows Server 2012.

You deploy Active Directory Certificate Services (AD CS).

Each user is issued a smart card.

Users report that when they work remotely, they are unable to renew their smart card certificate.

You need to recommend a solution to ensure that the users can renew their smart card certificate from the Internet.

What should you recommend implementing on Server1?

More than one answer choice may achieve the goal. Select the BEST answer.

- A. The Certificate Enrollment Policy Web Service role service and the Certificate Enrollment Web Service role service
- B. The Active Directory Federation Services server role
- C. An additional certification authority (CA) and the Online Responder role service
- D. The Certification Authority Web Enrollment role service and the Online Responder role service

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**Answer: A**

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### **Question: 49**

Your network contains an Active Directory domain named contoso.com.

You plan to deploy an Active Directory Federation Services (AD FS) farm that will contain eight federation servers.

You need to identify which technology or technologies must be deployed on the network before you install the federation servers.

Which technology or technologies should you identify? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Network Load Balancing (NLB)
- B. Microsoft Forefront Identity Manager (FIM) 2010
- C. The Windows Internal Database feature
- D. Microsoft SQL Server 2012
- E. The Windows Identity Foundation 3.5 feature

---

**Answer: A, D**

---

Explanation:

Best practices for deploying a federation server farm. We recommend the following best practices for deploying a federation server in a production environment:

- \* (A) Use NLB or some other form of clustering to allocate a single IP address for many federation server computers.
- \* (D) If the AD FS configuration database will be stored in an SQL database, avoid editing the SQL database from multiple federation servers at the same time.
- \* If you will be deploying multiple federation servers at the same time or you know that you will be adding more servers to the farm over time, consider creating a server image of an existing federation server in the farm and then installing from that image when you need to create additional federation servers quickly.
- \* Reserve a static IP address for each federation server in the farm and, depending on your Domain Name System (DNS) configuration, insert an exclusion for each IP address in Dynamic Host Configuration Protocol (DHCP). Microsoft NLB technology requires that each server that participates in the NLB cluster be assigned a static IP address.

Reference: When to Create a Federation Server Farm

## **Question: 50**

### **HOTSPOT**

You plan to deploy a certification authority (CA) infrastructure that contains the following servers:

An offline standalone root CA named CA1

An enterprise subordinate CA named CA2

On all of the computers, you import the root CA certificate from CA1 to the Trusted Root Certification Authorities Certificates store.

You need to ensure that CA2 can issue certificates for the CA hierarchy.

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

### **Answer Area**

Modify the certificate revocation list (CRL) settings and the Authority Information Access (AIA) settings:

Create the subordinate certificate request:

Issue a certificate and export the certificate to a .p7b file:

Install the CA certificate:

**Answer Area**

Modify the certificate revocation list (CRL) settings and the Authority Information Access (AIA) settings:

|     |
|-----|
| CA1 |
| CA2 |

Create the subordinate certificate request:

|     |
|-----|
| CA1 |
| CA2 |

Issue a certificate and export the certificate to a .p7b file:

|     |
|-----|
| CA1 |
| CA2 |

Install the CA certificate:

|     |
|-----|
| CA1 |
| CA2 |

**Answer:****Answer Area**

Modify the certificate revocation list (CRL) settings and the Authority Information Access (AIA) settings:

|     |
|-----|
| CA1 |
| CA2 |

Create the subordinate certificate request:

|     |
|-----|
| CA1 |
| CA2 |

Issue a certificate and export the certificate to a .p7b file:

|     |
|-----|
| CA1 |
| CA2 |

Install the CA certificate:

|     |
|-----|
| CA1 |
| CA2 |

**Question: 51**

Your network contains an Active Directory domain named contoso.com.

You deploy Active Directory Certificate Services (AD CS).

Your company, which is named Contoso, Ltd., has a partner company named Fabrikam, Inc. Fabrikam also deploys AD CS.

Contoso and Fabrikam plan to exchange signed and encrypted email messages.

You need to ensure that the client computers in both Contoso and Fabrikam trust each other's email certificates. The solution must prevent other certificates from being trusted and minimize administrative effort.

What should you do?

More than one answer choice may achieve the goal. Select the BEST answer.

- A. Implement an online responder in each company.
- B. Exchange the root certification authority (CA) certificates of both companies, and then deploy the certificates to the Enterprise Trust store by using Group Policy objects (GPOs).
- C. Implement cross-certification in each company.
- D. Exchange the root certification authority (CA) certificates of both companies, and then deploy the certificates to the Trusted Root Certification Authorities store by using Group Policy objects (GPOs).

**Answer: C**

**Question: 52**

Your network contains a Hyper-V host named Host1. Host1 hosts 25 virtual machines.

All of the virtual machines are configured to start automatically when Host1 restarts.

You discover that some of the virtual machines fail to start automatically when Host1 restarts and require an administrator to start them manually.

You need to modify the settings of the virtual machines to ensure that they automatically restart when Host1 restarts.

Which settings should you modify?

- A. Maximum RAM
- B. Minimum RAM
- C. Memory weight
- D. Startup RAM

**Answer: D****Question: 53****HOTSPOT**

Your network contains five physical servers. The servers are configured as shown in the following table.

| <b>Server name</b> | <b>Role</b>   |
|--------------------|---|
| DC1                | Domain controller<br>DHCP server<br>DNS server                                  |
| SQL1               | Microsoft SQL Server 2012 database server                                       |
| DPM1               | Microsoft System Center 2012 R2 Data Protection Manager (DPM)                   |
| Server1            | Microsoft System Center 2012 R2 Virtual Machine Manager (VMM) management server |
| Server2            | Microsoft System Center 2012 R2 Virtual Machine Manager (VMM) library server    |

All servers run Windows Server 2012 R2.

During the setup of VMM, you configure distributed key management.

You need to ensure that the entire VMM infrastructure can be restored.

What should you include in the backup plan? To answer, select the appropriate server to back up for each backup content type in the answer.

**Answer Area**

System state:

VMM databases:

All disk volumes:

**Answer Area**

System state:

DC1  
Server1  
Server2  
SQL1

VMM databases:

DC1  
Server1  
Server2  
SQL1

All disk volumes:

DC1  
Server1  
Server2  
SQL1

**Answer:****Answer Area**

System state:

**DC1**  
Server1  
Server2  
SQL1

VMM databases:

DC1  
Server1  
Server2  
**SQL1**

All disk volumes:

DC1  
Server1  
**Server2**  
SQL1

**Question: 54**

Your network contains four clusters. The clusters are configured as shown in the following table.

| Server name | Nodes       | Platform         |
|-------------|-------------|------------------|
| Cluster1    | Five nodes  | VMware ESX 4.0   |
| Cluster2    | Ten nodes   | Citrix XenServer |
| Cluster3    | Six nodes   | Hyper-V          |
| Cluster4    | Three nodes | Hyper-V          |

You manage all of the clusters by using Microsoft System Center 2012 Virtual Machine Manager (VMM). You plan to implement Dynamic Optimization for the virtual machines.

You need to recommend a configuration for the planned implementation.

What should you recommend?

- A. Dynamic Optimization on Cluster2 and Cluster4 only  
Virtual machines that are balanced across the clusters
- B. Dynamic Optimization on Cluster1 and Cluster2 only

- Virtual machines that are balanced across the nodes in the clusters
- C. Dynamic Optimization on all of the clusters
- Virtual machines that are balanced across the nodes in the clusters
- D. Dynamic Optimization on all of the clusters
- Virtual machines that are balanced across the clusters

---

**Answer: C**

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### **Question: 55**

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Your network contains a Microsoft System Center 2012 Virtual Machine Manager (VMM) server named Server1. You use Server1 to manage 20 Hyper-V hosts. The network also contains five Citrix XenServer virtualization hosts. You need to recommend which installation is required to manage the XenServer servers from Server1. What should you recommend installing?

- A. The Citrix XenServer - Microsoft System Center Integration Pack on the Citrix XenServer hosts
- B. The Citrix XenServer - Microsoft System Center Integration Pack on Server1
- C. Citrix Essentials for Hyper-V on Server1
- D. Citrix Essentials for Hyper-V on the Citrix XenServer hosts

---

**Answer: A**

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### **Question: 56**

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#### **HOTSPOT**

Your network contains an Active Directory domain named contoso.com. All servers run Windows Server 2012 R2. System Center 2012 R2 Virtual Machine Manager (VMM) is deployed to the domain. In VMM, you create a host group named HostGroup1. You add a 16-node Hyper-V failover cluster to HostGroup1. From Windows PowerShell, you run the following commands:

```

PS C:\> $HostGroup = Get-SCVMHostGroup "HostGroup1"
PS C:\> $DoConfig = Get-SCDynamicOptimizationConfiguration -VMHostGroup $HostGroup
PS C:\> $PORange = Get-SCPowersOptimizationRange -DynamicOptimizationConfiguration $DoConfig
PS C:\> $DoConfig | ft Automatic,Aggressiveness,FrequencyMinutes,EnablePowerOptimization,Name,ReadOnly,ConnectedHostGroup

    Automatic Aggressiveness FrequencyMinutes EnablePowerOptimization Name ReadOnly ConnectedHostGroup
    -----
    True      5          10        False      HostGroup1      False      All Hosts\...
    -----
```

```

PS C:\> Get-SCHostReserve -VMHostGroup $HostGroup | ft CPUReserveOff,CPUPlacementLevel,CPUStartOptimizationLevel,MemoryReserveOff,MemoryReserveMode,MemoryPlacementLevel,MemoryStartOptimizationLevel

CPUReserveOff CPUPlacementLevel CPUStartOptimizationLevel MemoryReserveMode MemoryPlacementLevel MemoryStartOptimizationLevel
    -----
    False      50        40        False      Megabyte     6144      4096
    -----
```

```

PS C:\> $PORange | ft DayOfWeek,BeginHour,EndHour,Name,ObjectType
```

Use the drop-down menus to select the answer choice that completes each statement.

### Answer Area

If node utilization is 5 percent on Tuesday, the node will [answer choice]

v

The hosts will [answer choice]

### Answer Area

If node utilization is 5 percent on Tuesday, the node will [answer choice]

remain on.  
be turned off.  
be put into drain mode.

The hosts will [answer choice]

never be considered for optimization.  
only be considered for optimization if the memory is less than 4,096 MB.  
not be considered for optimization if the memory is less than 6,144 MB.

---

**Answer:**

### Answer Area

If node utilization is 5 percent on Tuesday, the node will [answer choice]

**remain on.**  
be turned off.  
be put into drain mode

The hosts will [answer choice]

never be considered for optimization.  
only be considered for optimization if the memory is less than 4.096 MB.  
only be considered for optimization if the memory is less than 6.144 MB.

## Question: 57

## DRAG DROP

Your network contains an Active Directory domain named contoso.com. The domain contains multiple servers that are configured as Hyper-V hosts.

You plan to implement four virtual machines. The virtual machines will be configured as shown in the following table.

| Virtual machine name | Configuration   |
|----------------------|---|
| VM1                  | Will host several shared folders that are accessed by users on the network.   |
| VM2                  | Will be migrated to a host on the public cloud by using live migration.   |
| VM3                  | Will run processes that must only be able to connect to shared resources on other virtual machines on the local Hyper-V host. |
| VM4                  | Will run processes that must only be able to connect to shared resources on the local Hyper-V host.                           |

You need to identify which network must be added to each virtual machine.

Which network types should you identify?

To answer, drag the appropriate Network Type to the correct virtual machine in the answer area.

a. Each Network Type may be used once, more than once, or not at all. Additionally, you may need to drag the split bar between panes or scroll to view content.

Network Types

- Private
- Internal
- External

Answer Area

|     |         |
|-----|---------|
| VM1 | Network |
| VM2 | Network |
| VM3 | Network |
| VM4 | Network |

---

Answer:

---

| Network Types | Answer Area       |
|---------------|-------------------|
| Private       | VM1      External |
| External      | VM2      External |

|     |          |
|-----|----------|
| VM3 | Private  |
| VM4 | Internal |

Explanation:

<http://blogs.technet.com/b/jhoward/archive/2008/06/17/hyper-v-what-are-the-uses-for-different-types-of-virtual-networks.aspx>

An external network, which provides communication between a virtual machine and a physical network by creating an association to a physical network adapter on the virtualization server.

An internal network, which provides communication between the virtualization server and virtual machines.

A private network, which provides communication between virtual machines only.

Reference: <http://technet.microsoft.com/en-us/library/cc732470%28v=WS.10%29.aspx>

### Question: 58

Your network contains multiple servers that run Windows Server 2012.

The network contains a Storage Area Network (SAN) that only supports Fibre Channel connections.

You have two failover clusters. The failover clusters are configured as shown in the following table.

| Failover cluster name | Role            | Members   |
|-----------------------|-----------------|-----------|
| Cluster1              | File Services   | Two nodes |
| Cluster2              | Hyper-V hosting | Six nodes |

Only the members of Cluster1 can connect to the SAN.

You plan to implement 15 highly available virtual machines on Cluster2. All of the virtual machines will be stored in a single shared folder.

You need to ensure that the VHD files of the virtual machines can be stored on the SAN.

What should you do? (Each correct answer presents a complete solution. Choose all that apply.)

- A. From a node in Cluster2, create a Virtual Fibre Channel SAN.
- B. From a node in Cluster1, create a Virtual Fibre Channel SAN.
- C. From Cluster1, add the iSCSI Target Server cluster role.
- D. From Cluster1, configure the clustered File Server role of the File Server for scale-out application data type.

**Answer: A, D**

### Question: 59

DRAG DROP

You are planning to set up a proof-of-concept network virtualization environment. The environment will contain three

servers. The servers will be configured as shown in the following table.

| Server name | Role  |
|-------------|---|
| Server1     | System Center 2012 R2 Virtual Machine Manager (VMM) |
| Server2     | Hyper-V host  |
| Server3     | File server   |

You need to enable network connectivity between the virtual machines and Server3.

Which four 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 |
|--|-------------|
| Add an infrastructure server.                            |             |
| Deploy Microsoft Forefront Unified Access Gateway (UAG). |             |
| Add an additional Hyper-V host.                          |             |
| Configure ISATAP transition technology.                  |             |
| Deploy Windows Server Gateway.                           |             |
| Configure Teredo transition technology.                  |             |
| Add a network service.                                   |             |
| Enable network address translation (NAT).                |             |

### Answer:

Box 1:

Add an additional Hyper-V host.

Box 2:

Add a network service.

Box 3:

Deploy Windows Server Gateway.

Box 4:

Enable network address translation (NAT).

### Question: 60

#### DRAG DROP

Your network contains two servers named Server1 and Server2 that run Windows Server 2012. Server1 and Server2 have the Hyper-V server role installed and are members of a failover cluster.

The network contains a Storage Area Network (SAN) that has a LUN named LUN1. LUN1 is connected to a 12-TB disk on the SAN.

You plan to host three new virtual machines on the failover cluster. Each virtual machine will store up to 4 TB of data on a single disk. The virtual machines will be backed up from the hosts by using the Volume Shadow Copy Service (VSS).

You need to ensure that Server1 and Server2 can store the new virtual machines on the SAN.

Which three actions should you perform?

To answer, move the three appropriate actions from the list of actions to the answer area and arrange them in the

correct order.

| Actions  | Answer Area |
|--|-------------|
| Configure each virtual machine to use a VHDX disk.         |             |
| Create a Fibre Channel adapter on each virtual machine.    |             |
| Configure Server1 and Server2 to connect to LUN1.          |             |
| Create a Cluster Shared Volume (CSV).                      |             |
| Configure each virtual machine to use a pass-through disk. |             |
| Configure each virtual machine to use a VHD disk.          |             |
| Create a Virtual Fibre Channel SAN on Server1 and Server2. |             |

### Answer:

- 1) Configure Server1 and Server2 to connect to LUN1
- 2) Create a Cluster Shared Volume (CSV)
- 3) Configure each virtual machine to use a VHDX disk.

Explanation:

Updated: February 29, 2012

Applies To: Windows Server 2012

As enterprise workloads for virtual environments grow in size and in performance demands, virtual hard disk (VHD) formats need to accommodate them. Hyper-V in Windows Server 2012 introduces a new version of the VHD format called VHDX, which is designed to handle current and future workloads.

VHDX has a much larger storage capacity than the older VHD format. It also provides data corruption protection during power failures and optimizes structural alignments of dynamic and differencing disks to prevent performance degradation on new, large-sector physical disks.

<http://technet.microsoft.com/en-us/library/hh831446.aspx>

### Question: 61

Your network contains a data center named DataCenter1 that contains multiple servers. The servers are configured as Hyper-V hosts.

Your company deploys a disaster recovery site. The disaster recovery site has a dedicated connection to DataCenter1. The network is connected to the disaster recovery site by using a dedicated link.

DataCenter1 contains 10 business critical virtual machines that run a line-of-business application named App1. You need to recommend a business continuity solution to ensure that users can connect to App1 within two hours if DataCenter1 fails.

What should you include in the recommendation?

More than one answer choice may achieve the goal. Select the BEST answer.

- A. From Microsoft System Center 2012 Virtual Machine Manager (VMM), implement live migration on the virtual machines.
- B. From Hyper-V Manager, implement Hyper-V replicas.
- C. From Microsoft System Center 2012 Data Protection Manager, implement a protection group.
- D. From Hyper-V Manager, create snapshots of the virtual machines.

### Answer: B

### Question: 62

Your network contains an Active Directory domain named contoso.com.  
You plan to implement Network Load Balancing (NLB).  
You need to identify which network services and applications can be load balanced by using NLB.  
Which services and applications should you identify?

- A. Microsoft SQL Server 2012 Reporting Services
- B. A failover cluster
- C. A DHCP server
- D. A Microsoft Exchange Server 2010 Mailbox server
- E. A file server
- F. A Microsoft SharePoint Server 2010 front-end Web server

---

**Answer: A, F**

---

### **Question: 63**

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#### HOTSPOT

You have a System Center 2012 R2 Virtual Machine Manager (VMM) deployment.

You implement Hyper-V Recovery Manager for the deployment.

You create two new clouds named Cloud1 and Cloud2. Metadata for both clouds is uploaded to Windows Azure.

You need to ensure that the virtual machines in Cloud1 are protected by using replicas in Cloud2.

Where should you perform each action? To answer, select the appropriate tool for each action in the answer area.

#### **Answer Area**

Configure the cloud protection settings:

Create a recovery plan:

Enable protection for individual virtual machines:

Map virtual machine networks:

#### **Answer Area**

Configure the cloud protection settings:   

|                                     |
|-------------------------------------|
| The Virtual Machine Manager console |
| The Windows Azure Management Portal |

Create a recovery plan:   

|                                     |
|-------------------------------------|
| The Virtual Machine Manager console |
| The Windows Azure Management Portal |

Enable protection for individual virtual machines:   

|                                     |
|-------------------------------------|
| The Virtual Machine Manager console |
| The Windows Azure Management Portal |

Map virtual machine networks:   

|                                     |
|-------------------------------------|
| The Virtual Machine Manager console |
| The Windows Azure Management Portal |

---

**Answer:**

---

**Answer Area**

|  |  |
|--|--|
| Configure the cloud protection settings:           | <input type="button" value="The Virtual Machine Manager console"/> <input checked="" type="button" value="The Windows Azure Management Portal"/> |
| Create a recovery plan:                            | <input type="button" value="The Virtual Machine Manager console"/> <input checked="" type="button" value="The Windows Azure Management Portal"/> |
| Enable protection for individual virtual machines: | <input type="button" value="The Virtual Machine Manager console"/> <input checked="" type="button" value="The Windows Azure Management Portal"/> |
| Map virtual machine networks:                      | <input type="button" value="The Virtual Machine Manager console"/> <input checked="" type="button" value="The Windows Azure Management Portal"/> |

**Question: 64****DRAG DROP**

You have a failover cluster named Cluster1 that contains four Hyper-V hosts. Cluster1 hosts 20 virtual machines.

You deploy a new failover cluster named Cluster2.

You plan to replicate the virtual machines from Cluster1 to Cluster2.

You need to recommend which actions must be performed on Cluster2 for the planned deployment.

Which three actions should you recommend?

To answer, move the three appropriate actions from the list of actions to the answer area and arrange them in the correct order.

| Actions  | Answer Area |
|--|-------------|
| Install the Hyper-V server role.                                   |             |
| Deploy Microsoft System Center 2012 Virtual Machine Manager (VMM). |             |
| Create replicas of the virtual machines.                           |             |
| Create a snapshot of each virtual machine.                         |             |
| Install the Hyper-V Replica Broker cluster role.                   |             |

**Answer:**

Box 1: Install the Hyper-V server role

Box 2: Install the Hyper-V Replica Broker cluster role.

Box 3: Create replicas of the virtual machines.

Note:

\* Windows Server 2012 Hyper-V Role introduces a new capability, Hyper-V Replica, as a built-in replication mechanism at a virtual machine (VM) level. Hyper-V Replica can asynchronously replicate a selected VM running at a primary site to a designated replica site across LAN/WAN.

\*Step 1: Prepare to Deploy Hyper-V Replica

1.1. Make basic planning decisions

1.2. Install the Hyper-V server role

1.3. Configure the firewall

1.4. Configure Hyper-V Replica Broker

Step2: Step 2: Enable Replication

2.1 Configure the Replica server

2.2. Configure a Replica server that is part of a failover cluster (optional)

2.3 Enable replication for virtual machines

Each virtual machine that is to be replicated must be enabled for replication.

**2.4 Configure primary server to receive replication**

Reference: Deploy Hyper-V Replica

---

**Question: 65**

Your network contains an Active Directory domain named contoso.com. The domain contains multiple servers that run Windows Server 2012. All client computers run Windows 7.

The network contains two data centers.

You plan to deploy one file server to each data center.

You need to recommend a solution to provide redundancy for shared folders if a single data center fails.

What should you recommend?

More than one answer choice may achieve the goal. Select the BEST answer.

A. A Distributed File System (DFS) namespace and DFS Replication

B. Cluster Shared Volumes (CSVs)

C. The clustered File Server role of the File Server for general use type

D. The clustered File Server role of the File Server scale-out application data type

---

**Answer: A**

---

**Question: 66**

You have a Windows Server 2012 R2 failover cluster that contains four nodes. Each node has four network adapters. The network adapters on each node are configured as shown in the following table.

| Network adapter name | Cluster network | Link speed |
|----------------------|-----------------|------------|
| NIC1                 | ClusterNetwork1 | 1 Gbps     |
| NIC2                 | ClusterNetwork2 | 1 Gbps     |
| NIC3                 | ClusterNetwork3 | 1 Gbps     |
| NIC4                 | ClusterNetwork4 | 10 Gbps    |

NIC4 supports Remote Direct Memory Access (RDMA) and Receive Side Scaling (RSS). The cluster networks are configured as shown in the following table.

| Cluster network name | Metric | Role |
|----------------------|--------|------|
| ClusterNetwork1      | 39984  | 1    |
| ClusterNetwork2      | 39983  | 1    |
| ClusterNetwork3      | 79984  | 3    |
| ClusterNetwork4      | 79840  | 3    |

You need to ensure that ClusterNetwork4 is used for Cluster Shared Volume (CSV) redirected traffic.

What should you do?

A. Set the metric of ClusterNetwork4 to 90,000 and disable SMB Multichannel.

B. On each server, replace NIC4 with a 1-Gbps network adapter.

C. Set the metric of ClusterNetwork4 to 30,000 and disable SMB Multichannel.

D. On each server, enable RDMA on NIC4.

---

**Answer: C**

---

**Question: 67**

DRAG DROP

Your network contains an Active Directory domain named contoso.com. The domain contains four servers named Server1, Server2, Server3 and Server4 that run Windows Server 2012.

Server1 and Server2 are configured as file servers and are part of a failover cluster named Cluster1. Server3 and Server4 have Microsoft SQL Server 2012 installed and are part of a failover cluster named Cluster2.

You add a disk named Disk1 to the nodes in Cluster1. Disk1 will be used to store the data files and log files used by SQL Server 2012.

You need to configure the environment so that access to Disk1 remains available when a node on Cluster1 fails over or fails back.

Which three actions should you perform?

To answer, move the three appropriate actions from the list of actions to the answer area and arrange them in the correct order.

| Actions   | Answer Area |
|---|-------------|
| From Failover Cluster Manager, configure the clustered File Server role of the File Server for scale-out application data type on Cluster2. |             |
| From Failover Cluster Manager, add Disk1 to Cluster Shared Volumes (CSVs).  |             |
| From Cluster-Aware Updating, add Server1 and Server2.   |             |
| From Failover Cluster Manager, configure the clustered File Server role of the File Server for scale-out application data type on Cluster1. |             |
| From Failover Cluster Manager, add Disk1 to Cluster1.   |             |
| From Failover Cluster Manager, add Disk1 to Cluster2.   |             |

Answer:

| Actions   | Answer Area   |
|---|---|
| From Failover Cluster Manager, configure the clustered File Server role of the File Server for scale-out application data type on Cluster2. | From Failover Cluster Manager, add Disk1 to Cluster1.   |
| From Cluster-Aware Updating, add Server1 and Server2.   | From Failover Cluster Manager, add Disk1 to Cluster Shared Volumes (CSVs).  |
| From Failover Cluster Manager, add Disk1 to Cluster2.   | From Failover Cluster Manager, configure the clustered File Server role of the File Server for scale-out application data type on Cluster1. |

### Question: 68

DRAG DROP

Your network contains two servers named Server1 and Server2 that run Windows Server 2012.

Server1 has the iSCSI Target Server role service installed and is configured to have five iSCSI virtual disks.

You install the Multipath I/O (MPIO) feature on Server2.

From the MPIO snap-in, you add support for iSCSI devices.

You need to ensure that Server2 can connect to the five iSCSI disks. The solution must ensure that Server2 uses MPIO to access the disks.

Which three actions should you perform?

To answer, move the three appropriate actions from the list of actions to the answer area and arrange them in the correct order.

| Actions  | Answer Area |
|--|-------------|
| On Server1, add the initiator ID of Server2.   |             |
| On Server2, from the iSCSI Initiator Properties, run Quick Connect.  |             |
| On Server1, from the iSCSI Initiator Properties, click <b>Connect</b> , and then select <b>Enable multi-path</b> . |             |
| On Server2, install the iSCSI Target Server role service.  |             |
| On Server2, from the iSCSI Initiator Properties, click <b>Connect</b> , and then select <b>Enable multi-path</b> . |             |

Answer:

| Actions  | Answer Area  |
|--|--|
|  | On Server1, add the initiator ID of Server2.   |
|  | On Server2, from the iSCSI Initiator Properties, run Quick Connect.  |
| On Server1, from the iSCSI Initiator Properties, click <b>Connect</b> , and then select <b>Enable multi-path</b> . |  |
| On Server2, install the iSCSI Target Server role service.  | On Server2, from the iSCSI Initiator Properties, click <b>Connect</b> , and then select <b>Enable multi-path</b> . |

**Question: 69**

Your network contains an Active Directory Rights Management Services (AD RMS) cluster named Cluster1. You plan to change Cluster1 to a new AD RMS cluster named Cluster2. You need to ensure that all users retrieve the location of the AD RMS templates from Cluster2. What should you do?

- A. Modify the Service Connection Point (SCP).
- B. Modify the exclusion policies.
- C. Modify the templates file location of the rights policy templates.
- D. Create an alias (CNAME) record named Cluster1.contoso.com that points to Cluster2.

**Answer: A****Question: 70**

Your network contains an Active Directory domain named contoso.com. The network contains a server named Server1 that runs Windows Server 2012. Server1 has the Active Directory Certificate Services server role installed. Server1 is configured as an offline standalone root certification authority (CA). You install the Active Directory Certificate Services server role on Server2 and configure the server as an enterprise subordinate CA.

You need to ensure that the certificate issued to Server2 is valid for 10 years. What should you do first?

- A. Modify the subordinate CA certificate template.
- B. Modify the registry on Server2.
- C. Modify the registry on Server1.
- D. Modify the CAPolicy.inf file on Server2.
- E. Modify the CAPolicy.inf file on Server1.

**Answer: C****Question: 71**

Your company has an office in New York.

Many users connect to the office from home by using the Internet.

You deploy an Active Directory Certificate Services (AD CS) infrastructure that contains an enterprise certification authority (CA) named CA1. CA1 is only available from hosts on the internal network.

You need to ensure that the certificate revocation list (CRL) is available to all of the users.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Create a scheduled task that copies the CRL files to a Web server.
- B. Run the Install-ADCSWebEnrollment cmdlet.
- C. Run the Install-EnrollmentPolicyWebService cmdlet.
- D. Deploy a Web server that is accessible from the Internet and the internal network.
- E. Modify the location of the Authority Information Access (AIA).
- F. Modify the location of the CRL distribution point (CDP).

---

**Answer: D, F**

---

**Explanation:**

CRLs will be located on Web servers which are Internet facing.

CRLs will be accessed using the HTTP retrieval protocol.

CRLs will be accessed using an external URL of <http://dp1.pki.contoso.com/pki>

F: To successfully authenticate an Internet Protocol over Secure Hypertext Transfer Protocol (IP-HTTPS)-based connection, DirectAccess clients must be able to check for certificate revocation of the secure sockets layer (SSL) certificate submitted by the DirectAccess server. To successfully perform intranet detection, DirectAccess clients must be able to check for certificate revocation of the SSL certificate submitted by the network location server. This procedure describes how to do the following:

Create a Web-based certificate revocation list (CRL) distribution point using Internet Information Services (IIS)

Configure permissions on the CRL distribution shared folder

Publish the CRL in the CRL distribution shared folder

Reference: Configure a CRL Distribution Point for Certificates

---

## **Question: 72**

---

**HOTSPOT**

Your network contains an Active Directory forest named contoso.com. All servers run Windows Server 2012 R2. The forest contains two servers.

The servers are configured as shown in the following table.

| <b>Server name</b> | <b>Role</b>                                  |
|--------------------|--|
| Server1            | Active Directory Federation Services (AD FS) |
| Server2            | Web application proxy                        |

You prepare the forest to support Workplace Join and you enable the Device Registration Service (DRS) on Server1.

You need to ensure that Workplace Join meets the following requirements:

Application access must be based on device claims.

Users who attempt to join their device to the workplace through Server2 must be prevented from locking out their Active Directory account due to invalid credentials.

Which cmdlet should you run to achieve each requirement? To answer, select the cmdlet for each requirement in the answer area.

**Answer Area**

Application access must be based on device claims:

Users who attempt to join their device to the workplace through Server2 must be prevented from locking out their Active Directory account due to invalid credentials:

**Answer Area**

Application access must be based on device claims:

|                                    |
|------------------------------------|
| Set-AdfsClaimsProviderTrust        |
| Set-AdfsGlobalAuthenticationPolicy |
| Set-AdfsProperties                 |
| Set-AdfsRelyingPartyTrust          |

Users who attempt to join their device to the workplace through Server2 must be prevented from locking out their Active Directory account due to invalid credentials:

|                                    |
|------------------------------------|
| Set-AdfsClaimsProviderTrust        |
| Set-AdfsGlobalAuthenticationPolicy |
| Set-AdfsProperties                 |
| Set-AdfsRelyingPartyTrust          |

**Answer:**

**Answer Area**

Application access must be based on device claims:

|                                    |
|------------------------------------|
| Set-AdfsClaimsProviderTrust        |
| Set-AdfsGlobalAuthenticationPolicy |
| Set-AdfsProperties                 |
| Set-AdfsRelyingPartyTrust          |

Users who attempt to join their device to the workplace through Server2 must be prevented from locking out their Active Directory account due to invalid credentials:

|                                    |
|------------------------------------|
| Set-AdfsClaimsProviderTrust        |
| Set-AdfsGlobalAuthenticationPolicy |
| Set-AdfsProperties                 |
| Set-AdfsRelyingPartyTrust          |

**Question: 73**

Your network contains the following roles and applications:

Microsoft SQL Server 2012

Distributed File System (DFS) Replication

Active Directory Domain Services (AD DS)

Active Directory Rights Management Services (AD RMS)

Active Directory Lightweight Directory Services (AD LDS)

You plan to deploy Active Directory Federation Services (AD FS).

You need to identify which deployed services or applications can be used as attribute stores for the planned AD FS deployment.

What should you identify? (Each correct answer presents a complete solution. Choose all that apply.)

- A. DFS
- B. AD RMS
- C. Microsoft SQL Server 2012
- D. AD LDS
- E. AD DS

---

**Answer: C, D, E**

---

**Question: 74**

Your company has 10,000 users located in 25 different sites.

All servers run Windows Server 2012. All client computers run either Windows 7 or Windows 8.

You need to recommend a solution to provide self-service password reset for all of the users.

What should you include in the recommendation?

- A. The Microsoft System Center 2012 Service Manager Self-Service Portal and Microsoft System Center 2012 Orchestrator runbooks
- B. Microsoft System Center 2012 Operations Manager management packs and Microsoft System Center 2012 Configuration Manager collections
- C. The Microsoft System Center 2012 Service Manager Self-Service Portal and Microsoft System Center 2012 Operation Manager management packs
- D. Microsoft System Center 2012 App Controller and Microsoft System Center 2012 Orchestrator runbooks

---

**Answer: A**

---

**Question: 75**

Your network contains an Active Directory domain named contoso.com. The domain contains 200 servers that run either Windows Server 2012 R2, Windows Server 2012, or Windows Server 2008 R2. The servers run the following enterprise applications:

Microsoft Exchange Server 2013

Microsoft SQL Server 2014

System Center 2012 R2 Operations Manager is deployed to the domain. Operations Manager monitors all of the servers in the domain. Audit Collection Services (ACS) is installed.

You need to recommend a monitoring strategy for the domain that meets the following requirements:

A group of administrators must be notified when an error is written to the System log on the servers that run Exchange Server 2013.

A group of administrators must be notified when a specific event is written to The Application log on the servers that run SQL Server 2014.

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

- A. From Operations Manager, enable audit collection.
- B. From Operations Manager, implement two monitors.
- C. From Computer Management, implement one event subscription.
- D. From Operations Manager, implement two rules.

---

**Answer: D**

---

**Question: 76**

Your company has three main offices named Main1, Main2, and Main3.

The network contains an Active Directory domain named contoso.com.

Each office contains a help desk group.

You plan to deploy Microsoft System Center 2012 Configuration Manager to meet the following requirements:  
The members of the Domain Admins group must be able to manage all of the Configuration Manager settings.  
The help desk groups must be able to manage only the client computers in their respective office by using Configuration Manager.

You need to recommend a Configuration Manager infrastructure to meet the requirements.  
Which infrastructure should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Three sites that contain one collection for each office
- B. One site that contains one collection
- C. Three sites that each contain one collection
- D. One site that contains a collection for each office

---

**Answer: D**

---

### **Question: 77**

---

Your network contains the following:

20 Hyper-V hosts  
100 virtual machines  
2,000 client computers

You need to recommend an update infrastructure design to meet the following requirements:

Deploy updates to all of the virtual machines and the client computers from a single console.

Generate reports that contain a list of the applied updates.

What should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

- A. One Windows Server Update Services (WSUS) server integrated with Microsoft System Center 2012 Configuration Manager and a second WSUS server that is integrated with Microsoft System Center 2012 Virtual Machine Manager (VMM)
- B. One Windows Server Update Services (WSUS) server integrated with Microsoft System Center 2012 Virtual Machine Manager (VMM)
- C. One Windows Server Update Services (WSUS) server integrated with Microsoft System Center 2012 Configuration Manager, a second WSUS server integrated with Microsoft System Center 2012 Virtual Machine Manager (VMM), and a third standalone WSUS server.
- D. One Windows Server Update Services (WSUS) server integrated with Microsoft System Center 2012 Configuration Manager and Microsoft System Center 2012 Virtual Machine Manager (VMM)

---

**Answer: D**

---

### **Question: 78**

---

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure.

All client computers have a custom application named App1 installed. App1 generates an Event ID 42 every time the application runs out of memory.

Users report that when App1 runs out of memory, their client computer runs slowly until they manually restart App1. You need to recommend a solution that automatically restarts App1 when the application runs out of memory. The solution must use the least amount of administrative effort.

What should you include in the recommendation?

- A. From Configurations Manager, create a desired configuration management baseline.
- B. From Windows System Resource Manager, create a resource allocation policy.
- C. From Event Viewer, attach a task to the event.
- D. From Operations Manager, create an alert.

---

**Answer: D**

---

### **Question: 79**

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- Your company has a human resources department and a finance department.  
You are planning an administrative model for both departments to meet the following requirements:  
Provide human resources managers with the ability to view the audit logs for the files of their department.  
Ensure that only domain administrators can view the audit logs for the files of the finance department.  
You need to recommend a solution for the deployment of file servers for both departments.  
What should you recommend?  
More than one answer choice may achieve the goal. Select the BEST answer.
- A. Deploy one file server. Add the human resources managers to the local Administrators group.
  - B. Deploy one file server. Add the human resources managers to the local Event Log Readers group.
  - C. Deploy two file servers. Add the human resources managers to the local Administrators group on one of the servers.
  - D. Deploy two file servers. Add the human resources managers to the local Event Log Readers group on one of the servers.

---

**Answer: D**

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### **Question: 80**

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- You have a small Hyper-V cluster built on two hosts that run Windows Server 2012 R2 Hyper-V. You manage the virtual infrastructure by using System Center Virtual Machine Manager 2012.  
Distributed Key Management is not installed. You have the following servers in the environment:

| <b>Server name</b> | <b>Role</b>  |
|--------------------|--|
| DC1                | Active Directory Domain Services domain controller |
| HYPERV1            | Hyper-V host with 40 virtual machines              |
| HYPERV2            | Hyper-V host with 25 virtual machines              |
| SQL1               | SQL Server 2012 database                           |
| DPM1               | Data Protection Manager (DPM) server               |
| VMM1               | Virtual Machine Manager (VMM) 2012                 |
| FILESERVER1        | File server, shared folders                        |
| FILESERVER2        | File server, VMM Library Server                    |

You have the following requirements:

You must back up virtual machines at the host level.

You must be able to back up virtual machines that are configured for live migration.

You must be able to restore the entire VMM infrastructure.

You need to design and implement the backup plan.

What should you do?

- A. Run the following Windows PowerShell command:

```
Checkpoint-VM -Name DPM1 -ComputerName SQL1
```

- B. Install the DPM console on VMM1

- C. Configure backup for all disk volumes on FILESERVER1.

- D. Install the VMM console on DPM1.

---

**Answer: A**

---

### **Question: 81**

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You administer a group of servers that run Windows Server 2012 R2.

You must install all updates. You must report on compliance with the update policy on a monthly basis.

You need to configure updates and compliance reporting for new devices.

What should you do?

- A. Deploy the Microsoft Baseline Security Analyzer. Scan the servers and specify the /apply switch.

- B. In Configuration Manager, deploy a new Desired Configuration Management baseline that includes all required updates.

- C. Configure a new group policy to install updates monthly. Deploy the group policy to all servers.

- D. In Operations Manager, create an override that enables the software updates management pack. Apply the new override to the servers.

---

**Answer: C**

---

### **Question: 82**

---

You are an Active Directory administrator for Contoso, Ltd. You have a properly configured certification authority (CA) in the contoso.com Active Directory Domain Services (AD DS) domain. Contoso employees authenticate to the VPN by using a user certificate issued by the CA.

Contoso acquires a company named Litware, Inc., and establishes a forest trust between contoso.com and litwareinc.com. No CA currently exists in the litwareinc.com AD DS domain. Litware employees do not have user accounts in contoso.com and will continue to use their litwareinc.com user accounts.

Litware employees must be able to access Contoso's VPN and must authenticate by using a user certificate that is issued by Contoso's CA.

You need to configure cross-forest certificate enrollment for Litware users.

Which two actions should you perform? Each correct answer presents part of the solution.

- A. Grant the litwareinc.com AD DS Domain Computers group permissions to enroll for the VPN template on the Contoso CA.

- B. Copy the VPN certificate template from contoso.com to litwareinc.com.

- C. Add Contoso's root CA certificate as a trusted root certificate to the Trusted Root Certification Authority in litware.com.

- D. Configure clients in litwareinc.com to use a Certificate Policy server URI that contains the location of Contoso's CA.

---

**Answer: CD**

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### **Question: 83**

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A company has data centers in Seattle and New York. A high-speed link connects the data centers. Each data center runs a virtualization infrastructure that uses Hyper-V Server 2012 and Hyper-V Server 2012 R2. Administrative users from the Seattle and New York offices are members of Active Directory Domain Services groups named SeattleAdmins and NewYorkAdmins, respectively.

You deploy one System Center Virtual Machine Manager (SCVMM) in the Seattle data center. You create two private clouds named SeattleCloud and NewYorkCloud in the Seattle and New York data centers, respectively.

You have the following requirements:

Administrators from each data center must be able to manage the virtual machines and services from their location by using a web portal.

Administrators must not apply new resource quotas or change resource quotas.

You must manage public clouds by using the existing SCVMM server.

You must use the minimum permissions required to perform the administrative tasks.

You need to configure the environment.

What should you do?

- A. For both the Seattle and New York admin groups, create a User Role and assign it to the Application Administrator profile. Add the Seattle and New York private clouds to the corresponding User Role.
- B. For both the Seattle and New York admin groups, create a User Role and assign it to the Delegated Administrator profile. Add the Seattle and New York private clouds to the corresponding User Role.
- C. For both the Seattle and New York admin groups, create a User Role and assign it to the Tenant Administrator profile. Add the Seattle and New York private clouds to the corresponding User Role.
- D. Add both SeattleAdmins and NewYorkAdmins to the Local Administrators group of each Hyper-V host in Seattle and New York, respectively.

---

**Answer: B**

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### **Question: 84**

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You administer an Active Directory Domain Services forest that includes an Active Directory Federation Services (AD FS) server and Azure Active Directory. The fully qualified domain name of the AD FS server is adfs.contoso.com.

You must implement single sign-on (SSO) for a cloud application that is hosted in Azure. All domain users must be able to use SSO to access the application.

You need to configure SSO for the application.

Which two actions should you perform? Each correct answer presents part of the solution.

- A. Use the Azure Active Directory Synchronization tool to configure user synchronization.
- B. Use the AD FS Configuration wizard to specify the domain and administrator for the Azure Active Directory service.
- C. Create a trust between AD FS and Azure Active Directory.
- D. In the Azure management portal, activate directory synchronization.

---

**Answer: A, B**

---

---

### **Question: 85**

---

You manage a Hyper-V 2012 cluster by using System Center Virtual Machine Manager 2012 SP1. You need to ensure high availability for business-critical virtual machines (VMs) that host business-critical SQL Server databases.

Solution: You set the memory-weight threshold value to High for each business-critical VM. Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

### **Question: 86**

---

You manage a Hyper-V 2012 cluster by using System Center Virtual Machine Manager 2012 SP1. You need to ensure high availability for business-critical virtual machines (VMs) that host business-critical SQL Server databases.

Solution: You configure preferred and possible owners for each business-critical VM.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

### **Question: 87**

---

You plan to allow users to run internal applications from outside the company's network. You have a Windows Server 2012 R2 that has the Active Directory Federation Services (AD FS) role installed. You must secure on-premises resources by using multi-factor authentication (MFA). You need to design a solution to enforce different access levels for users with personal Windows 8.1 or iOS 8 devices.

Solution: You migrate the AD FS server to Microsoft Azure and connect it to the internal Active Directory instance on the network. Then, you use the Workplace Join process to configure access for personal devices to the on-premises resources.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: A**

---

### **Question: 88**

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You plan to allow users to run internal applications from outside the company's network. You have a Windows Server 2012 R2 that has the Active Directory Federation Services (AD FS) role installed. You must secure on-premises resources by using multi-factor authentication (MFA). You need to design a solution to enforce different access levels for users with personal Windows 8.1 or iOS 8 devices.

Solution: You install a local instance of the MFA Server. You connect the instance to the Microsoft Azure MFA provider and then you use Microsoft Intune to manage personal devices.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: A**

---

### **Question: 89**

---

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure.

You deploy a service named Service1 by using a service template. Service1 contains two virtual machines. The virtual machines are configured as shown in the following table.

| <b>Virtual machine name</b> | <b>Roles and software</b>  |
|-----------------------------|--|
| VM1                         | Web server<br>Windows Server 2012 R2<br>Operations Manager agent<br>Configuration Manager agent                |
| VM2                         | Windows Server 2012 R2<br>Operations Manager agent<br>Microsoft SQL Server 2012<br>Configuration Manager agent |

You need to recommend a monitoring solution to ensure that an administrator can review the availability information of Service1.

Solution: From Configuration Manager, you create a Collection and a Desired Configuration Management baseline.  
Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

### **Question: 90**

---

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure.

You deploy a service named Service1 by using a service template. Service1 contains two virtual machines. The virtual machines are configured as shown in the following table.

| <b>Virtual machine name</b> | <b>Roles and software</b>  |
|-----------------------------|--|
| VM1                         | Web server<br>Windows Server 2012 R2<br>Operations Manager agent<br>Configuration Manager agent                |
| VM2                         | Windows Server 2012 R2<br>Operations Manager agent<br>Microsoft SQL Server 2012<br>Configuration Manager agent |

You need to recommend a monitoring solution to ensure that an administrator can review the availability information of Service1.

Solution: From Operations Manager, you create a Distributed Application and a Monitor Override.  
Does this meet the goal?

- A. Yes
- B. No

---

**Answer: A**

---

### **Question: 91**

---

An organization uses an Active Directory Rights Management Services (AD RMS) cluster named RMS1 to protect content for a project. You uninstall AD RMS when the project is complete. You need to ensure that the protected content is still available after AD RMS is uninstalled.

Solution: You run the following Windows PowerShell command:

```
Set-ItemProperty -Path <protected content>:\ -Name IsDecommissioned -Value $true –EnableDecommission  
Does this meet the goal?
```

- A. Yes
- B. No

---

**Answer: B**

---

### **Question: 92**

---

An organization uses an Active Directory Rights Management Services (AD RMS) cluster named RMS1 to protect content for a project. You uninstall AD RMS when the project is complete. You need to ensure that the protected content is still available after AD RMS is uninstalled.

Solution: You add the backup service account to the SuperUsers group and back up the protected content. Then, you restore the content to a file server and apply the required NTFS permissions to the files.

Does this meet the goal?

- A. Yes
- B. No

---

**Answer: B**

---

### **Question: 93**

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DRAG DROP

You use the entire System Center suite. You integrate Service Manager with Operations Manager, Virtual Machine Manager, Orchestrator, and Active Directory. You perform all remediation by using Orchestrator runbooks. An application experiences performance problems on a periodic basis.

You have the following requirements:

A new incident must be opened when System Center Operations Manager (SCOM) detects a performance problem.

The incident must be closed when the performance problem is resolved.

The incident must be associated with the HR performance problem in Service Manager.

You need to configure the environment.

**Actions**

- In Operations Manager, create a new monitoring rule that creates an alert.
- In Service Manager, create a Business Service for the application, and associate it with the existing problem.
- In Service Manager, create a new incident template with a relationship to the existing problem.
- In Service Manager, create a new SCOM Alert connector.

**Answer Area**

---

**Answer:**

**Answer Area**

- 1 In Service Manager, create a Business Service for the application, and associate it with the existing problem.
- 2 In Service Manager, create a new SCOM Alert connector.
- 3 In Service Manager, create a new incident template with a relationship to the existing problem.

---

**Question: 94**

You install the Service Manager Self-Service Portal on a server named CONTOSOSSP1.

Users report that they receive access denied messages when they try to connect to the portal. You must grant users the minimum required permissions.

You need to ensure that all users in the Contoso domain can access the Service Manager Self-Service Portal.

What should you do?

- A. In Active Directory, create a new group named PortalUsers. Add the PortalUsers group to the Contoso\Domain Users group, and then add the group to the local users group on CONTOSOSSP1.
- B. Using the account that you used to install the Self-Service portal, grant the Contoso\Domain Users group Read permissions to the portal.
- C. In Service Manager, create a new user role named PortalUsers. Grant the PortalUsers role rights to all catalog items, and then add the Contoso\Domain Users Active Directory Domain Services group to the PortalUsers role.
- D. Using the account that you used to install the Self-Service portal, grant the Contoso\Domain Users group Contribute permissions to the portal.

---

**Answer: D**

---

**Question: 95**

DRAG DROP

You are planning to set up a proof-of-concept network virtualization environment.

The environment will contain three servers. The servers will be configured as shown in the following table.

| Server name | Role  |
|-------------|---|
| Server1     | System Center 2012 R2 Virtual Machine Manager (VMM) |
| Server2     | Hyper-V host  |
| Server3     | File server   |

VMM will be used to manage the virtualization environment.

Server2 runs three virtual machines. All of the virtual machines are configured to use network virtualization.

You need to enable network connectivity between the virtual machines and Server3.

Which four 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

- Add an infrastructure server.
- Enable network address translation (NAT).
- Configure Teredo transition technology.
- Deploy Windows Server Gateway.
- Configure ISATAP transition technology.
- Add an additional Hyper-V host.
- Deploy Microsoft Forefront Unified Access Gateway (UAG).
- Add a network service.

#### Answer Area

---

**Answer:**

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#### Answer Area

- 1 Add an additional Hyper-V host.
- 2 Deploy Windows Server Gateway.
- 3 Add a network service.
- 4 Enable network address translation (NAT).

---

**Question: 96**

---

DRAG DROP

You need to ensure that all new production Hyper-V virtual machines can be deployed correctly.

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 |
|--|-------------|
| Create a new logical network.  |             |
| Select the <b>All Hosts</b> check box, and insert a VLAN with an ID of <b>30</b> . |             |
| Add an uplink port profile.  |             |
| Create a new logical switch.   |             |
| Select the <b>All Hosts</b> check box, and insert a VLAN with an ID of <b>20</b> . |             |
| Select the <b>All Hosts</b> check box, and insert a VLAN with an ID of <b>40</b> . |             |
| Add a network site.  |             |

---

**Answer:****Answer Area**

- 1 Create a new logical network.
- 2 Create a new logical switch.
- 3 Add an uplink port profile.

---

**Question: 97**

You need to deploy the virtual network for the development servers.

Which two actions should you perform? Each correct answer presents part of the solution.

- A. Associate VLAN ID 40 with the new logical network.
- B. On HV-Cluster1, create a new logical network that uses a single connected network.
- C. Associate VLAN ID 20 with the new logical network.
- D. On HV-Cluster1, create a new logical network that uses private VLAN networks.
- E. On HV-Cluster2, create a new logical network that uses a single connected network.
- F. On HV-Cluster2, create a new logical network that uses private VLAN networks.

---

**Answer: A, B**

---

**Question: 98**

You need to configure migration for HV-CLUSTER1. What should you do?

- A. Use live migration between HV-Cluster1 and HV-Cluster3.

- B. Configure a Hyper-V replica between HV-Cluster1 and HV-Cluster3.
- C. Configure a Hyper-V replica between HV-Cluster1 and HV-Cluster4.
- D. Use live migration between HV-Cluster1 and HV-Cluster4.

---

**Answer: C**

---

**Question: 99**

---

DRAG DROP

You need to configure the environment to support App1.

Which four 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.

| <b>Actions</b>  | <b>Answer Area</b> |
|---|--------------------|
| Connect to APP1-SRV1.contoso.com and select <b>Interface1</b> .                                 |                    |
| Select a priority of 1 in host parameters, and then add the cluster IP address and subnet mask. |                    |
| Select multicast for cluster operation mode.  |                    |
| Connect to APP1-SRV1.contoso.com and select <b>Interface2</b> .                                 |                    |
| Add APP1-SRV2.contoso.com to the cluster.   |                    |
| Select unicast for cluster operation mode.  |                    |

---

**Answer:**

---

### Answer Area

- 1 Connect to APP1-SRV1.contoso.com and select **Interface1**.
- 2 Connect to APP1-SRV1.contoso.com and select **Interface2**.
- 3 Select unicast for cluster operation mode.
- 4 Add APP1-SRV2.contoso.com to the cluster.

### Question: 100

#### HOTSPOT

You need to create a script to deploy DFS replication.

Which Windows PowerShell commands should you add to the script? To answer, select the appropriate Windows PowerShell commands in each list in the answer area.

```
New-DfsReplicationGroup -GroupName "RG-HR" | New-DfsReplicatedFolder  
-FolderName "HR Data"
```

```
New-DfsReplicatedFolder -GroupName "RG-HR" -FolderName "HR Data" |  
New-DfsReplicationGroup -GroupName "RG-HR"
```

```
Add-DfsrMember -GroupName "RG-HR" -ComputerName "DAL-FS1","DAL-FS2"  
Add-DfsrMember -GroupName "RG-HR" -ComputerName "SERVER1","SERVER2"
```

```
Add-DfsrConnection -GroupName "RG-HR" -SourceComputerName "DAL-FS1"  
-DestinationComputerName "DAL-FS2"
```

```
Add-DfsrConnection -GroupName "RG-HR" -SourceComputerName "SERVER1"  
-DestinationComputerName "SERVER2"
```

```
Set-DfsrConnectionSchedule -GroupName "RG-HR" -SourceComputerName  
"DAL-FS1" -DestinationComputerName "DAL-FS2"
```

```
Set-DfsrConnectionSchedule -GroupName "RG-HR" -SourceComputerName  
"DAL-FS1" -DestinationComputerName "DAL-FS2"
```

```
Set-DfsrConnectionSchedule -GroupName "RG-HR" -SourceComputerName  
"SERVER1" -DestinationComputerName "SERVER2"
```

```
Set-DfsrConnectionSchedule -GroupName "RG-HR" -SourceComputerName  
"SERVER1" -DestinationComputerName "SERVER2"
```

---

**Answer:**

---

```
New-DfsReplicationGroup -GroupName "RG-HR" | New-DfsReplicatedFolder  
-FolderName "HR Data"  
  
New-DfsReplicatedFolder -GroupName "RG-HR" -FolderName "HR Data" |  
New-DfsReplicationGroup -GroupName "RG-HR"  
  
Add-DfsrMember -GroupName "RG-HR" -ComputerName "DAL-FS1","DAL-FS2"  
Add-DfsrMember -GroupName "RG-HR" -ComputerName "SERVER1","SERVER2"  
  
Add-DfsrConnection -GroupName "RG-HR" -SourceComputerName "DAL-FS1"  
-DestinationComputerName "DAL-FS2"  
  
Add-DfsrConnection -GroupName "RG-HR" -SourceComputerName "SERVER1"  
-DestinationComputerName "SERVER2"  
  
Set-DfsrConnectionSchedule -GroupName "RG-HR" -SourceComputerName  
"DAL-FS1" -DestinationComputerName "DAL-FS2"  
Set-DfsrConnectionSchedule -GroupName "RG-HR" -SourceComputerName  
"DAL-FS1" -DestinationComputerName "DAL-FS2" .  
Set-DfsrConnectionSchedule -GroupName "RG-HR" -SourceComputerName  
"SERVER1" -DestinationComputerName "SERVER2"  
Set-DfsrConnectionSchedule -GroupName "RG-HR" -SourceComputerName  
"SERVER1" -DestinationComputerName "SERVER2"
```

### Question: 101

You need to change the HR application server environment. What should you do?

- A. Use Microsoft Virtual Machine Converter 3.0 to convert DAL-APPERVER2.
- B. Use Virtual Machine Manager to convert DAL-APPERVER2.
- C. Use Microsoft Virtual Machine Converter 3.0 to convert DAL-APPERVER1.
- D. Use Virtual Machine Manager to convert DAL-APPERVER1.

**Answer: C**

### Question: 102

You need to ensure that the developers can manage their own virtual machines.

Solution: You perform the following actions:

In Virtual Machine Manager, you create a new user role named DevUsers that uses the Application Administrator profile.

You create and publish a request offering that allows the DevUsers role to create checkpoints.

You grant Checkpoint permissions to the DevUsers role.

You distribute the Self-Service Portal to the developers.  
Does this meet the goal?

- A. Yes
- B. No

---

**Answer: A**

---

**Explanation:**

**Virtual Machine Manager Self-Service Portal**

The VMM Self-Service Portal is an optional, Web-based component that a VMM administrator can install and configure to allow users to create and manage their own virtual machines within a controlled environment on a limited group of virtual machine hosts. The VMM administrator creates self-service user roles which determine the scope of the users' actions on their own virtual machines.

To create, operate, and manage virtual machines, self-service users use the Virtual Machine Manager Self-Service Portal. The administrator determines which host groups self-service users can create virtual machines on. When a self-service user creates a virtual machine, the virtual machine is automatically placed on the most suitable host in the host group based on host ratings.

Reference: Overview of Virtual Machine Manager

<https://technet.microsoft.com/en-us/library/cc764267.aspx>

---

**Question: 103**

---

Your network contains two clusters. The clusters are configured as shown in the following table.

| <b>Cluster name</b> | <b>Resource</b>               | <b>Node</b> |
|---------------------|-------------------------------|-------------|
| Cluster1            | Hyper-V                       | 3           |
| Cluster2            | Distributed File System (DFS) | 5           |

All of the servers in both of the clusters run Windows Server 2012. You need to plan the application of Windows updates to the nodes in the cluster.

What should you include in the plan? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Cluster-Aware Updating (CAU) self-updating and downloaded updates from Windows Server Update Services (WSUS)
- B. Microsoft System Center 2012 Service Manager integrated with Windows Server Update Service (WSUS)
- C. A manual application of Windows updates on all of the cluster node
- D. Microsoft System Center 2012 Configuration Manager integrated with Windows Server Update Service (WSUS)

---

**Answer: A**

---

---

**Question: 104**

---

Your network contains an Active Directory domain named contoso.com. The network contains a server named Server1 that has the Hyper-V server role installed. Server1 hosts a virtual machine named VM1.

You deploy a new standalone server named Server2. You install the Hyper-V server role on Server2. Another administrator named Admin1 plans to create a replica of VM1 on Server2. You need to ensure that Admin1 can configure Server2 to receive a replica of VM1.

To which group should you add Admin1?

- A. Server Operators
- B. Domain Admins
- C. Hyper-V Administrators
- D. Replicator

---

**Answer: C**

---

### **Question: 105**

---

Your network contains an Active Directory domain named contoso.com. The domain contains 20 servers that run Windows Server 2012. The domain contains a Microsoft System Center 2012 infrastructure. A web application named WebApp1 is installed on the 20 servers.

You plan to deploy a custom registry key for WebApp1 on the 20 servers. You need to deploy the registry key to the 20 servers. The solution must ensure that you can verify whether the registry key was applied successfully to the servers. What should you do? More than one answer choice may achieve the goal. Select the BEST answer.

- A. From Operations Manager, create a monitor.
- B. From the Group Policy Management console, create a Group Policy object (GPO).
- C. From Configuration Manager, create a Compliance Settings.
- D. From Orchestrator Runbook Designer, create a runbook.

---

**Answer: C**

---

Explanation:

#### **Introduction to Compliance Settings in Configuration Manager**

2 out of 3 rated this helpful - Rate this topic

Updated: August 1, 2012

Applies To: System Center 2012 Configuration Manager, System Center 2012 Configuration Manager SP1

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

Compliance settings in System Center 2012 Configuration Manager provides a unified interface and user experience that lets you manage the configuration and compliance of servers, laptops, desktop computers, and mobile devices in your organization. Compliance settings contains tools to help you to assess the compliance of users and client devices with regard to a number of configurations, such as whether the correct Windows operating system versions are installed and configured appropriately, whether all required applications are installed and configured correctly, whether optional applications are configured appropriately, and whether prohibited applications are installed. Additionally, you can check for compliance with software updates, security settings, and mobile devices. Configuration item settings of the type WMI, registry, script, and all mobile device settings in Configuration Manager let you automatically remediate noncompliant settings when they are found.

Compliance is evaluated by defining a configuration baseline that contains the configuration items that you want to evaluate and settings and rules that describe the level of compliance you require. You can import this configuration data from the web in Microsoft System Center Configuration Manager Configuration Packs as best practices that are defined by Microsoft and other vendors, defined in Configuration Manager, and defined externally, and that you then import into Configuration Manager. Or, an administrative user can create new configuration items and configuration baselines.

Reference: <http://technet.microsoft.com/en-us/library/gg682139.aspx>

---

### **Question: 106**

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Your network contains five servers that run Windows Server 2012. You install the Hyper-V server role on the servers. You create an external virtual network switch on each server.

You plan to deploy five virtual machines to each Hyper-V server. Each virtual machine will have a virtual network

adapter that is connected to the external virtual network switch and that has a VLAN identifier of 1. Each virtual machine will run Windows Server 2012. All of the virtual machines will run the identical web application. You plan to install the Network Load Balancing (NLB) feature on each virtual machine and join each virtual machine to an NLB cluster. The cluster will be configured to use unicast only. You need to ensure that the NLB feature can distribute connections across all of the virtual machines. What should you do?

- A. From the properties of each virtual machine, add a second virtual network adapter. Connect the new virtual network adapters to the external virtual network switch. Configure the new virtual network adapters to use a VLAN identifier of 2.
- B. On each Hyper-V server, create a new private virtual network switch. From the properties of each virtual machine, add a second virtual network adapter. Connect the new virtual network adapters to the new private virtual network switches.
- C. On each Hyper-V server, create a new external virtual network switch. From the properties of each virtual machine, add a second virtual network adapter. Connect the new virtual network adapters to the new external virtual network switches.
- D. From the properties of each virtual machine, enable MAC address spoofing for the existing virtual network adapter.

---

**Answer: D**

---

Explanation:

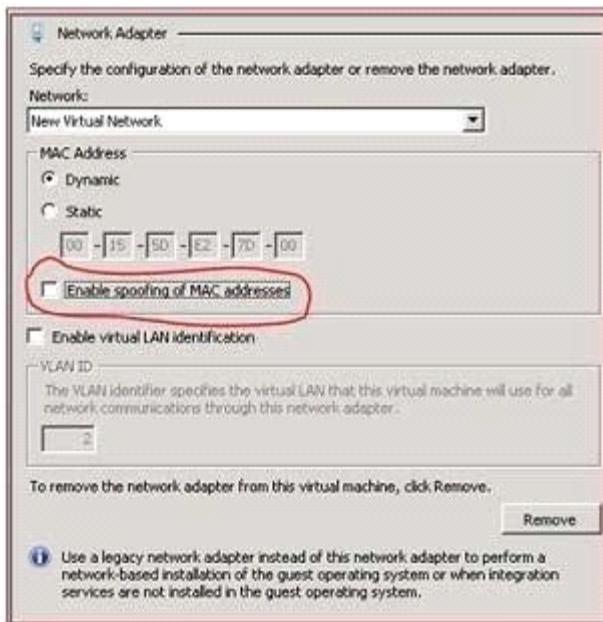
MAC spoofing

The changing of the assigned MAC address may allow the bypassing of access control lists on servers or routers, either hiding a computer on a network or allowing it to impersonate another network device.

A user may wish to legitimately spoof the MAC address of a previous hardware device in order to reacquire connectivity after hardware failure.

addresses. Therefore, if a malicious VM starts sending out packets with a MAC address owned by another machine, it causes the switch to re-learn. This in turn can cause DoS (Denial of Service) attacks, and the potential for the malicious virtual machine to see packets which weren't destined for it. Hence, in our security recommendations, we state that as a security best practice, you should consider (in Hyper-V v1 at least) placing virtual machines of a similar security integrity level on the same virtual switch and not share the switch with virtual machines of a different security integrity level.

In Windows Server 2008 R2, we introduced several changes in the switch to make it smarter. Each virtual switch port has a new property (exposed in our WMI model as AllowMacSpoofing) which is off by default. We also expose this property in the settings page for a virtual machine. Note that to see this setting, you must be using the UI from Windows Server 2008 R2 or RSAT in Windows 7 Client.



When the checkbox is not checked (i.e. the port is in "secure" mode):

1. The MAC address set in the Virtual NIC settings page (either static or the dynamically assigned one) is Reference: <http://blogs.technet.com/b/jhoward/archive/2009/05/21/new-in-hyper-v-windows-server-2008-r2-part-2-macspoofing.aspx>

## Question: 107

Your network contains a server named Server1 that runs Windows Server 2012. Server1 is configured as a Hyper-V host. Server1 hosts a virtual machine named VM1. VM1 is configured as a file server that runs Windows Server 2012. VM1 connects to a shared storage device by using the iSCSI Initiator.

You need to back up the files and the folders in the shared storage used by VM1. The solution must ensure that open files are included in the backup.

What should you do?

- A. From Hyper-V Manager, create a snapshot of VM1.
- B. From Server1, perform a backup by using Windows Server Backup.
- C. From VM1, perform a backup by using Windows Server Backup.
- D. From Microsoft System Center 2012 Virtual Machine Manager (VMM), create a copy of VM1.

---

## Answer: C

---

Explanation:

Backing Up Hyper-V Virtual Machines Using Windows Server Backup

*Caption: After doing a backup using Windows Server Backup – I can now restore a specific virtual machine... I am showing the backup contains the ID's of all the VM's for the Hyper-V "application"... (see the post by Rob Hefner linked to below to enabled Hyper-V in WSB)*

Reference: <http://blogs.msdn.com/b/taylorb/archive/2008/08/20/backing-up-hyper-v-virtual-machines-usingwindowsserver-backup.aspx>

### **Question: 108**

Your network contains three networks named LAN1, LAN2, and LAN3. You have a Hyper-V host named Hyper1 that has Windows Server 2012 installed. Hyper1 has three network adapters.

The network adapters are configured as shown in the following table. Hyper1 hosts 10 virtual machines. A virtual machine named VM1 runs a line-of-business application that is used by all of the users of LAN1. All of the other virtual machines are connected to LAN2.

You need to implement a solution to ensure that users can access VM1 if either NIC1 or NIC2 fails.

What should you do?

| <b>Network adapter name</b> | <b>Network</b> |
|-----------------------------|----------------|
| NIC1                        | LAN1           |
| NIC2                        | LAN1           |
| NIC3                        | LAN2           |

- A. From the properties of each virtual network adapter, enable network adapter teaming, and then modify the bandwidth management settings.
- B. From the properties of each virtual network adapter, enable network adapter teaming, and then enable virtual LAN identification.
- C. From the properties of each physical network adapter, enable network adapter teaming, and then add a second legacy network adapter to VM1.
- D. From the properties of each physical network adapter, enable network adapter teaming, and then create a virtual switch.

---

**Answer: D**

### **Question: 109**

Your network contains an Active Directory domain named contoso.com. You deploy Microsoft System Center 2012 Virtual Machine Manager (VMM). The network contains five physical servers. The servers are configured as shown in the following table.

You plan to use VMM to convert the existing physical servers to virtual machines. You need to identify which physical servers can be converted to virtual machines.

Which servers should you identify? (Each correct answer presents part of the solution. Choose all that apply.)

| Server name | Operating system                            | Disk                            | Memory | CPU |
|-------------|---|---------------------------------|--------|-----|
| Server1     | Windows Server 2008                         | C: 100 GB<br>D: 2 TB            | 4 GB   | X86 |
| Server2     | Windows Server 2003 R2 Service Pack 2 (SP2) | C: 40 GB<br>D: 4 TB             | 2 GB   | X86 |
| Server3     | Windows Server 2008 R2 Service Pack 1 (SP1) | C: 100 GB<br>D: 2.5 TB          | 8 GB   | X64 |
| Server4     | Windows Server 2008 R2                      | C: 100 GB<br>D: 1 TB            | 16 GB  | X64 |
| Server5     | Windows Server 2003 R2 Service Pack 2 (SP2) | C: 100 GB<br>D: 2 TB<br>E: 2 TB | 4 GB   | X86 |

- A. Server1
- B. Server2
- C. Server3
- D. Server4
- E. Server5

**Answer: A, D, E**

Reference:

<http://technet.microsoft.com/en-us/systemcenter/hh278293.aspx>

### Question: 110

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure. The domain contains the computers configured as shown in the following table.

| Computer                | Operating system       |
|-------------------------|------------------------|
| 1,200 desktop computers | Windows 7              |
| 500 desktop computers   | Windows 8              |
| 30 servers              | Windows Server 2012    |
| 20 servers              | Windows Server 2008 R2 |

You need to implement a monitoring solution that gathers the security logs from all of the computers in the domain. Which monitoring solution should you implement? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Data Collector Sets (DCSs)
- B. Event subscriptions
- C. Desired Configuration Management in Configuration Manager
- D. Audit Collection Services (ACS) in Operations Manager

---

**Answer: D**

---

**Explanation:**

**ACS Collector**

The ACS collector receives and processes events from ACS forwarders and then sends this data to the ACS database. This processing includes disassembling the data so that it can be spread across several tables within the ACS database, minimizing data redundancy, and applying filters so that unnecessary events are not added to the ACS database.

The number of ACS forwarders that can be supported by a single ACS collector and ACS database can vary, depending on the number of events that your audit policy generates, the role of the computers that the ACS forwarders monitor (such as domain controller versus member server), the level of activities on the computer, and the hardware on which the ACS collector and ACS database run. If your environment contains too many ACS forwarders for a single ACS collector, you can install more than one ACS collector. Each ACS collector must have its own ACS database.

An ACS Collector must be installed on computers running Windows Server 2003 and later, and must have a minimum of 1 gigabyte (GB) of RAM, with 2 GB recommended. Also, it must have at least a 1.8 gigahertz (GHz) processor, with a 2.8 GHz processor recommended and 10 GB of hard disk space available, at a minimum, with 50 GB recommended. The computer you select as an ACS collector must be an Operations Manager 2007 management server and for security reasons, it must also be a member of an Active Directory domain.

On each computer on which you plan to install the ACS collector, you must download and install the latest version of the Microsoft Data Access Components (MDAC) from the Microsoft Web site. To learn more about MDAC, see "Learning Microsoft Data Access Components (MDAC)" at <http://go.microsoft.com/fwlink/?LinkId=74155>.

Reference: <http://technet.microsoft.com/en-us/library/bb381373.aspx>

---

**Question: 111**

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Your network contains 10 servers that run Windows Server 2012. The servers have the Hyper-V server role installed. The servers host a Virtual Desktop Infrastructure (VDI) that contains persistent virtual machines. Each virtual machine is assigned to a specific user. Users can install software on their specific virtual machine.

You need to implement a solution to generate monthly reports that contain a list of all the installed software on the virtual machines. The solution must NOT require the installation of additional software on the virtual machines.

Which solution should you implement?

- A. A Microsoft System Center 2012 Configuration Manager software inventory
- B. A Microsoft System Center 2012 Configuration Manager hardware inventory
- C. Microsoft Assessment and Planning (MAP) Toolkit scans
- D. Microsoft Audit Collection Services (ACS) audit logs

---

**Answer: C**

---

**Explanation:**

To assist in the planning for a migration of existing Windows-based computers to Windows 7, MAP provides a readiness scenario to help assess which computers are capable of running Windows 7. After the environment **scan** has been completed, MAP looks at computers running earlier versions of Windows, such as Windows XP and Windows Vista, and compares CPU speed, memory and free disk attributes to the minimum and recommended system requirements. When a computer doesn't meet a specific requirement, such as that for installed memory, MAP provides a specific recommendation that indicates what action is required to bring the machine to the recommended level.

When the assessment is complete, the results are displayed in the MAP console, which is shown in **Figure 1**. For Windows 7, MAP displays the following four types of results in separate sections:

- Inventory Summary
- Before Hardware Upgrades
- After Hardware Upgrades
- Device Compatibility Summary

## Question: 112

Your network contains an Active Directory domain named contoso.com. The domain contains a Hyper-V host named Server1. Server1 has an offline virtual machine named VM1 that is stored on a virtual hard disk named VM1.vhd.

You plan to implement multiple virtual machines that have the same configurations as VM1. You need to recommend a virtual hard disk solution for the planned implementation.

The solution must meet the following requirements:

Minimize the amount of time required to create the new virtual machines.

Minimize the amount of storage space required on Server1.

What should you include in the recommendation?

- A. Differencing VHD disks
- B. Dynamically expanding VHD disks
- C. Dynamically expanding VHDX disks
- D. Differencing VHDX disks

**Answer: A**

Explanation:

## Creating Hyper-V 3 Differencing Disks in Server 2012 with GUI and PowerShell

159 days ago by Tom Arbuthnot 4

I'm not sure how this feature passed me by up until now. Differencing Disks are like VMware Linked Clones, you have Parent VHD and a number of linked VHD/VHDX for VMs that only record the changes from the Parent. A full Server 2008 R2 VHDX is around 11GB, a sysprep'd Differencing disk is around 1GB, meaning more machines in less space, ideal for Test and Dev. I've now got a SSD in my lab Server (which makes a huge difference in performance when running multiple VMs). I was looking into Server 2010 dedupe, but found that is only for VHDs at rest, i.e. libraries of VHD images, not live in use disks. With differencing disks I can make much better use of my SSD.

So how do you create a VM with differencing disks? First you start with a Master or Parent disk. I have a sysprep'd Server 2008 R2 VHDX. Mark it as read only so you don't inadvertently change it. If you do all the child disk will be unusable.

Reference:

<http://lyncdup.com/2012/06/creating-hyper-v-3-differencing-disks-in-server-2012-with-gui-and-powershell/>

## Question: 113

Your network contains an Active Directory domain named contoso.com. The domain contains a Microsoft System Center 2012 infrastructure. You deploy a service named Service1 by using a service template. Service1 contains two virtual machines. The virtual machines are configured as shown in the following table.

| Virtual machine name | Roles and software   |
|----------------------|--|
| VM1                  | Web server<br>Windows Server 2012 R2<br>Operations Manager agent<br>Configuration Manager agent                |
| VM2                  | Windows Server 2012 R2<br>Operations Manager agent<br>Microsoft SQL Server 2012<br>Configuration Manager agent |

You need to recommend a monitoring solution to ensure that an administrator can review the availability information of Service1.

What should you do?

- A. From Configuration Manager, create a Collection and a Desired Configuration Management baseline.
- B. From Virtual Machine Manager (VMM), modify the properties of the service template.
- C. From Operations Manager, create a Distributed Application and a Monitor Override.
- D. From Operations Manager, create a Distributed Application and a Service Level Tracking object.

---

**Answer: D**

---

Explanation:

- Display data through addition of widgets
- New web console
- Dashboards can be easily updated

Microsoft System Center Operations Manager 2012 offers significant new functionality, including enhanced network monitoring and application performance monitoring, as well as architectural changes to remove the root management server and to add management server pools. These capabilities are all important, but one of the most interesting investments is Operations Manager 2012's integrated dashboard functionality.

Reference: <http://www.windowsitpro.com/article/system-center/dashboards-operations-manager-2012-141491>

## Defining a Service Level Objective Against an Application

This topic has not yet been rated - Rate this topic

Updated: September 10, 2012

Applies To: System Center 2012 - Operations Manager, System Center 2012 SP1 - Operations Manager

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

You can define a service level objective (SLO) to establish the availability and performance goals for an application. In the following procedure, you create a service level objective against a distributed application, define a monitor SLO that is based on availability (99.9% up-time), and define a collection rule SLO that is based on a performance rule (80% average processor time).

Reference: <http://technet.microsoft.com/en-us/library/hh230719.aspx>

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### Question: 114

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Your network contains an Active Directory domain named contoso.com. The network contains 15,000 client computers. You plan to deploy an Active Directory Certificate Services (AD CS) infrastructure and issue certificates to all of the network devices.

You need to recommend a solution to minimize the amount of network utilization caused by certificate revocation list (CRL) checking.

What should you include in the recommendation? More than one answer choice may achieve the goal. Select the BEST answer.

- A. The Network Device Enrollment Service role service
- B. An increase of the CRL validity period
- C. A reduction of the CRL validity period
- D. The Online Responder role service

---

**Answer: D**

---

Explanation:

### Setting Up Online Responder Services in a Network

11 out of 12 rated this helpful - Rate this topic

Applies To: Windows Server 2008 R2

Setting up Online Responder services involves several interrelated steps. Several of these steps must be performed on the certification authority (CA) that will be used to issue the Online Certificate Status Protocol (OCSP) signing certificates necessary for an Online Responder to function. These steps include configuring the appropriate certificate template, enabling the certificate template, and configuring and completing certificate autoenrollment so that the computer hosting the Online Responder has the certificates needed for the Online Responder to function.

Installation and configuration of an Online Responder involves using Server Manager to install the Online Responder service, the Certificate Templates snap-in to configure and publish OCSP Response Signing certificate templates, the Certification Authority snap-in to include OCSP extensions in the certificates that it will issue and to issue OCSP Response Signing certificates, and the Online Responder snap-in to create a revocation configuration.

The following topics describe the steps needed to complete these installation and configuration steps and how to verify that the installation was successful.

Reference: <http://technet.microsoft.com/en-us/library/cc753468.aspx>

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### Question: 115

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Your network contains an Active Directory domain named contoso.com. You deploy Active Directory Certificate Services (AD CS). You plan to deploy 100 external Web servers that will be publicly accessible and will require Secure Sockets Layer (SSL) certificates.

You also plan to deploy 50,000 certificates for secure email exchanges with Internet-based recipients.

You need to recommend a certificate services solution for the planned deployment.

What should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Deploy a certification authority (CA) that is subordinate to an external root CA.
- B. Purchase 50,100 certificates from a trusted third-party root certification authority (CA).
- C. Distribute a copy of the root certification authority (CA) certificate to external relying parties.
- D. Instruct each user to request a Secure Email certificate from a trusted third-party root CA, and then purchase 100 Web server certificates.

---

**Answer: A**

---

Explanation:

### Install a Subordinate Certification Authority

0 out of 2 rated this helpful - Rate this topic

Applies To: Windows Server 2008

After a root certification authority (CA) has been installed, many organizations will install one or more subordinate CAs to implement policy restrictions on the public key infrastructure (PKI) and to issue certificates to end clients. Using at least one subordinate CA can help protect the root CA from unnecessary exposure.

If a subordinate CA will be used to issue certificates to users or computers with accounts in an Active Directory domain, installing the subordinate CA as an enterprise CA allows you to use the client's existing account data in Active Directory Domain Services (AD DS) to issue and manage certificates and to publish certificates to AD DS.

Membership in local **Administrators**, or equivalent, is the minimum required to complete this procedure. If this will be an enterprise CA, membership in **Domain Admins**, or equivalent, is the minimum required to complete this procedure. For more information, see [Implement Role-Based Administration](#).

Reference: [http://technet.microsoft.com/en-us/library/cc772192\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc772192(v=ws.10).aspx)

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### Question: 116

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Your network contains an Active Directory domain named contoso.com. The network has an Active Directory Certificate Services (AD CS) infrastructure.

You need to issue a certificate to users to meet the following requirements:

Ensure that the users can encrypt files by using Encrypting File System (EFS).

Ensure that all of the users reenroll for their certificate every six months.

What should you do first?

- A. From the properties of the User certificate template, assign the Allow -Enroll permission to the Authenticated Users group.
- B. From the properties of the Basic EFS template, assign the Allow -Enroll permission to the Authenticated Users group.
- C. Create a copy of the User certificate template, and then modify the extensions of the copy.
- D. Create a copy of the Basic EFS certificate template, and then modify the validity period of the copy.

---

**Answer: D**

---

Explanation:

## Selecting Certificate Templates

1 out of 1 rated this helpful - Rate this topic

Updated: March 28, 2003

Applies To: Windows Server 2003, Windows Server 2003 R2, Windows Server 2003 with SP1, Windows Server 2003 with SP2

The certificate services that you deploy and the security requirements that are specific to your organization impact the types of certificates that you issue. You can issue multiple types of certificates to meet a variety of security requirements.

The certificate templates available with an enterprise CA in Windows Server 2000 and Windows Server 2003 provide the default contents of all certificates that can be requested from a Windows enterprise CA. These certificate templates are stored in Active Directory and cannot be used with stand-alone CAs.

Certificate templates can serve a single purpose or multiple purposes. Single-purpose templates generate certificates that can be used for a single application. For example, the Smart Card Logon certificate template is designed for smart card logon only. Multipurpose templates generate certificates that can be used for a number of applications, such as Secure Sockets Layer (SSL), S/MIME, and EFS. For example, a user certificate can be used for both user authentication and EFS encryption.

Both Windows 2000 and Windows Server 2003 support single-purpose and multipurpose templates. However, Windows 2000 and Windows Server 2003 Standard Edition only support version 1 templates, which have read-only attributes that cannot be customized or extended. Windows Server 2003, Enterprise Edition supports version 2 templates, which allow you to create new certificate templates, clone an existing template, and replace templates that are already in use.

Reference: [http://technet.microsoft.com/en-us/library/cc786499\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc786499(v=ws.10).aspx)

## Question: 117

Your network contains an Active Directory domain named contoso.com. The network has an Active Directory Certificate Services (AD CS) infrastructure.

You deploy Active Directory Rights Management Services (AD RMS) on the network. You provide several users on the network with the ability to protect content by using AD RMS.

You need to recommend a solution to provide the members of a group named Audit with the ability to read and modify all of the AD RMS-protected content.

What should you recommend?

- A. Issue a CEP Encryption certificate to the members of the Audit group.
- B. Issue a key recovery agent certificate to the members of the Audit group.
- C. Add the Audit group as a member of the super users group.
- D. Add the Audit group as a member of the Domain Admins group.

---

**Answer: C**

---

Explanation:

## Add the Federation Mailbox to the AD RMS Super Users Group

Exchange 2013 | Other Versions | This topic has not yet been rated - Rate this topic

**Applies to:** Exchange Server 2013

**Topic Last Modified:** 2012-10-12

For the following Microsoft Exchange Server 2013 Information Rights Management (IRM) features to be enabled, you must add the Federation mailbox (a system mailbox created by Exchange 2013 Setup) to the **super users** group on your organization's Active Directory Rights Management Services (AD RMS) cluster:

- IRM in Microsoft Office Outlook Web App
- IRM in Exchange ActiveSync
- Journal report decryption
- Transport decryption

You can configure a mail-enabled distribution group as a **super users** group in AD RMS. Members of the distribution group are granted an owner use license when they request a license from the AD RMS cluster. This allows them to decrypt all RMS-protected content published by that cluster. Whether you use an existing distribution group or create a distribution group and configure it as the **super users** group in AD RMS, we recommend that you dedicate the distribution group for this purpose and configure the appropriate settings to approve, audit, and monitor membership changes.

 **Caution:**

Configuring a **super users** group in AD RMS allows group members to decrypt IRM-protected content. We recommend that you take adequate measures to control and monitor group membership and enable auditing to track membership changes. You can also limit unwanted changes to group membership by configuring the group as a restricted group using Group Policy. For details, see [Restricted Groups Policy Settings](#).

Reference: <http://technet.microsoft.com/en-us/library/ee424431.aspx>

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### Question: 118

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Your company, which is named Contoso, Ltd., has offices only in North America.

a. The company has 2,000 users. The network contains an Active Directory domain named contoso.com.

You plan to deploy an Active Directory Certificate Services (AD CS) infrastructure and assign certificates to all client computers.

You need to recommend a PKI solution to protect the private key of the root certification authority (CA) from being accessed by external users.

What should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

- A. An offline standalone root CA and an online enterprise issuing CA
- B. An online enterprise root CA and an online enterprise issuing CA
- C. An offline standalone root CA and an offline enterprise issuing CA
- D. An online enterprise root CA, an online enterprise policy CA, and an online enterprise issuing CA

---

**Answer: A**

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Reference: [http://technet.microsoft.com/en-us/library/cc737481\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc737481(v=ws.10).aspx)

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### Question: 119

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Your network contains an Active Directory domain. The domain contains a site named Site1.

All of the client computers in Site1 use static IPv4 addresses on a single subnet. Site1 contains a Storage Area Network (SAN) device and two servers named Server1 and Server2 that run Windows Server 2012.

You plan to implement a DHCP infrastructure that will contain Server1 and Server2. The infrastructure will contain several IP address reservations. You need to recommend a solution for the DHCP infrastructure to ensure that clients

can receive IP addresses from a DHCP server if either Server1 or Server2 fails.

What should you recommend? (Each correct answer is a complete solution. Choose all that apply.)

- A. Configure all of the client computers to use IPv6 addresses, and then configure Server1 and Server2 to run DHCP in stateless mode.
- B. Configure Server1 and Server2 as members of a failover cluster, and then configure DHCP as a clustered resource.
- C. Configure a DHCP failover relationship that contains Server1 and Server2.
- D. Create a scope for each server, and then configure each scope to contain half of the IP addresses.

---

**Answer: B, C, D**

**Explanation:**

Windows Server 2012 DHCP provides a new high availability mechanism addressing these critical aspects. Two DHCP servers can be set up to provide a highly available DHCP service by entering into a failover relationship. A failover relationship has a couple of parameters which govern the behavior of the DHCP servers as they orchestrate the failover. One of them is the *mode* of the failover operation – I will describe this shortly. The other is the set of scopes that are part of the failover relation. These scopes are set up identically between the two servers when failover is configured. Once set up in this fashion, the DHCP servers replicate the IP address leases and associated client information between them and thereby have up-to-date information of all the clients on the network. So even when one of the servers goes down – either in a planned or in an unplanned manner – the other DHCP server has the required IP address lease data to continue serving the clients.

## Modes of Failover Operation

There are two modes of configuring **DHCP failover** to cater to the various deployment topologies: *Load Balance* and *Hot Standby*. The Load Balance mode is essentially an Active-Active configuration wherein both DHCP servers serve client requests with a configured load distribution percentage. We will look at how the DHCP servers distribute client load in a later post.

Reference: <http://blogs.technet.com/b/teamdhcp/archive/2012/06/28/ensuring-high-availability-of-dhcp-usingwindowsserver-2012-dhcp-failover.aspx>

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## Question: 120

Your network contains two servers named Server1 and Server2 that run Windows Server 2012. Server1 and Server2 are connected to a Fibre Channel Storage Area Network (SAN). Server1 and Server2 are members of a failover cluster named Cluster1.

You plan to host the clustered File Server role on the nodes in Cluster1. Cluster1 will store application databases in shared folders. You need to implement a storage solution for Cluster1. The solution must minimize the amount of time the shared folders are unavailable during a failover.

What should you implement? More than one answer choice may achieve the goal. Select the BEST answer.

- A. An iSCSI Target Server cluster role in Cluster1
- B. The Multi Path I/O (MPIO) feature on Server1 and Server2
- C. A Virtual Fibre Channel SAN on Server1 and Server2
- D. A Cluster Shared Volume (CSV) in Cluster1

---

**Answer: D**

**Explanation:**

## Use Cluster Shared Volumes in a Windows Server 2012 Failover Cluster

1 out of 1 rated this helpful - Rate this topic

Published: August 29, 2012

Updated: August 29, 2012

Applies To: Windows Server 2012

Cluster Shared Volumes (CSVs) in a Windows Server 2012 failover cluster allow multiple nodes in the cluster to simultaneously have read-write access to the same LUN (disk) that is provisioned as an NTFS volume. With CSVs, clustered roles can fail over quickly from one node to another node without requiring a change in drive ownership, or dismounting and remounting a volume. CSVs also help simplify managing a potentially large number of LUNs in a failover cluster.

CSVs provide a general-purpose, clustered file system in Windows Server 2012, which is layered above NTFS. They are not restricted to specific clustered workloads. (In Windows Server 2008 R2, CSVs only supported the Hyper-V workload.) CSV applications include:

- Clustered virtual hard disk (VHD) files for clustered Hyper-V virtual machines
- Scale-out file shares to store application data for the Scale-Out File Server role. Examples of the application data for this role include Hyper-V virtual machine files and Microsoft SQL Server data. For more information about Scale-Out File Server, see [Scale-Out File Server for Application Data Overview](#).

Reference: <http://technet.microsoft.com/en-us/library/jj612868.aspx>\

### Question: 121

Your network contains a Microsoft System Center 2012 Virtual Machine Manager (VMM) infrastructure. You plan to provide self-service users with the ability to create virtual machines that run Windows Server 2012 and have the following configurations:

8 GB of memory

The File Server server role

Windows Internal Database

A local Administrator password set to 'P@\$\$w0rd"

You have a VHD that contains a generalized version of Windows Server 2012. You need to ensure that the self-service users can provision virtual machines that are based on the VHD.

What should you create? (Each correct answer presents part of the solution. Choose all that apply.)

- A. A Hardware Profile
- B. An Application Profile
- C. An Application Host Profile
- D. A VM Template
- E. A Guest OS Profile

**Answer: A, D, E**

Explanation:

<http://technet.microsoft.com/en-us/library/hh368987.aspx>

## Creating Profiles in VMM

0 out of 1 rated this helpful - Rate this topic

Updated: September 10, 2012

Applies To: System Center 2012 - Virtual Machine Manager, System Center 2012 SP1 - Virtual Machine Manager

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

A profile contains configuration settings that you can apply to a new virtual machine template or virtual machine. The following table lists the types of **profiles** that you can create in System Center 2012 – Virtual Machine Manager (VMM).

<http://technet.microsoft.com/en-us/library/bb740838.aspx>

## About Virtual Machine Templates

2 out of 3 rated this helpful - Rate this topic

A Virtual Machine Manager **template** provides a standardized group of hardware and software settings that can be used repeatedly to create new virtual machines configured with those settings. In Library view in the Administrator Console, you can use the **New template** action to open the **New Template Wizard** used to create a virtual machine **template**.

Although you can use a number of methods to create a template, you cannot create a template that does not include an operating system. Virtual Machine Manager supports the use of either Windows Server 2003 or Windows 2000 Server. If you want to create a virtual machine with a blank virtual hard disk on which you install an operating system later, you must use the New Virtual Machine Wizard rather than the **New Template Wizard** that is described in this topic. For more information about using the New Virtual Machine Wizard, see Creating Virtual Machines.

## Question: 122

Your network contains four servers. The servers are configured as shown in the following table.

| Server name | Nodes       | Platform         |
|-------------|-------------|------------------|
| Cluster1    | Five nodes  | VMware ESX 4.0   |
| Cluster2    | Ten nodes   | Citrix XenServer |
| Cluster3    | Six nodes   | Hyper-V          |
| Cluster4    | Three nodes | Hyper-V          |

You manage all of the servers and all of the clusters by using Microsoft System Center 2012 Virtual Machine Manager (VMM).

You plan to implement Dynamic Optimization for the virtual machines. You need to recommend a configuration for the planned implementation.

What should you recommend?

- A. Dynamic Optimization on Cluster3 and Cluster4 only  
Virtual machines that are balanced across the clusters
- B. Dynamic Optimization on all of the clusters  
Virtual machines that are balanced across the nodes in the clusters
- C. Dynamic Optimization on all of the clusters  
Virtual machines that are balanced across the clusters
- D. Dynamic Optimization on Cluster1 and Cluster2 only  
Virtual machines that are balanced across the nodes in the clusters

---

**Answer: B**

---

Explanation:

<http://technet.microsoft.com/en-us/library/gg675109.aspx>

## Configuring Dynamic Optimization and Power Optimization in VMM

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Updated: September 10, 2012

Applies To: System Center 2012 - Virtual Machine Manager, System Center 2012 SP1 - Virtual Machine Manager

[This topic is pre-release documentation and is subject to change in future releases. Blank topics are included as placeholders.]

The procedures in this section explain how to configure Dynamic Optimization and Power Optimization in System Center 2012 – Virtual Machine Manager (VMM), and how to run Dynamic Optimization on demand for a host cluster.

VMM can perform load balancing within host clusters that support live migration. Dynamic Optimization migrates virtual machines within a cluster according to settings you enter.

### Note

In System Center 2012 – Virtual Machine Manager, Dynamic Optimization replaces the host load balancing that is performed for Performance and Resource Optimization (PRO) by the PRO CPU Utilization and PRO Memory Utilization monitors in System Center Virtual Machine Manager (VMM) 2008 R2.

VMM can help to save power in a virtualized environment by turning off hosts when they are not needed and turning the hosts back on when they are needed.

Reference:

<http://searchsystemschannel.techtarget.com/feature/Using-Microsoft-Cluster-Services-for-virtualmachineclustering>

Unlike NLB clusters, server clusters are used solely for the sake of availability. Server clusters do not provide performance enhancements outside of high availability. In a typical server cluster, multiple nodes are configured to be able to own a service or application resource, but only one node owns the resource at a given time. Server clusters are most often used for applications like Microsoft Exchange, Microsoft SQL Server, and DHCP services, which each share a need for a common datastore. The common datastore houses the information accessible by the node that is online and currently owns the resource, as well as the other possible owners that could assume ownership in the event of failure. Each node requires at least two network connections: one for the production network and one for the cluster service heartbeat between nodes. Figure 11.2 details the structure of a server cluster.

### Question: 123

Your network contains two servers that run Windows Server 2012. The servers are members of a failover cluster. Each server has 32 GB of RAM and has the Hyper-V server role installed. Each server hosts three highly available virtual machines. All of the virtual machines have an application named App1 installed. Each of the virtual machines is configured to have 4 GB of memory. During regular business hours, the virtual machines use less than 2 GB of memory. Each night, App1 truncates its logs and uses almost 4 GB of memory.

You plan to add another three virtual machines to each host. The new virtual machines will run the same load as the existing virtual machines.

You need to ensure that all of the virtual machines can run on one of the Hyper-V hosts if a single host fails.

What should you do?

- A. From the properties of each Hyper-V host, modify the Allow virtual machines to span NUMA nodes.
- B. From the properties of each virtual machine, modify the NUMA Configuration -Maximum amount of memory setting.
- C. From the properties of each virtual machine, modify the Smart Paging File Location.
- D. From the properties of each virtual machine, modify the Dynamic Memory settings.

Answer: D

**Explanation:**

With the **Dynamic Memory** improvements for Hyper-V in Windows Server 2012, you can attain higher consolidation numbers with improved reliability for restart operations. This can lead to lower costs, especially in environments that have many idle or low-load virtual machines, such as pooled VDI environments. **Dynamic Memory** run-time configuration changes can reduce downtime and provide increased agility to respond to requirement changes.

**Technical overview**

Dynamic Memory, introduced in Windows Server 2008 R2 Service Pack 1 (SP1), defined startup memory as the minimum amount of memory that a virtual machine can have. However, Windows requires more memory during startup than the steady state. As a result, administrators sometimes assign extra memory to a virtual machine because Hyper-V cannot reclaim memory from these virtual machines after startup. In Windows Server 2012, **Dynamic Memory** introduces a minimum memory setting, which allows Hyper-V to reclaim the unused memory from the virtual machines. This is reflected as increased virtual machine consolidation numbers, especially in Virtual Desktop Infrastructure (VDI) environments.

Windows Server 2012 also introduces Smart Paging for reliable virtual machine restart operations. Although minimum memory increases virtual machine consolidation numbers, it also brings a challenge. If a virtual machine has a smaller amount of memory than its startup memory and if it is restarted, Hyper-V needs additional memory to restart the virtual machine. Due to host memory pressure or virtual machine states, Hyper-V may not always have additional memory available. This can cause sporadic virtual machine restart failures. Smart Paging is used to bridge the memory gap between minimum memory and startup memory, and allow virtual machines to restart reliably.

**Reference:**

<http://technet.microsoft.com/en-us/library/hh831766.aspx>

**Question: 124**

Your network contains two servers named Server1 and Server2 that run Windows Server 2012.

Server1 and Server2 are members of a failover cluster named Cluster1 and are connected to an iSCSI Storage Area Network (SAN).

You need to ensure that you can implement the clustered File Server role of the File Server for scale-out application data type for Cluster1.

What should you install?

- A. The iSCSI Target Server cluster role
- B. The Distributed Transaction Coordinator (DTC) cluster role
- C. The DFS Namespace Server cluster role
- D. A Cluster Shared Volume (CSV)

**Answer: D****Explanation:**

Applies To: Windows Server 2012

**Cluster Shared Volumes** (CSVs) in a Windows Server 2012 failover cluster allow multiple nodes in the cluster to simultaneously have read-write access to the same LUN (disk) that is provisioned as an NTFS volume. With CSVs, clustered roles can fail over quickly from one node to another node without requiring a change in drive ownership, or dismounting and remounting a volume. CSVs also help simplify managing a potentially large number of LUNs in a failover cluster.

CSVs provide a general-purpose, clustered file system in Windows Server 2012, which is layered above NTFS. They are not restricted to specific clustered workloads. (In Windows Server 2008 R2, CSVs only supported the Hyper-V workload.) CSV applications include:

- Clustered virtual hard disk (VHD) files for clustered Hyper-V virtual machines
- Scale-out file shares to store application data for the **Scale-Out File Server** role. Examples of the application data for this role include Hyper-V virtual machine files and Microsoft SQL Server data. For more information about Scale-Out File Server, see [Scale-Out File Server for Application Data Overview](#).

Reference: <http://technet.microsoft.com/en-us/library/jj612868.aspx>

### Question: 125

Your network contains a main data center and a disaster recovery data center. Each data center contains a Storage Area Network (SAN). The main data center contains a two-node failover cluster named Cluster1 that hosts a Microsoft SQL Server 2012 database named DB1.

The database files in DB1 are stored on the SAN in the main office. The disaster recovery data center contains a server that runs SQL Server 2012.

You need to recommend a disaster recovery solution for the SQL Server database. The solution must ensure that the database remains available if the main data center fails.

What should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

- A. Deploy Distributed File System (DFS) Replication.
- B. Extend the failover cluster to the disaster recovery data center.
- C. Implement a Cluster Shared Volume (CSV) and move the database files to the CSV.
- D. Implement SQL Server database replication between the two data centers.

---

**Answer: D**

---

Explanation:

#### SQL Server Replication

| SQL Server 2012 | Other Versions | 25 out of 37 rated this helpful - Rate this topic

Replication is a set of technologies for copying and distributing data and database objects from one database to another and then synchronizing between databases to maintain consistency. Using replication, you can distribute data to different locations and to remote or mobile users over local and wide area networks, dial-up connections, wireless connections, and the Internet.

Transactional replication is typically used in server-to-server scenarios that require high throughput, including: improving scalability and availability; data warehousing and reporting; integrating data from multiple sites; integrating heterogeneous data; and offloading batch processing. Merge replication is primarily designed for mobile applications or distributed server applications that have possible data conflicts. Common scenarios include: exchanging data with mobile users; consumer point of sale (POS) applications; and integration of data from multiple sites. Snapshot replication is used to provide the initial data set for transactional and merge replication; it can also be used when complete refreshes of data are appropriate. With these three types of replication, SQL Server provides a powerful and flexible system for synchronizing data across your enterprise.

Reference: <http://technet.microsoft.com/en-us/library/ms151198.aspx>

### Question: 126

What is the minimum number of certificate servers you need to deploy?

- A. 2
- B. 3
- C. 4
- D. 5

---

**Answer: C**

---

Explanation:

|                 |                           |                        |                       |     |
|-----------------|---------------------------|------------------------|-----------------------|-----|
| Planned Changes | Notification Requirements | Technical Requirements | Security Requirements | All |
|-----------------|---------------------------|------------------------|-----------------------|-----|

- A. Datum identifies the following security requirements:
- An offline root certification authority (CA) must be configured.
  - Client computers must be issued certificates by a server in their local office.
  - Changes to the CA configuration settings and the CA security settings must be logged.
  - Client computers must be able to renew certificates automatically over the Internet.
  - The number of permissions and privileges assigned to users must be minimized whenever possible.
  - Users from a group named Group1 must be able to create new instances of App1 in the private cloud.
  - Client computers must be issued new certificates when the computers are connected to the local network only.
  - The virtual machines used to host App2 must use BitLocker Drive Encryption (BitLocker).
  - Users from Trey Research must be able to access App2 by using their credentials from [treyresearch.com](http://treyresearch.com).

|                 |                           |                        |                       |     |
|-----------------|---------------------------|------------------------|-----------------------|-----|
| Planned Changes | Notification Requirements | Technical Requirements | Security Requirements | All |
|-----------------|---------------------------|------------------------|-----------------------|-----|

- A. Datum plans to implement the following changes:
- Replace all of the servers with new servers that run Windows Server 2012.
  - Implement a private cloud by using Microsoft System Center 2012 to host instances of App1.
  - In the Miami office, deploy four new Hyper-V hosts to the perimeter network.
  - In the Miami office, deploy two new Hyper-V hosts to the local network.
  - In the Seattle office, deploy two new Hyper-V hosts. In the Miami office, implement a System Center 2012 Configuration Manager primary site that has all of the system roles installed.
  - Implement a public key infrastructure (PKI).
  - Implement AD FS.

## **Question: 127**

Your network contains an Active Directory domain named contoso.com. The domain contains Server 2012 R2 and has the Hyper-V server role installed.

You need to log the amount of system resources used by each virtual machine.

What should you do?

- A. From Windows PowerShell, run the Enable-VMResourceMetering cmdlet.
- B. From Windows System Resource Manager, enable Accounting.
- C. From Windows System Resource Manager, add a resource allocation policy.
- D. From Windows PowerShell, run the Measure-VM cmdlet.

**Answer: A**

Explanation:

The Enable-VMResourceMetering cmdlet collects resource utilization data for a virtual machine or resource pool.

## **Question: 128**

Your network contains an Active Directory domain named contoso.com. The domain contains a member server named HVServer1. HVServer1 runs Windows Server 2012 R2 and has the Hyper-V server role installed. HVServer1 hosts 10 generation 1 virtual machines. All of the virtual machines connect to a virtual switch named Switch1. Switch1 is configured as a private network. All of the virtual machines have the DHCP guard and the router guard settings enabled.

You install the DHCP server role on a virtual machine named Server1. You authorize Server1 as a DHCP server in contoso.com. You create an IP scope. You discover that the virtual machines connected to Switch1 do not receive IP settings from Server1.

You need to ensure that the virtual machines can use Server1 as a DHCP server.

What should you do?

- A. Enable MAC address spoofing on Server1.
- B. Enable single-root I/O visualization (SR-IOV) on Server1.
- C. Disable the DHCP guard on Server1.
- D. Disable the DHCP guard on all of the virtual machines that are DHCP clients.

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**Answer: C**

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Explanation:

DHCP guard setting

This setting stops the virtual machine from making DHCP offers over this network interface.

To be clear this does not affect the ability to receive a DHCP offer (i.e. if you need to use DHCP to acquire an IP address that will work) it only blocks the ability for the virtual machine to act as a DHCP server.

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### **Question: 129**

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You have a server named Server1 that runs Windows Server 2012 R2. You plan to enable Hyper-V Network Virtualization on Server1. You need to install the Windows Network Virtualization Filter Driver on Server1.

Which Windows PowerShell cmdlet should you run?

- A. Set-NetVirtualizationGlobal
- B. Enable-NetAdapterBinding
- C. Add - WindowsFeature
- D. Set-NetAdapterVmq

---

**Answer: B**

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Explanation:

Hyper-V Network Virtualization runs multiple virtual networks on a physical network. And each virtual network operates as if it is running as a physical network.

The Set-NetAdapter cmdlet sets the basic properties of a network adapter such as virtual LAN (VLAN) identifier (ID) and MAC address.

Thus if you add the binding parameter to the command then you will be able to install the Windows Network Virtualization Filter Driver.

Step one: Enable Windows Network Virtualization (WNV). This is a binding that is applied to the NIC that your External Virtual Switch is bound to.

This can be a physical NIC, it can be an LBFO NIC team. Either way, it is the network adapter that your External Virtual Switch uses to exit the server.

This also means that if you have multiple virtual networks or multiple interfaces that you can pick and choose and it is not some global setting.

If you have one External Virtual Switch this is fairly easy:

```
$vSwitch = Get-VMSwitch -SwitchType External# Check if Network Virtualization is bound# This could be done by
# checking for the binding and seeing if it is enabled
ForEach-Object $vSwitch {if ((Get-NetAdapterBinding
-ComponentID "ms_netwvn" - InterfaceDescription$_.NetAdapterInterfaceDescription).Enabled -eq $false){ # Lets
enable it
Enable-NetAdapterBinding -InterfaceDescription $_.NetAdapterInterfaceDescription - ComponentID
"ms_netwvn"}}
```

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### **Question: 130**

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Your network contains an Active Directory domain named contoso.com. You install Windows Server 2012 R2 on a new server named Server1 and you join Server1 to the domain. You need to ensure that you can view processor usage and

memory usage information in Server Manager.

What should you do?

- A. From Server Manager, click Configure Performance Alerts.
- B. From Performance Monitor, create a Data Collector Set (DCS).
- C. From Performance Monitor, start the System Performance Data Collector Set (DCS).
- D. From Server Manager, click Start Performance Counters.

---

**Answer: D**

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Explanation:

You should navigate to the Server Manager snap-in and there click on All Servers, and then Performance Counters. The Performance Counters, when started can be set to collect and display data regarding processor usage, memory usage, amongst many other resources like disk-related and security related data, that can be monitored.

Reference: <http://technet.microsoft.com/en-us/library/bb734903.aspx>

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### **Question: 131**

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Your network contains an Active Directory domain named contoso.com. The domain contains a server named Server1 that runs Windows Server 2012 R2. Server1 has the Hyper-V server role installed. The domain contains a virtual machine named VM1. A developer wants to attach a debugger to VM1.

You need to ensure that the developer can connect to VM1 by using a named pipe.

Which virtual machine setting should you configure?

- A. BIOS
- B. Network Adapter
- C. COM 1
- D. Processor

---

**Answer: C**

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Explanation:

Named pipes can be used to connect to a virtual machine by configuring COM 1.

References:

<http://support.microsoft.com/kb/819036>

<http://support.microsoft.com/kb/141709>

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### **Question: 132**

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Your network contains an Active Directory domain named contoso.com. The domain contains a member server named Server 1. Server1 runs Windows Server 2012 R2 and has the Hyper-V server role installed. You create an external virtual switch named Switch1.

Switch1 has the following configurations:

Connection type: External network

Single-root I/O virtualization (SR-IOV): Enabled

Ten virtual machines connect to Switch1.

You need to ensure that all of the virtual machines that connect to Switch1 are isolated from the external network and can connect to each other only. The solution must minimize network downtime for the virtual machines.

What should you do?

- A. Remove Switch1 and recreate Switch1 as an internal network.
- B. Change the Connection type of Switch1 to Private network.
- C. Change the Connection type of Switch1 to Internal network.
- D. Remove Switch1 and recreate Switch1 as a private network.

---

**Answer: B**

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**Explanation:**

You can change the connection type of a virtual switch from the virtual switch manager without having to remove it. A private virtual network is isolated from all external network traffic on the virtualization server, as well any network traffic between the management operating system and the external network.

This type of network is useful when you need to create an isolated networking environment, such as an isolated test domain.

**Reference:**

<http://technet.microsoft.com/en-us/library/cc816585%28v=WS.10%29.aspx>

<http://blogs.technet.com/b/jhoward/archive/2008/06/17/hyper-v-what-are-the-uses-for-different-types-of-virtualnetworks.aspx>

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**Question: 133**

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Your network contains two Hyper-V hosts named Host1 and Host2. Host1 contains a virtual machine named VM1. Host2 contains a virtual machine named VM2. VM1 and VM2 run Windows Server 2012 R2.

You install the Network Load Balancing feature on VM1 and VM2. You need to ensure that the virtual machines are configured to support Network Load Balancing (NLB).

Which virtual machine settings should you configure on VM1 and VM2?

- A. DHCP guard
- B. MAC address
- C. Router guard
- D. Port mirroring

---

**Answer: B**

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**Explanation:**

When MAC addresses are not assigned to virtual machines, it could cause network problems.

Reference: <http://blogs.msdn.com/b/clustering/archive/2010/07/01/10033544.aspx>

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**Question: 134**

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Your network contains an Active Directory domain named contoso.com. The domain contains a server named Server1. Server1 runs Windows Server 2012 R2 and has the Hyper-V server role installed.

On Server1, an administrator creates a virtual machine named VM1. A user named User1 is the member of the local Administrators group on Server1. User1 attempts to modify the settings of VM1 as shown in the following exhibit. (Click the Exhibit button.)

```
Windows PowerShell
PS C:\> Set-VM VM1 -ProcessorCount 4
Set-VM : The parameter is not valid. Hyper-V was unable to find a virtual machine with name VM1.
At line:1 char:1
+ Set-VM VM1 -ProcessorCount 4
+ ~~~~~~
+ CategoryInfo          : InvalidArgument: (VM1:String) [Set-VM], VirtualizationUnavailableArgumentException
+ FullyQualifiedErrorId : InvalidParameter,Microsoft.HyperV.PowerShell.Commands.SetVM
```

You need to ensure that User1 can modify the settings of VM1 by running the Set-Vm cmdlet. What should you instruct User1 to do?

- A. Run Windows PowerShell with elevated privileges.
- B. Install the Integration Services on VM1.
- C. Modify the membership of the local Hyper-V Administrators group.
- D. Import the Hyper-V module.

---

**Answer: A**

---

**Explanation:**

You can only use the PowerShell snap-in to modify the VM settings with the vm cmdlets when you are an Administrator.

Thus best practices dictate that User1 run the Powershell with elevated privileges.

References: <http://technet.microsoft.com/en-us/library/jj713439.aspx>

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### Question: 135

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Your network contains an Active Directory domain named contoso.com. The domain contains two member servers named Server1 and Server2. All servers run Windows Server 2012 R2.

Server1 and Server2 have the Failover Clustering feature installed.

The servers are configured as nodes in a failover cluster named Cluster1. Cluster1 has access to four physical disks. The disks are configured as shown in the following table.

You need to ensure that all of the disks can be added to a Cluster Shared Volume (CSV).

Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Enable BitLocker on Disk4.
- B. Disable BitLocker on Disk1.
- C. Format Disk2 to use NTFS.
- D. Format Disk3 to use NTFS.

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**Answer: C, D**

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**Explanation:**

You cannot use a disk for a CSV that is formatted with FAT, FAT32, or Resilient File System (ReFS).

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### Question: 136

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Your network contains three servers named HV1, HV2, and Server1 that run Windows Server 2012 R2. HV1 and HV2 have the Hyper-V server role installed. Server1 is a file server that contains 3 TB of free disk space.

HV1 hosts a virtual machine named VM1. The virtual machine configuration file for VM1 is stored in D:\VM and the virtual hard disk file is stored in E:\VHD.

You plan to replace drive E with a larger volume. You need to ensure that VM1 remains available from HV1 while drive E is being replaced. You want to achieve this goal by using the minimum amount of administrative effort.

What should you do?

- A. Perform a live migration to HV2.
- B. Add HV1 and HV2 as nodes in a failover cluster. Perform a storage migration to HV2.
- C. Add HV1 and HV2 as nodes in a failover cluster. Perform a live migration to HV2.
- D. Perform a storage migration to Server1.

---

**Answer: D**

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### **Question: 137**

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You have a Hyper-V host named Server1 that runs Windows Server 2012 R2. Server1 hosts 50 virtual machines that run Windows Server 2012 R2.

Your company uses smart cards for authentication. You need to ensure that you can use smart card authentication when you connect to the virtual machine by using Virtual Machine Connection.

What should you configure?

- A. The NUMA Spanning settings
- B. The RemoteFX settings
- C. The Enhanced Session Mode Policy
- D. The Integration Services settings

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**Answer: C**

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### **Question: 138**

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You have a Hyper-V host named Server1 that runs Windows Server 2012 R2. Server1 hosts a virtual machine named VM1 that runs Windows Server 2012 R2. VM1 has several snapshots.

You need to modify the snapshot file location of VM1.

What should you do?

- A. Delete the existing snapshots, and then modify the settings of VM1.
- B. Right-click VM1, and then click Move.
- C. Right-click VM1, and then click Export.
- D. PauseVM1, and then modify the settings of VM1.

---

**Answer: A**

Explanation:

You will need to navigate to the Hyper-V Management snap-in (C:\ProgramData\Microsoft\Windows\Hyper-V) and from there access the Snapshot file Location tab where you can change the settings for the VM1 snapshot file location. However, since there are already several snapshots in existence, you will need to delete them first because you will not be able to change the location of the snapshot file while there is an existing snapshot.

You need to modify the snapshot file location of VM1.

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### **Question: 139**

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Your network contains an Active Directory domain named contoso.com.

The domain contains four servers named Server1, Server2, Server3, and Server4 that run Windows Server 2012 R2.

All servers have the Hyper-V server role and the Failover Clustering feature installed.  
 You need to replicate virtual machines from Cluster1 to Cluster2.  
 Which three actions should you perform? (Each correct answer presents part of the solution. Choose three.)

- A. From Hyper-V Manager on a node in Cluster2, create three virtual machines.
- B. From Cluster2, add and configure the Hyper-V Replica Broker role.
- C. From Failover Cluster Manager on Cluster1, configure each virtual machine for replication.
- D. From Cluster1, add and configure the Hyper-V Replica Broker role.
- E. From Hyper-V Manager on a node in Cluster2 modify the Hyper-V settings.

---

**Answer: B, C, D**

---

**Explanation:**

These are two clusters, to replicate any VM to a cluster you need to configure the Replica Broker role on each cluster  
 the last step should be enabling replication on the VMs.

### Question: 140

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**DRAG DROP**

You plan to delegate the management of virtual machines to five groups by using Microsoft System Center 2012 Virtual Machine Manager (VMM).

The network contains 20 Hyper-V hosts in a host group named HostGroup1. You identify the requirements for each group as shown in the following table.

| Group name | Requirement  |
|------------|--|
| VMAdmins1  | Must only be able to manage the virtual machines hosted in HostGroup1.   |
| VMAdmins2  | Must only be able to manage the virtual machines that the group creates. |
| VMAdmins3  | Must only be able to view the status of the hosts in HostGroup1.         |
| VMAdmins4  | Must be able to manage all of the hosts in all of the host groups.       |

You need to identify which user role must be assigned to each group.

Which user roles should you identify?

To answer, drag the appropriate user role to the correct group in the answer area

a. Each user role may be used once, more than once, or not at all. Additionally, you may need to drag the split bar between panes or scroll to view content.

| User roles               | Answer Area            |
|--------------------------|------------------------|
| Administrators           | VMAdmins1<br>User role |
| Delegated Administrators | VMAdmins2<br>User role |
| Read-Only Administrators | VMAdmins3<br>User role |
| Self-Service Users       | VMAdmins4<br>User role |

---

**Answer:**

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| User roles   | Answer Area              |
|--|--------------------------|
|  | Delegated Administrators |
|  | Self-Service Users       |
|  | Read-Only Administrators |
| VMA admins1<br>VMA admins2<br>VMA admins3<br>VMA admins4 | Administrators           |

**Explanation:**

You can create **user roles** in System Center 2012 – Virtual Machine Manager (VMM) to define the objects that users can manage and the management operations that users can perform. The following table summarizes the capabilities of each **user role** in VMM :

**User Role Descriptions for VMM**

| VMM User Role | Capabilities  |
|---------------|---|
|               | Members of the Administrators <b>user role</b> can perform all administrative actions on all objects that VMM manages. Administrators have sole responsibility for these features of VMM: |

References: <http://mountainss.wordpress.com/2011/11/19/user-roles-in-system-center-virtual-machine-manager-2012/>  
<http://technet.microsoft.com/en-us/library/gg696971.aspx>

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**Question: 141**

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**DRAG DROP**

Your network contains an Active Directory domain named contoso.com. The network has an Active Directory Certificate Services (AD CS) infrastructure.

You publish the certificate revocation list (CRL) to a farm of Web servers. You are creating a disaster recovery plan for the AD CS infrastructure. You need to recommend which actions must be performed to restore certificate revocation checking if a certification authority (CA) is offline for an extended period of time.

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

| Actions  | Answer Area |
|--|-------------|
| By using Certutil, republish the CRL.  |             |
| Restore a copy of the CA's private key, and then retrieve a copy of the CRL.       |             |
| Copy the CRL to the Web server farm.   |             |
| By using Certutil, resign the CRL, and then extend the validity period of the CRL. |             |
| Restore a copy of the CA's public key and a copy of the CA's certificate.          |             |

**Answer:**

| Actions                              | Answer Area  |
|--------------------------------------|--|
| Copy the CRL to the Web server farm. | Restore a copy of the CA's private key, and then retrieve a copy of the CRL.       |
|                                      | By using Certutil, resign the CRL, and then extend the validity period of the CRL. |
|                                      | By using Certutil, republish the CRL.  |

Restore a copy of the CA's public key and a copy of the CA's certificate.

**Explanation:**

**Certutil**

11 out of 37 rated this helpful - Rate this topic

Updated: November 14, 2012

Applies To: Windows Server 2008 R2, Windows Server 2012

Certutil.exe is a command-line program that is installed as part of Certificate Services. You can use Certutil.exe to dump and display certification authority (CA) configuration information, configure Certificate Services, back up and restore CA components, and verify certificates, key pairs, and certificate chains.

**Reference:**

[http://technet.microsoft.com/en-us/library/cc732443\(v=ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc732443(v=ws.10).aspx)

## Question: 142

**HOTSPOT**

Your network contains an Active Directory domain named contoso.com. You have a failover cluster named Cluster1 that contains two nodes named Server1 and Server2. Both servers run Windows Server 2012 R2 and have the Hyper-V server role installed.

You plan to create two virtual machines that will run an application named App1. App1 will store data on a virtual hard drive named App1data.vhdx. App1data.vhdx will be shared by both virtual machines.

The network contains the following shared folders:

An SMB file share named Share1 that is hosted on a Scale-Out File Server.

An SMB file share named Share2 that is hosted on a standalone file server.

An NFS share named Share3 that is hosted on a standalone file server.

You need to ensure that both virtual machines can use App1data.vhdx simultaneously.

What should you do? To answer, select the appropriate configurations in the answer area.

**Hot Area:**

Location of App1data.vhdx:

|        |
|--------|
| ▼      |
| Share1 |
| Share2 |
| Share3 |

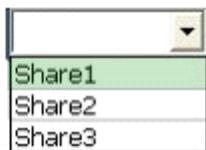
App1data.vhdx disk type:

|                       |
|-----------------------|
| ▼                     |
| Differencing          |
| Dynamically expanding |

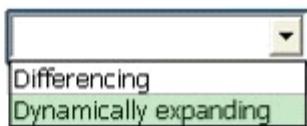
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**Answer:**

Location of App1data.vhdx:



App1data.vhdx disk type:



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**Question: 143**

A company has offices in Seattle and Shanghai. You use Hyper-V Server 2012 R2 as the server virtualization platform. Each office has a secured server room where all the servers are located. Eighty percent of the company's servers are virtual. The company signs a data center services agreement with a vendor that is located in New York. The agreement includes a 1 GB per second link to the collocation facility in New York.

The link between the Seattle and Shanghai offices is slow and unreliable. You must design and implement a cost-effective data recovery solution to replicate virtual servers from Seattle to both the New York and Shanghai locations.

The solution must support the following requirements:

Perform failover replication from Seattle to New York.

Perform scheduled replication between as many locations as possible.

In case of a disaster, a fast failover should be possible to the replicated servers with minimal changes required to the existing infrastructure.

Which two actions should you perform? Each correct answer presents part of the solution.

- A. Use Hyper-V Replica unplanned failovers.
- B. Configure the Seattle Hyper-V server as the primary replica server and the Shanghai Hyper-V server as the secondary replica server.
- C. Use Hyper-V Replica planned failovers.
- D. Configure the Seattle Hyper-V server as the primary replica server and the New York Hyper-V server as the secondary replica server.

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**Answer: AD**

A: Unplanned Failover is an operation initiated on the replica VM when the primary VM/site is hit by a disaster.

Incorrect:

Not B: We should not use Shanghai as the secondary replica server as the link between the Seattle and Shanghai offices is slow and unreliable.

Not C: We must protect against disaster, so we cannot use planned failovers.

Reference: Types of failover operations in Hyper-V Replica—Part III - Unplanned Failover

<http://blogs.technet.com/b/virtualization/archive/2012/08/08/types-of-failover-operations-in-hyper-v-replica-part-iii-unplanned-failover.aspx>

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**Question: 144**

Your network contains servers that run only Windows Server 2012.

You have five storage pools. The storage pools are configured as shown in the following table.

| Storage pool name | Contents  |
|-------------------|---|
| StoragePool1      | <ul style="list-style-type: none"> <li>• Two SATA disks</li> <li>• One SAS disk</li> </ul>    |
| StoragePool2      | <ul style="list-style-type: none"> <li>• Two iSCSI disks</li> <li>• One USB disk</li> </ul>   |
| StoragePool3      | <ul style="list-style-type: none"> <li>• Five SAS disks</li> <li>• Two iSCSI disks</li> </ul> |
| StoragePool4      | <ul style="list-style-type: none"> <li>• Three SAS disks</li> </ul>                           |
| StoragePool5      | <ul style="list-style-type: none"> <li>• Two iSCSI disks</li> </ul>                           |

You need to identify which storage pools can be used as clustered disk resources.

Which storage pools should you identify? (Each correct answer presents part of the solution. Choose all that apply.)

- A. StoragePool1
- B. StoragePool2
- C. StoragePool3
- D. StoragePool4
- E. StoragePool5

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#### Answer: AD

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The clustered storage pool MUST be comprised of Serial Attached SCSI (SAS) connected physical disks.

Note: SAS, Serial Attached SCSI, is an evolution of parallel SCSI into a point-to-point serial peripheral interface in which controllers are linked directly to disk drives.

Incorrect:

Not B, not C, not E: iSCSI and Fibre Channel controllers are not supported.

Reference: Deploy Clustered Storage Spaces

<https://technet.microsoft.com/en-us/library/jj822937.aspx>

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#### Question: 145

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An organization uses an Active Directory Rights Management Services (AD RMS) cluster named RMS1 to protect content for a project. You uninstall AD RMS when the project is complete. You need to ensure that the protected content is still available after AD RMS is uninstalled.

Solution: You run the following command from an administrative command prompt:

`cipher /a /d /s:<protected share name>`

Does this meet the goal?

- A. Yes
- B. No

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#### Answer: B

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If you plan to remove Active Directory Rights Management Services from your organization, you should first decommission the AD RMS cluster. This allows your AD RMS users to remove AD RMS protection from existing content. If you uninstall AD RMS without first decommissioning it, your protected content will no longer be

accessible.

Reference: Decommissioning AD RMS

<http://blogs.technet.com/b/rms/archive/2012/04/29/decommissioning-ad-rms.aspx>

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### **Question: 146**

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You need to automatically restart the appropriate web service on DETCRL01 and CHICRL01 if the web service is stopped.

Solution: You create a Windows Events monitor in SCOM and configure it to monitor events related to the http.sys service?

Does this meet the goal?

- A. Yes
- B. No

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### **Answer: B**

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Just monitoring the service will not restart it.

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### **Question: 147**

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Your network contains an Active Directory domain named adatum.com. The domain contains a server named ADFS1.

You plan to deploy Active Directory Federation Services (AD FS) to ADFS1.

You plan to register the company's SMTP domain for Office 365 and to configure single sign-on for all users.

You need to identify which certificate or certificates are required for the planned deployment.

Which certificate or certificates should you identify? (Each correct answer presents a complete solution. Choose all that apply.)

- A. a certificate that is issued by an internal certification authority and that contains the subject name ADFS1
- B. a certificate that is issued by an internal certification authority and that contains the subject name adfs1.adatum.com.
- C. a certificate that is issued by a trusted third-party root certification authority and that contains the subject name ADFS1
- D. self-signed certificates for adfs1.adatum.com
- E. a certificate that is issued by a trusted third-party root certification authority and that contains the subject name adfs1.adatum.com

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### **Answer: AE**

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E (not C, not D): Setting up AD FS requires the use of a third party SSL certificate. Make sure you match the certificate's subject name with the Fully Qualified Domain Name of the server.

Reference: Geek of All Trades: Office 365 SSO: A Simplified Installation Guide

<https://technet.microsoft.com/en-us/magazine/jj631606.aspx>

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### **Question: 149**

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You manage a Hyper-V 2012 cluster by using System Center Virtual Machine Manager 2012 SP1. You need to ensure high availability for business-critical virtual machines (VMs) that host business-critical SQL Server databases.

Solution: You create a custom placement rule and apply it to all business-critical VMs.

Does this meet the goal?

- A. Yes
- B. No

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**Answer: A**

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### **Question: 150**

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You have a properly configured certification authority in an Active Directory Domain Services domain. You must implement two-factor authentication and use virtual smart cards to secure user sessions. You need to implement two-factor authentication for each client device. What should you install on each client device?

- A. a smart card reader
- B. a user certificate issued by a certification authority
- C. a Trusted Platform Module (TPM) chip
- D. a local computer certificate issued by a certificate authority

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**Answer: B**

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Reference: A Complete Guide on Active Directory Certificate Services in Windows Server 2008 R2  
<http://blog.windowsserversecurity.com/2012/01/17/a-complete-guide-on-active-directory-certificate-services-in-windows-server-2008-r2/>

### **Question: 151**

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You implement cross-forest enrollment between Contoso.com and Fabrikam.com. You receive version errors when you deploy updated certificates from the Contoso domain to the Fabrikam domain. You need to ensure that you can deploy the certificates to the fabrikam.com domain. What should you do?

- A. Run the following Windows PowerShell script:

DumpADObj.ps1 –ForestName fabrikam.com

- B. Run the following Windows PowerShell script:  
PKISync.ps1 -sourceforest contoso.com -targetforest fabricam.com -f

- C. Run the following Windows PowerShell command:

Get-CertificationAuthority contoso.com | Get-PendingRequest | Approve-CertificateRequest

- D. Run the following Windows PowerShell command:

Get-CertificationAuthority –Name contoso.com | Get-PolicyModuleFlag | Enable-PolicyModuleFlag  
EnableOCSPRevNoCheck, DisableExtensionList -RestartCA

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**Answer: B**

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Reference: AD CS: DumpADObj.ps1 Script for Cross-forest Certificate Enrollment  
[https://technet.microsoft.com/en-us/library/ff961505\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/ff961505(v=ws.10).aspx)

### **Question: 152**

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Your network contains an Active Directory domain named contoso.com. The domain contains several domain

controllers. The domain controllers run either Windows Server 2012 or Windows Server 2008 R2. The domain functional level is Windows Server 2008 R2. The forest functional level is Windows Server 2008. The corporate compliance policy states that all items deleted from Active Directory must be recoverable from a Recycle Bin.

You need to recommend changes to the current environment to meet the compliance policy. Which changes should you recommend? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Run the Set-ADForestMode cmdlet.
- B. Run the New-ADObject cmdlet.
- C. Run the Set-ADObject cmdlet.
- D. Run the Set-ADDomainMode cmdlet.
- E. Run the Enable-ADOptionalFeature cmdlet.

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**Answer: AE**

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A: You can enable Active Directory Recycle Bin only if the forest functional level of your environment is set to Windows Server 2008 R2.

The Set-ADForestMode cmdlet sets the Forest mode for an Active Directory forest. You specify the forest mode by setting the ForestMode parameter. Here we should set it to Windows2008R2Forest.

E: Enabling Active Directory Recycle Bin

After the forest functional level of your environment is set to Windows Server 2008 R2, you can enable Active Directory Recycle Bin by using the following methods:

- / Enable-ADOptionalFeature Active Directory module cmdlet (This is the recommended method.)
- / Ldp.exe

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**Question: 153**

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Your network contains five Active Directory forests.

You plan to protect the resources in all of the forests by using Active Directory Rights Management Services (AD RMS). Users in one of the forests will access the protected resources.

You need to identify the minimum number of AD RMS clusters required for the planned deployment.

What should you identify?

- A. five licensing clusters and one root cluster
- B. one licensing cluster
- C. one root cluster
- D. five root clusters and one licensing cluster

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**Answer: D**

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**Question: 154**

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You manage a Hyper-V 2012 cluster by using System Center Virtual Machine Manager 2012 SP1. You need to ensure high availability for business-critical virtual machines (VMs) that host business-critical SQL Server databases.

Solution: You create an availability set and place each business-critical VM in the set.

Does this meet the goal?

- A. Yes
- B. No

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**Answer: A**

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When you place multiple virtual machines in an availability set, VMM will attempt to keep those virtual machines on separate hosts and avoid placing them together on the same host whenever possible. This helps to improve continuity of service.

Reference: Configuring Availability Options for Virtual Machines Overview

<https://technet.microsoft.com/en-us/library/jj628163.aspx>

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**Question: 155**

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You need to automatically restart the appropriate web service on DETCRL01 and CHICRL01 if the web service is stopped.

Solution: You create a Basic service monitor in SCOM and configure it to monitor the World Wide Web publishing service.

Does this meet the goal?

- A. Yes
- B. No

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**Answer: A**

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This can be done with a recovery task.

Reference: HOW DO I: MONITOR A SERVICE AND AUTOMATICALLY RESTART IT IF IT STOPS (SCOM 2012)

<http://www.opsconfig.com/how-do-i-monitor-a-service-and-automaticaly-restart-it-if-it-stops-scom-2012/>

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**Question: 156**

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You have a server named Host1 that runs Windows Server 2012 and has the Hyper-V server role installed.

Host1 has one physical network adapter. You plan to deploy 15 virtual machines on Host1.

You need to implement a networking solution that ensures that all of the virtual machines use PXE to boot when they connect to Windows Deployment Server (WDS).

What should you do?

- A. Install legacy network adapters for each virtual machine.
- B. Modify the settings of the virtual switch.
- C. Modify the settings of the network adapter for each virtual machine.
- D. Install a second physical network adapter.

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**Answer: A**

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Since Windows Server 2012 R2 (WS2012 R2) Hyper-V and Windows 8.1 Client Hyper-V, there are two generations of virtual machine hardware specification. Generation 1 virtual machines (the only generation on legacy versions of Hyper-V) make things a little tricky when it comes to PXE booting. The default (and better performing) synthetic Network Adapter (that leverages the Hyper-V integration components) does not support booting off of the network in Generation 1 virtual machines. If you do want to boot this type of virtual hardware using PXE then you must add an emulated Legacy Network Adapter.

Reference: Boot a Hyper-V Virtual Machine Using PXE

<https://www.petri.com/boot-hyper-v-virtual-machine-using-pxe>

### **Question: 157**

You have a small Hyper-V cluster built on two hosts that run Windows Server 2012 R2 Hyper-V. You manage the virtual infrastructure by using System Center Virtual Machine Manager 2012.

Distributed Key Management is not installed. You have the following servers in the environment:

| <b>Server name</b> | <b>Role</b>  |
|--------------------|--|
| DC1                | Active Directory Domain Services domain controller |
| HYPERV1            | Hyper-V host with 40 virtual machines              |
| HYPERV2            | Hyper-V host with 25 virtual machines              |
| SQL1               | SQL Server 2012 database                           |
| DPM1               | Data Protection Manager (DPM) server               |
| VMM1               | Virtual Machine Manager (VMM) 2012                 |
| FILESERVER1        | File server, shared folders                        |
| FILESERVER2        | File server, VMM Library Server                    |

You have the following requirements:

You must back up virtual machines at the host level.

You must be able to back up virtual machines that are configured for live migration.

You must be able to restore the entire VMM infrastructure.

You need to design and implement the backup plan.

What should you do?

A. Run the following Windows PowerShell command:

`Set-DPMGlobalProperty -DPMServerName DPM1 -KnownVMMservers VMM1`

B. Install the DPM console on VMM1.

C. Run the following Windows PowerShell command:

`Checkpoint-VM -Name DPM1 -ComputerName SQL1`

D. Configure backup for all disk volumes on FILESERVER1.

---

### **Answer: A**

Run the Set-DPMGlobalProperty PowerShell command to connect all the servers that are running Hyper-V to all the DPM servers. The cmdlet accepts multiple DPM server names. For more information see Set-DPMGlobalProperty.

`Set-DPMGlobalProperty -dpmservername <dpmservername> -knownvmmservers <vmmservername>`

Reference: Set up protection for live migration

<https://technet.microsoft.com/en-us/library/jj656643.aspx>

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### **Question: 158**

You plan to allow users to run internal applications from outside the company's network. You have a Windows Server 2012 R2 that has the Active Directory Federation Services (AD FS) role installed. You must secure on-premises resources by using multi-factor authentication (MFA). You need to design a solution to enforce different access levels for users with personal Windows 8.1 or iOS 8 devices.

Solution: You install a local instance of MFA Server and connect it to your Microsoft Azure MFA provider. Then, you use the Workplace Join process to configure access for personal devices to the on-premises resources.

Does this meet the goal?

- A. Yes
- B. No

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**Answer: A**

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Reference: Setting up on-premises conditional access using Azure Active Directory Device Registration  
<https://azure.microsoft.com/en-gb/documentation/articles/active-directory-conditional-access-on-premises-setup/>

### **Question: 159**

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You plan to implement 20 highly available virtual machines on FC1. All of the virtual machines must be stored in a single shared folder. You need to ensure that the VHD files of the virtual machines can be stored on SAN1. VHD files must be available from any node in FC2.

| Failover cluster name | Role            |
|-----------------------|-----------------|
| FC1                   | Hyper-V hosting |
| FC2                   | File Services   |

**Only the members of FC2 can connect to SAN1**

What should you do on FC2?

- A. Configure the clustered File server role or the filer server for general use.
- B. Add the iSCSI target server cluster role.
- C. Configure the clustered file server role of the scale-out file server for application data.
- D. Add the storage services role service.

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**Answer: BC**

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### **Question: 160**

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Your network contains a server named Hyperl that runs Windows Server 2012. Hyperl is configured as a Hyper-V host and runs System Center 2012 Virtual Machine Manager (VMM).

Hyperl hosts a virtual machine named Guestl. Guestl is configured as a file server that runs Windows Server 2012. Guestl connects to a shared storage device by using the iSCSI Initiator.

You need to back up the files and the folders in the shared storage used by Guestl. The solution must ensure that the backup is successful even if Guestl is in a saved state. What should you do?

- A. From Hyper-V Manager, create a snapshot of Guestl.
- B. From Hyperl, configure an iSCSI initiator to the shared storage and perform a backup by using Windows Server Backup.
- C. From Guestl, schedule regular backups by using Windows Server Backup.
- D. From Microsoft System Center 2012 Virtual Machine Manager (VMM), create a copy of Guestl.

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**Answer: B**

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**Question: 161**

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Contoso.Ltd, has an Active Directory Domain Services (AD DS) domain named contoso.com. The domain and forest functional levels are set to Windows Server 2008 R2. You have a properly configured certification authority (CA). All servers run Windows Server 2012 R2.

You have the following requirements.

- . Users must not be able to attach specific documents to e-mail messages or copy the files to a personal USB device.
- . Finance department users must be able to access the solution from their domain-joined windows devices on the corporate network over the internet without any additional configuration.
- . Finance department users must be able to access the documents even if the primary server fails.

What should you do?

- A. Upgrade the domain functional level to Windows 2012 or higher.
- B. Install Active Directory Federation Services (AD FS), and integrate the Active Directory Rights Management Services server with AD FS.
- C. Ensure that the internal and external URLs for the Active Directory Rights Management Services cluster are the same.
- D. Implement an Active Directory Rights Management Services cluster and place at least one cluster node in the perimeter network

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**Answer: D**

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**Question: 162**

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Your network contains an Active Directory domain named contoso.com

You plan to implement Network Load Balancing (NLB)

You need to identify which network services and applications can be load balanced by using NLB.

Which three services and applications should you identify?

- A. Microsoft SQL Server 2012 Reporting Services
- B. Microsoft Exchange Server 2012 Mailbox servers
- C. file servers
- D. Microsoft Exchange Server 2012 Client Access Servers
- E. DHCP Servers
- F. Microsoft Sharepoint Server 2012 front-end Web servers

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**Answer: ADF**

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