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70-745

Implementing a Software-Defined Datacenter

Testlet 1

Background

General

You are the system administrator for a company named Fabrikam, Inc. You maintain the server infrastructure for the company. Company headquarters is located in Toronto. The company has additional offices in Atlanta, Dallas, and Detroit.

There is a datacenter located at each office. The company has a single Active Directory Domain Services (AD DS) forest that uses fabrikam.com as the namespace.

Each datacenter hosts a Microsoft Hyper-V cluster. The clusters are configured as shown in the following table. You plan to upgrade all clusters to Windows Server 2016 using cluster rolling upgrades if possible.

Office location	IP subnet	Hyper-V cluster name	Hyper-V cluster operating system
Atlanta	10.20.0.0/16	Atl-Cluster	Windows Server 2012
Detroit	10.40.0.0/16	Det-Cluster	Windows Server 2012 R2
Dallas	10.30.0.0/16	Dal-Cluster	Windows Server 2012
Toronto	10.10.0.0/16	Tor-Cluster	Windows Server 2012 R2

Atlanta

The software development teams work at the Atlanta office. The datacenter at the Atlanta office hosts all development servers and applications in a Hyper-V cluster infrastructure. Microsoft System Center Virtual Machine Manager (SCVMM) is not deployed.

The following servers are available in the Atlanta datacenter.

Server	Comments
Atl-Server1	This server is joined to the domain and runs Microsoft Windows Server 2016 Datacenter.
Atl-Server2	This server is joined to the domain and runs Microsoft Windows Server 2016 Nano Server.
Atl-Server3	This server is joined to the domain and runs Microsoft Windows Server 2016 Datacenter.

Detroit

IT department employees work at the Detroit office. The datacenter at the Detroit office hosts test servers in a Hyper-V cluster infrastructure. The datacenter also hosts applications that the IT department is testing for future deployments.

The following servers are available in the Detroit datacenter:

Server	Comments
Det-Server1	This server is reserved for a highly available SCVMM test environment.
Det-Server2	This server is reserved for a highly available SCVMM test environment.
Det-Server3	This server is joined to the domain and runs Windows Server 2012 R2.
Det-Server4	This server is joined to the domain and runs Windows Server 2012 R2.
Det-Server5	This server is joined to the domain and runs Windows Server 2012 R2.
Det-Server6	This server is joined to the domain and runs Windows Server 2016.
Det-Server7	This server is joined to the domain and runs Windows Server 2016.
Det-Server8	This server is joined to the domain and runs Windows Server 2016.

Dallas

The following servers are available in the Dallas datacenter:

Server	Comments
Dal-Server1	This server requires custom placement rules and must have host reserve settings.
Dal-Server2	This server requires custom placement rules and must have host reserve settings.
Dal-Server3	This server requires custom placement rules and must have host reserve settings.
Dal-Server4	
Dal-Server5	
Dal-Server6	

Toronto

Human resource department employees work at the Toronto office. The datacenter in the Toronto office hosts production servers and applications in a Hyper-V cluster infrastructure. SCVMM is not deployed.

The Toronto datacenter also hosts Windows Server Update Services (WSUS) for the entire company.

You have the following servers available in the datacenter:

Server	Comments
Tor-Server1	This server is joined to the domain.
Tor-Server2	This server is not domain joined.
Tor-Server10	This is the root WSUS server.
Tor-Server11	This is the WSUS replica server.

Technical Requirements

Atlanta

You identify the following requirements for the Atlanta datacenter:

- You must deploy an SCVMM instance to manage Atl-Cluster.
- The SCVMM deployment must use Distributed Key Management (DKM).
- You must install all applications that support the development server in the Atlanta datacenter.
- The virtual machines (VMs) in the datacenter that are connected to multiple networks must be isolated by using Private VLANs (PVLANS).

Detroit

You identify the following requirements for the Detroit datacenter.

- You must create an SCVMM cluster named **Det-VMM**.
- SCVMM must be used to manage Det-Cluster.
- You must deploy Software Defined Networking (SDN) software load balancer (SLB) on Det-Cluster.
- All required server IP addresses are part of the range of IP addresses that are allocated for the Detroit datacenter.
- You must deploy a three-node SDN network controller in Det-Cluster. ▪ The SCVMM environment must support Generation 2 VMs.

Dallas

You must manage devices at the Dallas office by using the SCVMM production environment. A high profile sales application that runs in the datacenter must run only on specific servers.

Toronto

You identify the following requirements for the Toronto datacenter:

- You must deploy SCVMM. You must integrate SCVMM with the current WSUS environment.
- You must use shared ISO images with all VMs.
- You must grant the minimum permissions required for employees to complete job-related tasks. ▪

The SCVMM environment must manage Tor-Cluster and Dal-Cluster.

QUESTION 1

You need to configure the network settings for the SLB in the test environment.

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

NOTE: Each correct selection is worth one point.

- A. Create a logical network that uses the **Private VLAN networks** option.
- B. Create a logical network that uses the **One connected network** option.
- C. Create a private VIP and IP address pool that uses the IP range 10.10.90.2 - 10.10.90.254. Create a public VIP and IP address pool that uses the IP range 10.10.20.2 – 10.10.20.254.
- D. Create a private VIP and IP address pool that uses the IP range 10.40.90.2 - 10.40.90.254. Create a public VIP and IP address pool that uses the IP range 10.40.20.2 – 10.40.20.254.

Correct Answer: AD

Section: [none]

Explanation

Explanation/Reference:

References: <https://blogs.technet.microsoft.com/larryexchange/2016/05/31/step-by-step-for-deploying-a-sdnv2-using-vmm-part-3/>

QUESTION 2

HOTSPOT

You need to deploy the production SCVMM instance.

Which values should you supply for each installation option? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area

Option

Value

SCVMM installation location

Atl-Server1	
Atl-Server2	
Tor-Server1	
Tor-Server2	

Type of account needed

Domain user account that is not a local administrator on the server	
Domain user account that is a local administrator on the server	
Local system account	
Local administrator account	

Correct Answer:

Answer Area

Option	Value
SCVMM installation location	<div> <div></div> <div> Atl-Server1 Atl-Server2 Tor-Server1 Tor-Server2 </div> </div>
Type of account needed	<div> <div></div> <div> Domain user account that is not a local administrator on the server Domain user account that is a local administrator on the server Local system account Local administrator account </div> </div>

Section: [none]

Explanation

Explanation/Reference:

Explanation:

When you install VMM you need to configure the VMM service to use either the Local System account or a domain account. If you specify a domain account, the account must be a member of the local Administrators group on the computer.

References: <https://docs.microsoft.com/en-us/system-center/vmm/plan-install?view=sc-vmm-1801#account-and-domain-requirements>

QUESTION 3

DRAG DROP

You need to create the VM network for the development environment.

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.



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Select and Place:



Actions

Associate the 10.20.5.0/24 subnet to the site.

Create a logical network.

Select **One connected network**.

Add a network site.

Select **Private VLAN networks**.

Associate the 10.10.5.0/24 subnet to the site.

Answer Area



Correct Answer:

Section: [none]

Explanation

Explanation/Reference:

Explanation:

To create a logical network

Actions

Associate the 10.20.5.0/24 subnet to the site.

Select **One** connected network.

Answer Area

Create a logical network.

Select **Private VLAN** networks.

Add a network site.

Associate the 10.10.5.0/24 subnet to the site.



1. Open the **Fabric** workspace.
 2. On the **Home** tab, in the **Show** group, click **Fabric Resources**.
 3. In the **Fabric** pane, expand **Networking**, and then click **Logical Networks**.
 4. On the **Home** tab, in the **Create** group, click **Create Logical Network**.
The **Create Logical Network Wizard** opens.
 5. On the **Name** page, do the following:
 - Enter a name and optional description for the logical network.
For example, enter the name **BACKEND**, with the description **Corporate network. Use for internal servers such as application and database servers**.
 - If you have System Center 2012 SP1 or System Center 2012 R2, select check boxes as appropriate by using the table that follows. Otherwise, skip to the next numbered step in this procedure.
- Select one or more check boxes based on how you intend to use the VM networks that will be configured on top of this logical network. The following table provides guidelines:

Use of the VM network or networks that will be created on top of this logical network	Action in System Center 2012 SP1	Action in System Center 2012 R2
Hyper-V network virtualization: multiple VM networks with isolation	Select Allow new VM networks created on this logical network to use network virtualization.	Select One connected network and then select Allow new VM networks created on this logical network to use network virtualization.
VLAN-based configuration: manage VLANs that have been created for network isolation within the physical network	<p>Select Network sites within this logical network are not connected.</p> <p>If you are using private VLAN technology, also select Network sites within this logical network contain private VLANs. (Otherwise, do not select it.)</p> <p>For information about additional steps for this configuration, see “VLAN-based configuration” in the list in Configuring VM Networks and Gateways in VMM.</p>	<p>In most cases, select VLAN-based independent networks. However, if you are using private VLAN technology, select Private VLAN (PVLAN) networks.</p> <p>For information about additional steps for this configuration, see “VLAN-based configuration” in the list in Configuring VM Networks and Gateways in VMM.</p>
One VM network that gives direct access to the logical network: no isolation	If this logical network will support network virtualization (in addition to having a VM network that gives direct access to the logical network), select the check box to allow network virtualization. If this logical network will not use network virtualization at all, leave all check boxes cleared.	<p>Select One connected network and select Create a VM network with the same name to allow virtual machines to access this logical network directly. If this logical network will also support network virtualization, select the check box to allow network virtualization.</p> <p>If you select One connected network but you do not create the VM network now, you will still be able to create the VM network later.</p>
External networks: use VMM in coordination with a virtual switch extension, network	Do not create the logical network manually from within VMM. Instead, follow the steps in How to Add a Virtual Switch Extension Manager in System	Follow the steps in How to Add a Virtual Switch Extension or Network Manager in System Center 2012 R2, and be sure to review the capabilities of your virtual switch

Use of the VM network or networks that will be created on top of this logical network	Action in System Center 2012 SP1	Action in System Center 2012 R2
manager, or vendor network-management console	Center 2012 SP1. The logical network settings will be imported from the database in the vendor networkmanagement console (also known as the management console for a forwarding extension).	extension or network manager. You might be able to configure your logical networks in VMM and then export the settings to the virtual switch extension or network manager. In any case, after you add a virtual switch extension or network manager, logical network settings configured in it will be imported into VMM.

6. Click **Next**.

7. On the **Network Site** page, take the following steps.

Note

For guidelines for configuring network sites, see “Network sites” in **Configuring Logical Networking in VMM Overview**. If you do not need to configure network sites, on the **Network Site** page, click **Next**, and then click **Finish** to complete the wizard.

1. To create a network site, click **Add**.

VMM automatically generates a site name that consists of the logical network name, followed by an underscore and a number.

2. Review the network site name and ensure that it is no longer than 64 characters. To change the default name, in the **Network site name** box, enter a new name for the network site.

For example, enter the name **BACKEND - Seattle**.

3. Under **Host groups that can use this network site**, select the check box next to each host group to which you want to make the logical network available. For example, to make the BACKEND logical network available to the Seattle host group and all its child host groups, select the check box next to **Seattle**. 4. Under **Associated VLANs and IP subnets**, enter the VLANs and IP subnets that you want to assign to the network site. To enter VLAN and IP subnet information, click **Insert row**, click the field under **VLAN** or **IP subnet**, depending on what you want to configure, and then enter a VLAN, an IP subnet, or a subnet/VLAN pair. You can insert multiple rows.

For example, add the IP subnet/VLAN pair that makes up the example BACKEND network in Seattle, as shown in the following table.

VLAN	IP subnet
7	10.0.0.0/24

Important

In your test environment, make sure that you use VLANs and IP subnets that are available in your network.

5. Optionally, create additional network sites by clicking **Add** and repeating the process.

6. When you complete this step, click **Next**.

8. On the **Summary** page, review the settings, and then click **Finish**.

The **Jobs** dialog box appears. Make sure the job has a status of **Completed**, and then close the dialog box.

9. Verify that the logical network appears in the **Logical Networks and IP Pools** pane. Also, if you added network sites, right-click the logical network, click **Properties**, click the **Network Site** tab, and verify that the intended network sites appear on the tab.

References: [https://technet.microsoft.com/en-us/library/gg610588\(v=sc.12\).aspx](https://technet.microsoft.com/en-us/library/gg610588(v=sc.12).aspx)

QUESTION 4

You must upgrade all Hyper-V clusters that support an upgrade.

Which 2 clusters can you upgrade?

- A. Atl-cluster
- B. Det-cluster
- C. Tor-clusterD. Dal-cluster

Correct Answer: BD

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/system-center/vmm/hyper-v-rolling-upgrade?view=sc-vmm-1807> **Question Set 1**

QUESTION 1

You manage Microsoft System Center Virtual Machine Manager (SCVMM). You plan to implement a software load balancer (SLB) Multiplexer (MUX).

You need to configure the Microsoft Hyper-V host servers to host the MUX.

What should you do?

- A. Configure Windows Server Gateway.
- B. Install the SLB Host Agent on each Hyper-V host.
- C. Configure virtual machine resource metering.
- D. Configure a Remote Access Service gateway.

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

You can use System Center to deploy SLB MUXs and to install SLB Host Agents on computers that are running Windows Server 2016 Technical Preview and Hyper-V.

When you deploy SLB, you must use System Center, Windows PowerShell, or another management application to deploy the SLB Host Agent on every Hyper-V host computer.

References: <https://technet.microsoft.com/en-US/library/mt632286.aspx>

QUESTION 2

You administer the Microsoft System Center Virtual Machine Manager (SCVMM) infrastructure for an organization. You deploy a software load balancer (SLB).

You need to create a health probe to verify that the VIP pool members are healthy.

Which health probe response code should you identify?

- A. 200
- B. 202
- C. 300
- D. 302



Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

An HTTP health probe should return a response code of 200 to indicate a healthy status.

References: <https://docs.microsoft.com/en-us/windows-server/networking/sdn/manage/configure-slb-and-nat>

QUESTION 3

You manage virtual machine (VM) workloads in an environment that includes the following objects:

- an IP address pool

- a software load balancer (SLB) object
- an SLB rule
- a public VIP address

You monitor network traffic logs and observe that a VM does not service requests for the VIP address.

You need to configure the virtual network so that traffic is not sent to a VM that is unavailable.

What should you do?

- A. Add a health probe. Change the SLB configuration to use the health probe. Redeploy the SLB rule.
- B. Add support for HTTP keep-alive. Change the SLB configuration to Enable keep-alive. Redeploy the SLB rule.
- C. Change the VM IP addresses to public IP addresses. Redeploy the SLB rule.
- D. Change the protocol for the SLB rule to UDP. Redeploy the SLB rule.

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

References: <https://docs.microsoft.com/en-us/windows-server/networking/sdn/manage/configure-slb-and-nat>

QUESTION 4

You manage Microsoft System Center Virtual Machine Manager (SCVMM).

You need to block specific packets on the virtual switch.

Which two types of virtual switch extensions can you use? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.



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- A. capturing extensions
- B. forwarding extensions
- C. monitoring extensions
- D. filtering extensions

Correct Answer: BD

Section: [none]

Explanation

Explanation/Reference:

Explanation:

A Hyper-V extensible switch filtering extension can inspect, modify, and insert packets into the extensible switch data path. Based on extensible switch port and switch policy settings, the extension can drop a packet or exclude its delivery to one or more destination ports.

A forwarding extension has the same capabilities as a filtering extension, but is responsible for performing the core packet forwarding and filtering tasks of the extensible switch.

References: <https://docs.microsoft.com/en-us/windows-hardware/drivers/network/overview-of-the-hyper-v-extensible-switch>

QUESTION 5

You manage a Microsoft Hyper-V host server that has several high-speed physical network adapters.

You need to attach a physical network adapter directly to a virtual machine (VM).

What should you do first?

- A. Assign the adapter to the VM.
- B. Disable the adapter on the Hyper-V host.
- C. Install the device driver on the Hyper-V host.
- D. Install the device driver on the VM.

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

QUESTION 6

You deploy Microsoft System Center Virtual Machine Manager (SCVMM) and System Center Operations Manager (SCOM). You integrate SCVMM with SCOM.

You need to view the reports for SCVMM.

What are two possible ways to achieve the goal? Each correct answer presents a complete solution.

- A. Launch the SCOM console.
- B. Launch the SCVMM console.
- C. Run the Windows PowerShell cmdlet **Get-SCOMMonitor**.
- D. Run the Windows PowerShell cmdlet **Get-SCOMReportingSetting**.
- E. View the Reporting server website for SCOM.

Correct Answer: AE

Section: [none]

Explanation

Explanation/Reference:

Explanation:

You can view reports in the Reporting workspace in System Center Operations Manager, or by using a web browser and entering this address: `http://ReportingServerName:port/reports`.

References: <https://docs.microsoft.com/en-us/system-center/vmm/monitor?view=sc-vmm-1801>

QUESTION 7

You install Microsoft System Center Operations Manager (SCOM) and download a sealed management pack.

You receive notifications from a monitor that a critical resource experiences an overload situation. When you check the resource, it is not in an overloaded condition.

You need to add a new threshold value for the resource.

What should you create?

- A. an override in an existing management pack
- B. an override in a new management pack
- C. a monitor in a new management pack

D. a monitor in an existing management pack

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Overrides change the configuration of System Center 2016 - Operations Manager monitoring settings for monitors, attributes, object discoveries, and rules.

As a best practice, save all overrides for each sealed management pack to an unsealed management pack that is named ManagementPack_Override, where ManagementPack is the name of the sealed management pack to which the overrides apply.

References:

<https://docs.microsoft.com/en-us/system-center/scom/manage-mp-override-rule-monitor?view=sc-om-1807> <https://docs.microsoft.com/en-us/system-center/scom/manage-mp-create-unsealed-mp?view=sc-om-1807>

QUESTION 8

You deploy Microsoft System Center Virtual Machine Manager (SCVMM). You configure shielded virtual machines (VMs) by using virtual Trusted Platform Modules (vTPM). The shielded VMs are in the existing guarded fabric.

You deploy System Center Data Protection Manager (DPM).

You need to identify the scenarios for which you can use DPM to back up the VMs.

For which two scenarios can you use DPM? Each correct answer presents a complete solution.

- A. shielded VMs not protected with vTPM
- B. Item Level Recovery and Alternate Location Recovery outside of the guarded fabric
- C. Item Level Recovery and Alternate Location Recovery in the guarded fabric
- D. shielded VMs protected with vTPM

Correct Answer: CD

Section: [none]

Explanation

Explanation/Reference:

Explanation:

DPM 2016 supports backup and recovery of Shielded VMs that have their VHDs/VHDXs protected with vTPM. Note that Item Level Recovery (ILR) and Alternate Location Recovery (ALR) to a location outside the guarded fabric is not available for this scenario.

References: <https://docs.microsoft.com/en-us/system-center/dpm/what-s-new-in-dpm-2016?view=sc-dpm-1801>

QUESTION 9

You plan to deploy a Nano Server that has the Microsoft Hyper-V role installed.

You must deploy the Nano Server host in a hyper-converged mode that has a Microsoft System Center Virtual Machine Manager (SCVMM) agent installed. You need to prepare a Nano Server VHD for a physical machine.

Which three packages should you include in the VHD? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Microsoft-NanoServer-DCB-Package
- B. Microsoft-NanoServer-SCVMM-Package
- C. Microsoft-NanoServer-SCVMM-Compute-Package
- D. Microsoft-NanoServer-Storage-Package
- E. Microsoft-NanoServer-NPDS-Package

Correct Answer: BCD

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The VHD should include the VMM packages:

- Add the VMM package, Microsoft-NanoServer-SCVMM-Package, to ensure that the VMM agent is part of the VHD.
- Add the VMM compute package, Microsoft-NanoServer-SCVMM-Compute-Package, to ensure that the VHD has the Hyper-V role, and that you can manage the physical server using VMM. If you install this package, don't use the -Compute option for the Hyper-V role).
- For the File Server role, use Microsoft-NanoServer-Storage-Package, along with Microsoft-NanoServer-SCVMM-Package.
- For a hyperconverged deployment, use Microsoft-NanoServer-Storage-Package, along with Microsoft-NanoServer-SCVMM-Package and MicrosoftNanoServer-SCVMM-Compute-Package.

References: <https://docs.microsoft.com/en-us/system-center/vmm/hyper-v-nano?view=sc-vmm-2016>

QUESTION 10

HOTSPOT

A company has an Active Directory Domain Services (AD DS) domain named corp.contoso.com.

You must install Microsoft System Center Virtual Machine Manager (SCVMM) and implement distributed key management (DKM). You must follow the principle of least privilege. Keys must be stored in a container named VMMKeys.

You need to ensure that you can store the cryptographic keys in AD DS.

How should you configure the environment? To answer, select the appropriate options in the dialog box in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



Answer Area

Requirement

DistinguishedName of AD DS container

Option

	▼
CN=VMMKeys,DC=corp,DC=contoso,DC=com	
CN=VMMKeys,DC=contoso,DC=com	
DC=VMMKeys,DC=corp,DC=contoso,DC=com	
DC=VMMKeys,DC=contoso,DC=com	

Container permissions for SCVMM installation

	▼
Full Control	
Modify	
Write	

Correct Answer:

Answer Area

Requirement	Option
DistinguishedName of AD DS container	<div>▼</div> <div> CN=VMMKeys,DC=corp,DC=contoso,DC=com CN=VMMKeys,DC=contoso,DC=com DC=VMMKeys,DC=corp,DC=contoso,DC=com DC=VMMKeys,DC=contoso,DC=com </div>
Container permissions for SCVMM installation	<div>▼</div> <div> Full Control Modify Write </div>

Section: [none]

Explanation

Explanation/Reference:

Explanation:

On the Configure service account and distributed key management page, you must specify the location of the container in AD DS by typing. For example, by typing CN=VMMKeys,DC=corp,DC=contoso,DC=com
The account with which you are installing VMM must have Full Control permissions to the container in AD DS.

References: [https://technet.microsoft.com/en-us/library/gg697604\(v=sc.12\).aspx](https://technet.microsoft.com/en-us/library/gg697604(v=sc.12).aspx)

QUESTION 11

You manage a datacenter that includes Software Defined Storage (SDS) and Microsoft System Center Virtual Machine Manager (SCVMM). You have a Microsoft Azure subscription.

You need to automate the replication of Hyper-V virtual machines (VMs) to Azure by using Azure Site Recovery (ASR).

Which three resources should you implement? Each correct answer presents part of a solution.

NOTE: Each correct selection is worth one point.

- A. Bitlocker-enabled VMs
- B. Azure storage account
- C. Microsoft Hyper-V VMs with hot storage
- D. SCVMM host group
- E. Azure Recovery Services Vault
- F. Shielded VMs

Correct Answer: BDE

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Component	Requirement	Details
Azure	An Azure subscription, Azure storage account, and Azure network.	Replicated data from on-premises VM workloads is stored in the storage account. Azure VMs are created with the replicated data when failover from your on-premises site occurs. The Azure VMs connect to the Azure virtual network when they're created.
VMM server	The VMM server has one or more clouds containing Hyper-V hosts.	You install the Site Recovery Provider on the VMM server, to orchestrate replication with Site Recovery, and register the server in the Recovery Services vault.
Hyper-V host	One or more Hyper-V hosts/clusters managed by VMM.	You install the Recovery Services agent on each Hyper-V host or cluster node.
Hyper-V VMs	One or VMs running on a Hyper-V host server.	Nothing needs to explicitly installed on VMs.

Networking	Logical and VM networks set up on the VMM server. The VM network should be linked to a logical network that's associated with the cloud.	VM networks are mapped to Azure virtual networks. When Azure VMs are created after failover, they are added to the Azure network that's mapped to the VM network.
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References: <https://docs.microsoft.com/en-us/azure/site-recovery/hyper-v-azure-architecture>

QUESTION 12

You manage Microsoft System Center Virtual Machine Manager (SCVMM).

You need to ensure that all virtual machines (VMs) are fault tolerant. You must set storage tier sizes.

Which three Windows PowerShell cmdlets should you run? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. **Optimize-Volume**
- B. **Enable-ClusterS2D**
- C. **Set-ClusterParameter**
- D. **New-Cluster**
- E. **New-Volume**



Correct Answer: BDE

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Storage Spaces Direct uses industry-standard servers with local-attached drives to create highly available, highly scalable software-defined storage at a fraction of the cost of traditional SAN or NAS arrays.

The New-Cluster cmdlet creates a cluster. After creating the cluster, use the Enable-ClusterStorageSpacesDirect PowerShell cmdlet, which will put the storage system into the Storage Spaces Direct mode and do the following automatically:

- **Create a pool:** Creates a single large pool that has a name like "S2D on Cluster1".
- **Configures the Storage Spaces Direct caches:** If there is more than one media (drive) type available for Storage Spaces Direct use, it enables the fastest as cache devices (read and write in most cases)
- **Tiers:** Creates two tiers as default tiers. One is called "Capacity" and the other called "Performance". The cmdlet analyzes the devices and configures each tier with the mix of device types and resiliency.

The use of the New-Volume cmdlet recommended to create volumes for Storage Spaces Direct. It provides the fastest and most straightforward experience.

References:

<https://docs.microsoft.com/en-us/windows-server/storage/storage-spaces/storage-spaces-direct-overview> <https://docs.microsoft.com/en-us/windows-server/storage/storage-spaces/create-volumes>

QUESTION 13

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You use Microsoft System Center Virtual Machine Manager (SCVMM) to manage your company's virtual infrastructure.

You need to install a host server that can run the full version of the .NET framework.

Solution: Install the host server using the Desktop Experience installation option.

Does the solution meet the goal?



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A. Yes

B. No

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Application	Server Core	Server with Desktop Experience
Command prompt	available	available

Windows PowerShell/ Microsoft .NET	available	available
Perfmon.exe	not available	available
Windbg (GUI)	supported	supported
Resmon.exe	not available	available
Regedit	available	available
Fsutil.exe	available	available
Disksnapshot.exe	not available	available
Application	Server Core	Server with Desktop Experience
Diskpart.exe	available	available
Diskmgmt.msc	not available	available
Devmgmt.msc	not available	available
Server Manager	not available	available
Mmc.exe	not available	available
Eventvwr	not available	available
Wevtutil (Event queries)	available	available
Services.msc	not available	available
Control Panel	not available	available
Windows Update (GUI)	not available	available
Windows Explorer	not available	available
Taskbar	not available	available
Taskbar notifications	not available	available
Taskmgr	available	available
Internet Explorer or Edge	not available	available
Built-in help system	not available	available
Windows 10 Shell	not available	available
Windows Media Player	not available	available
PowerShell	available	available
PowerShell ISE	not available	available
PowerShell ISE	available	available
Mstsc.exe	not available	available
Remote Desktop Services	available	available
Hyper-V Manager	not available	available

References: <https://docs.microsoft.com/en-us/windows-server/administration/server-core/what-is-server-core>

QUESTION 14

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You use Microsoft System Center Virtual Machine Manager (SCVMM) to manage your company's virtual infrastructure.

You need to install a host server that can run the full version of the .NET framework.

Solution: Install the host server as Windows Server 2016 Server Core.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation



Explanation/Reference:

Explanation:

Application	Server Core	Server with Desktop Experience
Command prompt	available	available
Windows PowerShell/ Microsoft .NET	available	available
Perfmon.exe	not available	available
Windbg (GUI)	supported	supported
Resmon.exe	not available	available
Regedit	available	available
Fsutil.exe	available	available
Disksnapshot.exe	not available	available
Diskpart.exe	available	available
Diskmgmt.msc	not available	available

Devmgmt.msc	not available	available
Server Manager	not available	available
Mmc.exe	not available	available
Eventvwr	not available	available
Wevtutil (Event queries)	available	available
Services.msc	not available	available
Control Panel	not available	available
Windows Update (GUI)	not available	available
Windows Explorer	not available	available
Taskbar	not available	available
Taskbar notifications	not available	available
Taskmgr	available	available
Internet Explorer or Edge	not available	available
Built-in help system	not available	available
Windows 10 Shell	not available	available
Windows Media Player	not available	available
PowerShell	available	available
Application	Server Core	Server with Desktop Experience
PowerShell ISE	not available	available
PowerShell ISE	available	available
Mstsc.exe	not available	available
Remote Desktop Services	available	available
Hyper-V Manager	not available	available

References: <https://docs.microsoft.com/en-us/windows-server/administration/server-core/what-is-server-core>

QUESTION 15

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to deploy Windows Server Gateway (WSG) with Microsoft System Center Virtual Machine Manager (SCVMM).

You need to configure the send and receive buffers for the Hyper-V hosts.

Solution: You run the Windows PowerShell cmdlet **Enable-NetAdapterRss**.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

You can use the following Windows PowerShell commands to enable and configure RSS on your network adapters: *Enable-NetAdapterRss "NIC1", "NIC2"*

References: <https://docs.microsoft.com/en-us/windows-server/administration/performance-tuning/subsystem/software-defined-networking/hnv-gateway-performance>

QUESTION 16

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to deploy Windows Server Gateway (WSG) with Microsoft System Center Virtual Machine Manager (SCVMM).

You need to configure the send and receive buffers for the Hyper-V hosts.

Solution: You run the Windows PowerShell cmdlet **Set-NetAdapterAdvancedProperty**.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

You can use the following Windows PowerShell command to set the Send Buffers size: *Set-NetAdapterAdvancedProperty "NIC1" -DisplayName "Transmit Buffers" -DisplayValue 3000* You can use the following Windows PowerShell command to set the Receive Buffers size: *Set-NetAdapterAdvancedProperty "NIC1" -DisplayName "Receive Buffers" -DisplayValue 3000*

References: <https://docs.microsoft.com/en-us/windows-server/administration/performance-tuning/subsystem/software-defined-networking/hnv-gateway-performance>

QUESTION 17

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You plan to deploy Windows Server Gateway (WSG) with Microsoft System Center Virtual Machine Manager (SCVMM).

You need to configure the send and receive buffers for the Hyper-V hosts.

Solution: You run the Windows PowerShell cmdlet **Set-NetAdapterBinding**.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The Set-NetAdapterBinding cmdlet sets the binding state of a transport or filter on a network adapter.

References: <https://docs.microsoft.com/en-us/powershell/module/netadapter/set-netadapterbinding?view=win10-ps>

QUESTION 18

You administer Microsoft system center Virtual machine manager (SCVMM). You create a virtual network adapter that connects a virtual machine (VM) named VM1 to a virtual switch called SW1.

You need to configure the maximum and minimum bandwidths for the virtual network adapter.

Which object should you create in SCVMM?

- A. Virtual port profile
- B. Uplink port profile
- C. Port classification
- D. Logical switch

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

You apply virtual network adapter port profiles to virtual network adapters. These profiles define specific capabilities, such as bandwidth limitations, and priority.

References:

<https://docs.microsoft.com/en-us/system-center/vmm/network-port-profile?view=sc-vmm-1807>

QUESTION 19

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You manage a Microsoft System Center Virtual Machine Manager (SCVMM) environment. You plan to create virtual machine (VM) networks and IP address pools.

You need to ensure that VM networks are segmented.

Solution: You create a VM network with the **No Isolation** option.

Does the solution meet the goal?

- A. Yes

B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The type of VM network you set up depends on the isolation settings for the logical network:

- **Network virtualization:** If the logical network is isolated using network virtualization you can create multiple VM networks for a logical network. Within a VM network tenants can use any IP addresses they want for their VMs regardless of the IP addresses used on other VM networks. Tenants can also configure some network settings.

- **VLAN:** If the logical network is isolated using VLAN or PVLAN you'll create on VM network for each network site and VLAN in the logical network. ▪

No isolation: If the logical network is configured without isolation you'll create a single VM network linked to a logical network.

References: <https://docs.microsoft.com/en-us/system-center/vmm/network-virtual?view=sc-vmm-1807#create-a-vm-network-no-isolation>

QUESTION 20

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You manage a Microsoft System Center Virtual Machine Manager (SCVMM) environment. You plan to create virtual machine (VM) networks and IP address pools.

You need to ensure that VM networks are segmented.

Solution: You create a VM network and specify the **Isolate using Hyper-V Network Virtualization** option.

Does the solution meet the goal?

A. Yes

B. No

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The type of VM network you set up depends on the isolation settings for the logical network:

- **Network virtualization:** If the logical network is isolated using network virtualization you can create multiple VM networks for a logical network. Within a VM network tenants can use any IP addresses they want for their VMs regardless of the IP addresses used on other VM networks. Tenants can also configure some network settings.
 - **VLAN:** If the logical network is isolated using VLAN or PVLAN you'll create on VM network for each network site and VLAN in the logical network. ▪
- No isolation:** If the logical network is configured without isolation you'll create a single VM network linked to a logical network.

References: <https://docs.microsoft.com/en-us/system-center/vmm/network-virtual?view=sc-vmm-1807#create-a-vm-network-no-isolation>

QUESTION 21

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You manage a System Center Virtual Machine Manager (SCVMM) environment. You plan to create virtual machine (VM) networks and IP address pools.

You need to ensure that VM networks are segmented.

Solution: You create Windows Firewall rules on the VMs.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The type of VM network you set up depends on the isolation settings for the logical network:

- **Network virtualization:** If the logical network is isolated using network virtualization you can create multiple VM networks for a logical network. Within a VM network tenants can use any IP addresses they want for their VMs regardless of the IP addresses used on other VM networks. Tenants can also configure some network settings.
 - **VLAN:** If the logical network is isolated using VLAN or PVLAN you'll create on VM network for each network site and VLAN in the logical network. ▪
- No isolation:** If the logical network is configured without isolation you'll create a single VM network linked to a logical network.

References: <https://docs.microsoft.com/en-us/system-center/vmm/network-virtual?view=sc-vmm-1807#create-a-vm-network-no-isolation>

QUESTION 22

DRAG DROP

You plan to deploy a new virtual machine (VM) that uses the following components:

- Windows server 2016
 - Microsoft system center virtual machine manager (SCVMM) ▪
- Nano Server

You create a Microsoft Hyper-V clustered environment and install SCVMM on a server named server1.

You need to create Nano based server image by using an SCVMM template. The image must contain the SCVMM agent.

Which 3 actions should you perform in sequence? Rearrange the answer in the correct order.

Select and Place:



Actions

On server1, use windows PowerShell to import the SCVMM module

On server1, use windows PowerShell to import the Nano server image Generator module

On server1, run the windows Power Shell Cmdlet-**New Nano Server Image** and specify a value for the **Package** parameter

On server1, run the windows PowerShell cmdlet **Install-Nano server package** and specify the name parameter

Copy the Nano server folder from the windows server 2016 media to server 1

Answer Area

Correct Answer:

Actions

On server1, use windows PowerShell to import the SCVMM module

Copy the Nano server folder from the windows server 2016 media to server 1

Answer Area

On server1, use windows PowerShell to import the Nano server image Generator module

On server1, run the windows Power Shell Cmdlet-**New Nano Server Image** and specify a value for the **Package** parameter

On server1, run the windows PowerShell cmdlet **Install-Nano server package** and specify the name parameter

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Create a virtual hard disk for a physical machine

1. Copy NanoServerImageGenerator.psm1 and Convert-WindowsImage.ps1 from the \NanoServer folder in the Windows Server ISO, to a folder on your hard drive.
2. Start Windows PowerShell as an administrator. Navigate to the folder in which you placed the scripts.
3. Import the NanoServerImageGenerator script by running:
 - Import-Module NanoServerImageGenerator.psm1 -Verbose
1. Create a VHD that includes the VMM packages. To do this, run the following command which will prompt you for an administrator password for the new VHD:
 - New-NanoServerImage -MediaPath <path to root of media> -BasePath .\Base -TargetPath .\NanoServerVM\NanoServerVM.vhdx -ComputerName <computername> -OEMDrivers -Package Microsoft-NanoServer-SCVMM-Package,Microsoft-NanoServer-SCVMM-Compute-Package

1. Log in as an administrator on the physical server on which you want to run the Nano Server VHD.
 2. Copy the VHD that the script creates to the physical computer, and configure it to boot from the new VHD, as follows:
 - Mount the generated VHD.
 - Run **bcdboot d:\windows** (in this example, it's mounted under D:) ▪
- Unmount the VHD.
1. Boot the physical computer into the Nano Server virtual hard disk.
 2. Log on to the Nano server Recovery Console using the administrator name and password you supplied when running the script, and obtain the IP address of the Nano server-based host.
 3. Ensure that the Nano server is joined to the same domain as the VMM server.
 4. Ensure that the VMM service account, and the Run As account, are added to the administrators group on the Nano server.

Install the VMM packages offline on an existing Nano Server

If you didn't add the VMM packages when you created the Nano Server VHD, you can install them later, as follows:

1. Copy the VHD/VHDX to a location on a Windows Server 2016 machine. For example: C:\MyNano.vhd.
2. Use PowerShell to install and import the NanoServerPackage provider of the PackageManagement (OneGet) PowerShell module: *Install-PackageProvider NanoServerPackage*

Import-PackageProvider NanoServerPackage

3. After the provider is installed, you can search and install the VMM packages (VMM agent and Hyper-V), on the VHD using these cmdlets, where **C:\MyNano.vhd** is the location of the Nano Server based VHD.

Find-NanoServerPackage

Install-NanoServerPackage -Name Microsoft-NanoServer-SCVMM-Package -culture en-US -ToVhd "C:\MyNano.vhd"

Install-NanoServerPackage -Name Microsoft-NanoServer-SCVMM-Compute-Package -culture en-US -ToVhd "C:\MyNano.vhd"

References: <https://docs.microsoft.com/en-us/system-center/vmm/hyper-v-nano?view=sc-vmm-2016>

QUESTION 23

You manage multiple Hyper-V clusters by using Microsoft system center virtual machine manager (SCVMM). All servers run windows server 2012R2.

You must upgrade the nodes in the cluster by using SCVMM.

You identify the following requirement:

- Do not make configuration changes to the management network adapter for the cluster ▪
- Minimize cluster downtime for the upgrade process

You need to create a template to upgrade nodes in the cluster.

Which 3 components should you configure? Each correct selection present part of the solution.

- A. Baseboard management controller (BMC) protocol
- B. Baseboard management controller (BMC) Mac address
- C. Cluster service account
- D. Cluster IP address
- E. Baseboard management controller (BMC) IP address
- F. Baseboard management controller (BMC) service account

Correct Answer: AEF

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Cluster rolling upgrade enables you to upgrade the operating system of cluster nodes without stopping Hyper-V workloads running on the nodes.

To run the upgrade

1. Click Fabric > Servers > All Hosts. Right-click the host cluster > Upgrade Cluster.
2. In the Upgrade Wizard > Nodes, click the nodes you want to upgrade or Select All. Then click Physical computer profile, and select the profile for the nodes.
3. In BMC Configuration, select the **Run As account** with permissions to access the BMC or create a new one. In **Out-of-band management protocol** click the protocol that the BMCs use. To use DCMI click IPMI. DCMI is supported even though it's not listed. Make sure the correct port is listed.
4. In Deployment Customization, review the nodes to upgrade. If the wizard couldn't figure out all of the settings it displays a Missing Settings alert for the node. For example if the node wasn't provisioned by bare metal BMC settings might not be complete. Fill in the missing information.
 - Enter the **BMC IP address** if required. You can also change the node name. Don't clear Skip Active Directory check for this computer name unless you're changing the node name and you want to make sure the new name is not in use.
 - In the network adapter configuration you can specify the MAC address. Do this if you're configuring the management adapter for the cluster, and you want to configure it as a virtual network adapter. It's not the MAC address of the BMC. If you choose to specify static IP settings for the adapter, select a logical network and an IP subnet if applicable. If the subnet contains an address pool you can select Obtain an IP address corresponding to the selected subnet. Otherwise type an IP address within the logical network.
5. In Summary click Finish to begin the upgrade. If the wizard finishes the node upgrades successfully, all of the cluster nodes are running Windows Server 2016 the wizard upgrade the cluster functional level to Windows Server 2016.

References: <https://docs.microsoft.com/en-us/system-center/vmm/hyper-v-rolling-upgrade?view=sc-vmm-1807>

QUESTION 24

DRAW DROP

You are the system administrator for a manufacturing company. You implement a new solution for your windows server.

The file system drivers for all servers offloaded data Transfers (ODX).



<https://www.vceplus.com/>

You need to configure the servers.

Which four actions should you perform in sequence? Rearrange in correct order.

Select and Place:



Actions

Run the following Windows PowerShell cmdlet for each filter driver registry entry:

Get-Item property

Open a windows PowerShell session

Ensure that the value of the support Features registry value equals 0

Ensure that the value of the support Features registry key equals 3

Run the FLmtc command

Answer Area

Correct Answer:

Actions	Answer Area
	Run the FLmtc command
	Ensure that the value of the support Features registry key equals 3
Ensure that the value of the support Features registry value equals 0	Open a windows PowerShell session
	Run the following Windows PowerShell cmdlet for each filter driver registry entry: Get-Item property

Section: [none]

Explanation

Explanation/Reference:

Explanation:

We can use the FLTMC command to list filter drivers and their supported features. If the value of the support Features registry key equals 3, then ODX is supported.

The Get-ItemProperty cmdlet gets the properties of the specified items.

References:

<https://blogs.technet.microsoft.com/askcore/2014/06/26/is-offloaded-data-transfers-odx-working/>

<https://docs.microsoft.com/en-us/powershell/module/microsoft.powershell.management/get-itemproperty?view=powershell-6>

QUESTION 25

A company has a Microsoft System center virtual machine manager (SCVMM) environment. The company also uses System center operations manager (SCOM). You integrate SCVMM with SCOM.

You need to ensure that alerts, notifications and monitoring is synchronizing between SCVMM and SCOM.

What should you do?

- A. Enable performance and resource optimization (PRO)
- B. Install the SCOM agent on the SCVMM management server
- C. Install the SCOM console on the SCVMM management server
- D. Enable maintenance and mode integration

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

PRO information is provided by Operations Manager, and can be VMM to optimize performance. You can map specific Operations Manager alerts to remedial actions in VMM. For example, you could migrate VMs to a different host after a hardware issue. In addition, with PRO enabled, Operations Managers can detect resource issues or hardware failures in the virtualization infrastructure.

References: <https://docs.microsoft.com/en-us/system-center/vmm/monitors-ops-manager?view=sc-vmm-1807>

QUESTION 26

You are configuring network adapters within a Microsoft system center virtual machine (SCVMM) network fabric. You deploy switch extensions.

The switch must filter packets and choose the appropriate destination port.

You need to select a virtual switch extension to include in the logical switch.

Which type of virtual extension switch should you include?

- A. Forwarding
- B. Monitoring
- C. Capturing
- D. filtering

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Forwarding extensions can be used to direct traffic by defining destinations, and they can capture and filter traffic.

References: <https://docs.microsoft.com/en-us/system-center/vmm/network-switch?view=sc-vmm-1807#set-up-virtual-switch-extensions>

