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70-745

Implementing a Software-Defined Datacenter

Testlet 1

Background

General

Alpine Ski House is a global resort and retail company that has a main office in Toronto. The main office hosts the primary datacenter for the company.

The datacenter contains servers that run Windows Server 2012 R2 and Windows Server 2016. The environment contains Microsoft System Center Virtual Machine Manager (SCVMM) and System Center Configuration Manager (SCCM).

Network environment

The company uses Microsoft Azure with the Operations Management Suite (OMS). The following servers are deployed:

- Network Controller
- Nano Servers that run IIS
- Hyper-V host servers that run Windows Server 2012 R2
- SQL Server 2014

All existing virtual machines (VMs) are Generation 1 VMs that run Windows Server 2012 R2.

You have the following VM networks:

- one datacenter network named DCN1
- one management network named MGN1
- one tenant network named Network1 that is isolated in the SCVMM fabric
- five additional tenant networks for VMs

Business Requirements

The company has signed a license agreement with Microsoft to use all System Center products.

You plan to deploy a distributed System Center Operations Manager (SCOM) environment in the Toronto datacenter. The SCOM server must use an existing SQL Server instance. A dedicated SQL Server service account must be used for the SCOM installation.

Technical Requirements

Compute environment

The company plans to deploy 10 new servers that run Hyper-V in the Toronto datacenter. All new Hyper-V host servers must run Nano Server. You create a blank Nano Server VHD and store the image at the following location: F:\HyperVNano.vhd.

The compute environment has the following requirements:

- IIS Nano Servers must appear in the SCVMM console.
- All new Nano Servers must be managed by SCVMM when they are deployed.
- All new VMs must be deployed and shielded by using SCVMM templates.
- All VMs must support shielding.

Network environment

You create a certificate file named Cert.cer for Network Controller.

You must implement a software load balancer (SLB) by using SCVMM service templates. The SLB template has been named SLBTemplate.xml.

The network environment has the following requirements:

- Use the SvcAdmin local user account for all service templates.
- Configure firewall rules by using access control lists (ACLs).
- Configure specific network interfaces to use individual ACLs.

QUESTION 1

You need to ensure that the existing VMs meet the requirements.

What should you do?



- A. Modify the VM disks to Differencing.
- B. Upgrade the VM operating system to Windows Server 2016 Standard edition.
- C. Modify the VM configuration to Generation 2.
- D. Upgrade the VM operating system to Windows Server 2016 Datacenter edition.

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Windows Server 2016 Datacenter supports Shielded Virtual Machines.

References:

<https://blogs.technet.microsoft.com/ausoemteam/2016/09/02/whats-new-in-windows-server-2016-standard-edition-part-7-virtualisation/> **QUESTION 2**

You need to ensure that Network1 can communicate with other virtual networks.

What should you do?

- A. Configure logical switches for the VMs on Network1.
- B. Create an IP address pool for Network1.
- C. Create port profiles for the VMs on Network1.
- D. Configure a gateway in SCVMM.

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

Explanation:

If you're using isolated VM networks in your VMM fabric, VMs associated with a network can only connect to machines in the same subnet. If you want to connect VMs further than the subnet you'll need a gateway.

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

QUESTION 3

You need to install SCOM.



Which SCOM component should you install first?

- A. Reporting server
- B. Web console
- C. Management server
- D. Operations console

Correct Answer: C

Section: [none]

Explanation

Explanation/Reference:

Explanation:

In System Center Operations Manager, the first feature you install is the management server.

References:

<https://docs.microsoft.com/en-us/system-center/scom/deploy-install-mgmt-server?view=sc-om-1807>

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 an SDN network controller for the SCVMM test environment.

What should you do first?

- A. In SCVMM, create a dedicated host group for Det-Server3, Det-Server4, and Det-Server5.
- B. In AD DS, create a security group and add Det-Server3, Det-Server4, and Det-Server5.
- C. In AD DS, create a security group and add Det-Server6, Det-Server7, and Det-Server8.
- D. In SCVMM, create a dedicated host group for Det-Server6, Det-Server7, and Det-Server8.

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Set up host groups

1. Create a dedicated host group for Hyper-V hosts that will be managed by SDN.
2. Make sure Hyper-V hosts are running Windows Server 2016 with latest patches installed.

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

QUESTION 2

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 3

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

Which 2 clusters can you upgrade?



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- 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

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.

Your company has two datacenters. You have Windows servers in both locations. The network that connects the datacenters has high bandwidth and low latency.

You are designing a new virtual machine (VM) and storage environment based on servers that run Windows Server 2016. You need to implement a solution that meets the following storage requirements:

- Tolerates the failure of a single datacenter.
- Ensures zero data loss in the event of a file system failure.

Solution: You implement offloaded data transfers.

Does the solution meet the goal?

- A. Yes
- B. No



Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

QUESTION 2

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You are designing a new virtual machine (VM) and storage environment based on servers that run Windows Server 2016. You need to implement a solution that meets the following storage requirements:

- Tolerates the failure of a single datacenter.
- Ensures zero data loss in the event of a file system failure.

Solution: You implement Distributed File System Replication.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

QUESTION 3

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.

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Your company has two datacenters. You have Windows servers in both locations. The network that connects the datacenters has high bandwidth and low latency.

You are designing a new virtual machine (VM) and storage environment based on servers that run Windows Server 2016. You need to implement a solution that meets the following storage requirements:

- Tolerates the failure of a single datacenter.
- Ensures zero data loss in the event of a file system failure.

Solution: You implement a storage replica with synchronous replication.

Does the solution meet the goal?

- A. Yes
- B. No

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

QUESTION 4

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

You need to access the Network Controller diagnostic logs.

Where should you view the logs?

- A. %programfiles%\DiagnosticLogs
- B. %windir%\SDNDiagnostics
- C. %systemdrive%\SDNDiagnostics
- D. %systemroot%\DiagnosticLogs

Correct Answer: C

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Logging is automatically enabled when you install the Network Controller cluster using the Install-NetworkControllerCluster cmdlet. By default, the logs are collected locally on the Network Controller nodes at %systemdrive%\SDNDiagnostics.

References: <https://docs.microsoft.com/en-us/windows-server/networking/sdn/troubleshoot/troubleshoot-windows-server-software-defined-networking-stack>

QUESTION 5

You deploy a Microsoft Hyper-V host server and install the Network Controller role.

You need to modify the application settings of the Network Controller.

Which Windows PowerShell cmdlet should you run?

- A. **Set-NetworkControllerVirtualNetworkConfiguration**
- B. **Set-NetworkController**



- C. **Set-NetworkControllerNode**
- D. **Set-NetworkControllerCluster**

Correct Answer: B

Section: [none]

Explanation

Explanation/Reference:

Explanation:

The Set-NetworkController cmdlet sets network controller application settings.

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

QUESTION 6

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 7

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 8

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.

- 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 9

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 10

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 11

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



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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 12

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 13

You administer a Microsoft System Center Virtual Machine Manager (SCVMM) infrastructure. You have a Microsoft Azure subscription.

You must design a backup strategy that meets the following requirements:

- Back up the SCVMM hosts, virtual machines (VMs), and workloads.
- Use a protection agent to perform the backups. ▪

Automate the backup process.

You need to recommend a backup solution.

What should you recommend?

- A. Windows PowerShell script that runs Disk2VHD
- B. Microsoft Hyper-V Replica
- C. WBAdmin.exe
- D. System Center Data Protection Manager

Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

Explanation:

You can deploy System Center Data Protection Manager (DPM) for:

- **Application-aware backup:** Application-aware back up of Microsoft workloads, including SQL Server, Exchange, and SharePoint.
- **File backup:** Back up files, folders and volumes for computers running Windows server and Windows client operating systems.
- **System backup:** Back up system state or run full, bare-metal backups of physical computers running Windows server or Windows client operating systems. ▪

Hyper-V backup: Back up Hyper-V virtual machines (VM) running Windows or Linux. You can back up an entire VM, or run application-aware backups of Microsoft workloads on Hyper-V VMs running Windows.

References: <https://docs.microsoft.com/en-us/system-center/dpm/dpm-overview?view=sc-dpm-1807>

QUESTION 14

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 more VMs running on a Hyper-V host server.	Nothing needs to be 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.

References: <https://docs.microsoft.com/en-us/azure/site-recovery/hyper-v-azure-architecture>

QUESTION 15

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 16

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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?

- 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
Diskpart.exe	available	available
Application	Server Core	Server with Desktop Experience
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 IME	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 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 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 a host server that runs Windows Server 2016 R2 Server Core. Add the Desktop Experience feature.

Does the solution meet the goal?

- 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
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
Application	Server Core	Server with Desktop Experience
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 18

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 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 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 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 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 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

You administer Microsoft system center virtual machine manager (SCVMM). You develop a custom three-tier application.

You identify the following requirement for the application deployment:

- You must deploy four separate instances of the application ▪
- Configuration settings for each instance must be similar
- You must be able to deploy the instances by using SCVMM
- Developers must be able to access two specific application instances

You need to deploy the application instances.

What should you do?

- A. Create a virtual machine VM template
- B. Create a private cloud
- C. Create a host group
- D. Create a service template



Correct Answer: D

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Service templates group VMs together to provide an app. They contain information about a service, including the VMs that are deployed as part of the service, the applications installed on VMs, and the network settings that should be used. You can add VM templates, network settings, applications, and storage to a service template.

<https://docs.microsoft.com/en-us/system-center/vmm/library-service-templates?view=sc-vmm-1807>

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

A company has a Microsoft System Center virtual machine manager (SCVMM) environment. The environment includes a software load balancer (SLB) and virtual machine (VMs) that run Network controller.

You need to create a guest cluster.

What should you do?

- A. Create a service template
- B. Create a logical network
- C. Deploy a RAS gateway
- D. Create an internal load-balancer virtual IP address

Correct Answer: D

Section: [none]

Explanation



Explanation/Reference:

Explanation:

VMM 1801 and later supports guest clustering in SDN through an Internal Load Balancer(ILB) Virtual IP(VIP). The ILB uses probe ports which are created on the guest cluster VMs to identify the active node. At any given time, the probe port of only the active node responds to the ILB and all the traffic directed to the VIP is routed to the active node.

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

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 an administrator at Contoso Ltd. You have a Microsoft system center virtual machine manager (SCVMM) host server with a 10 Gbps network interface card (NIC). The host server is configured for a multi-tenant environment. Contoso, provides three tiers of service of its tenants.

Level	Comments
Bronze	Provides bandwidth up to 500 Mbps and minimally 0 Mbps for the tenant's virtual machines (VMs)
Silver	Provides bandwidth up to 1 Gbps and minimally 500 Mbps for the tenant's (VMs)
Gold	Provides bandwidth up to 5 Gbps and minimally 1 Gbps for the tenant's (VMs)

All tenants are configured to use the same virtual network and same virtual switch.

You configure the Maximum Bandwidth (Mbps) and minimum (Mbps) port profiles for each tenant according to their service tier.

Tenants report that they are not receiving the minimum service levels for their service tier.

You need to ensure that tenants receive the minimum service levels.

What should you configure?

- A. Minimum Bandwidth (weight)
- B. Minimum Bandwidth (Mbps)
- C. Maximum Bandwidth (Mbps)
- D. Maximum Bandwidth (Weight)

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Minimum bandwidth (Weight): Specify a weighted portion of the outbound bandwidth that you want to reserve for this vNIC. This will reserve a weighted portion of the total physical NIC(s) bandwidth based on the total weights reserved by all other vNICs for a particular switch.

References: <https://docs.microsoft.com/en-us/system-center/vmm/sdn-bandwidth-qos?view=sc-vmm-1807>

QUESTION 27

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>

QUESTION 28

A company plans to deploy the host guardian service.

You need to ensure that hosts are approved if they match boot sequence and code integrity policies.

What should you use with the host guardian service?

- A. TPM-trusted attestation
- B. Admin trusted attestation
- C. Storage spaces direct
- D. Credential Guard

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

In guarded fabrics configured to use TPM attestation, each host must be configured with a code integrity policy that is trusted by the Host Guardian Service. TPM-attestation: If your HGS is configured to use TPM attestation, the host servers must:

1. Use UEFI 2.3.1c and a TPM 2.0 module
2. Boot in UEFI mode (not BIOS or "legacy" mode)
3. Enable Secure Boot

References: <https://docs.microsoft.com/en-us/system-center/vmm/guarded-deploy-host?view=sc-vmm-1807>

QUESTION 29

An organization has three physical locations that are configured as separate Active Directory Services (AD DS) sites.

You need to deploy Microsoft System center Operations Manager. The Operations Manager agents must be able to access a management server even if one management server or AD DS is unavailable.

What should you do?

- A. Deploy a secondary management server in each AD DS site

- B. Deploy a management server in each AD DS and add the management servers to the all management servers resource pool
C. Deploy a root management server in each AD DS site
D. Create a resource pool for each AD Ds site. Deploy a management server in each AD DS site and then add the management server to the site resource pool.

Correct Answer: A

Section: [none]

Explanation

Explanation/Reference:

Explanation:

Configuration of agent assignment is managed by an Operations Manager administrator using the Agent Assignment and Failover Wizard to assign computers to a primary management server and secondary management server.

References: <https://docs.microsoft.com/en-us/system-center/scom/plan-planning-agent-deployment?view=sc-om-1807>

QUESTION 30

You manage Microsoft system virtual Machine Manager (SCVMM).

You need to secure network traffic.

Which two protocols can you secure by using port access control lists (ACLs)? Each correct answer presents a complete solution.

- A. SCTP
- B. DTP
- C. DCCP
- D. UDP
- E. TCP

Correct Answer: DE

Section: [none]

Explanation

Explanation/Reference:

Explanation:

General guidelines for what an access control list consist of are as follows:

- Access control list name (depending on the router it could be numeric or combination of letters and numbers)

- A sequence number or term name for each entry
- A statement of permission or denial for that entry
- A network protocol and associated function or ports
 - Examples include IP, IPX, ICMP, **TCP**, **UDP**, NETBIOS and many others
- Destination and Source targets
 - These are typically addresses and can be defined as a single discrete address, a range or subnet, or all addresses
- Additional flags or identifiers
- These additional statements request additional functions when a match is found for the statement. These flags vary for each protocol but a common flag added to statements is the log feature that records any match to the statement into the router log

References: <https://www.pluralsight.com/blog/it-ops/access-control-list-concepts>



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