

## AZ-104

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## AZ-104

Microsoft Azure Administrator



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## Implement and manage storage

### Question Set 1

#### QUESTION 1

##### HOTSPOT

You have an Azure Storage account named storage1.

You have an Azure Service app named App1 and an app named App2 that runs in an Azure container instance. Each app uses a managed identity.

You need to ensure that App1 and App2 can read blobs from storage1. The solution must meet the following requirements:

- Minimize the number of secrets used.
- Ensure that App2 can only read from storage1 for the next 30 days.

What should you configure in storage1 for each app? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

#### Answer Area

App1:

	▼
Access keys	
Advanced security	
Access control (IAM)	
Shared access signatures (SAS)	

App2:

	▼
Access keys	
Advanced security	
Access control (IAM)	
Shared access signatures (SAS)	

**Correct Answer:**

## Answer Area

App1:

	▼
Access keys	
Advanced security	
Access control (IAM)	
Shared access signatures (SAS)	

App2:

	▼
Access keys	
Advanced security	
Access control (IAM)	
Shared access signatures (SAS)	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

App1: Access keys

App2: Shared access signature (SAS)

A shared access signature (SAS) provides secure delegated access to resources in your storage account without compromising the security of your data. With a SAS, you have granular control over how a client can access your data. You can control what resources the client may access, what permissions they have on those resources, and how long the SAS is valid, among other parameters.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview>

### QUESTION 2

HOTSPOT

You need to create an Azure Storage account that meets the following requirements:

- Minimizes costs

- Supports hot, cool, and archive blob tiers
- Provides fault tolerance if a disaster affects the Azure region where the account resides

How should you complete the command? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

```
az storage account create -g RG1 -n storageaccount1
```

--kind 

	▼
BlobStorage	
Storage	
StorageV2	

 --sku 

	▼
Standard_GRS	
Standard_LRS	
Standard_RAGRS	
Premium_LRS	

**Correct Answer:**

**Answer Area**

```
az storage account create -g RG1 -n storageaccount1
```

--kind 

	▼
BlobStorage	
Storage	
StorageV2	

 --sku 

	▼
Standard_GRS	
Standard_LRS	
Standard_RAGRS	
Premium_LRS	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: StorageV2

You may only tier your object storage data to hot, cool, or archive in Blob storage and General Purpose v2 (GPv2) accounts. General Purpose v1 (GPv1) accounts

do not support tiering.

General-purpose v2 accounts deliver the lowest per-gigabyte capacity prices for Azure Storage, as well as industry-competitive transaction prices.

Box 2: Standard\_GRS

Geo-redundant storage (GRS): Cross-regional replication to protect against region-wide unavailability.

Incorrect Answers:

Locally-redundant storage (LRS): A simple, low-cost replication strategy. Data is replicated within a single storage scale unit.

Read-access geo-redundant storage (RA-GRS): Cross-regional replication with read access to the replica. RA-GRS provides read-only access to the data in the secondary location, in addition to geo-replication across two regions, but is more expensive compared to GRS.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy-grs>

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers>

### QUESTION 3

You have an Azure subscription that contains the resources in the following table.

Name	Type
RG1	Resource group
store1	Azure Storage account
Sync1	Azure File Sync

Store1 contains a file share named data. Data contains 5,000 files.

You need to synchronize the files in the file share named data to an on-premises server named Server1.

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

**NOTE:** Each correct selection is worth one point.

- A. Create a container instance
- B. Register Server1
- C. Install the Azure File Sync agent on Server1
- D. Download an automation script
- E. Create a sync group

**Correct Answer:** BCE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1 (C): Install the Azure File Sync agent on Server1

The Azure File Sync agent is a downloadable package that enables Windows Server to be synced with an Azure file share

Step 2 (B): Register Server1.

Register Windows Server with Storage Sync Service

Registering your Windows Server with a Storage Sync Service establishes a trust relationship between your server (or cluster) and the Storage Sync Service.

Step 3 (E): Create a sync group and a cloud endpoint.

A sync group defines the sync topology for a set of files. Endpoints within a sync group are kept in sync with each other. A sync group must contain one cloud endpoint, which represents an Azure file share and one or more server endpoints. A server endpoint represents a path on registered server.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-deployment-guide>

#### **QUESTION 4**

**HOTSPOT**

You have an Azure subscription that contains the resources shown in the following table.

Name	Type	Resource group
VNET1	Virtual network	RG1
VNET2	Virtual network	RG2
VM1	Virtual machine	RG2

The status of VM1 is **Running**.

You assign an Azure policy as shown in the exhibit. (Click the **Exhibit** tab.)

[Home](#) > [Policy - Assignments](#) > [Assign Policy](#)

Assign Policy

SCOPE

\* Scope ([Learn more about setting the scope](#))

Azure Pass/RG2

...

Exclusions

Optionally select resources to exempt from the policy assignment

...

BASICS

\* Policy definition

Not allowed resource types

✓

...

\* Assignment name ⓘ

Not allowed resource types

✓

Description

Assigned by

First User

PARAMETERS

\* Not allowed resource types ⓘ

3 selected

✓

Assign

Cancel

You assign the policy by using the following parameters:

Microsoft.ClassicNetwork/virtualNetworks  
Microsoft.Network/virtualNetworks  
Microsoft.Compute/virtualMachines

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Statements	Yes	No
An administrator can move VNET1 to RG2	<input type="radio"/>	<input type="radio"/>
The state of VM1 changed to deallocated	<input type="radio"/>	<input type="radio"/>
An administrator can modify the address space of VNET2	<input type="radio"/>	<input type="radio"/>

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

Statements	Yes	No
An administrator can move VNET1 to RG2	<input type="radio"/>	<input checked="" type="radio"/>
The state of VM1 changed to deallocated	<input checked="" type="radio"/>	<input type="radio"/>
An administrator can modify the address space of VNET2	<input type="radio"/>	<input checked="" type="radio"/>

**Section: (none)**  
**Explanation****Explanation/Reference:****QUESTION 5**  
**DRAG DROP**

You have an Azure subscription that contains a storage account.

You have an on-premises server named Server1 that runs Windows Server 2016. Server1 has 2 TB of data.

You need to transfer the data to the storage account by using the Azure Import/Export service.

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



**NOTE:** More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

**Select and Place:**

Actions	Answer Area
From the Azure portal, update the import job	
From the Azure portal, create an import job	
Attach an external disk to Server1 and then run waimportexport.exe	⤵
Detach the external disks from Server1 and ship the disks to an Azure data center	⤴

**Correct Answer:**

Actions	Answer Area
From the Azure portal, update the import job	Attach an external disk to Server1 and then run waimportexport.exe
From the Azure portal, create an import job	From the Azure portal, create an import job
Attach an external disk to Server1 and then run waimportexport.exe	⤵
Detach the external disks from Server1 and ship the disks to an Azure data center	⤴

**Section: (none)**  
**Explanation**

**Explanation/Reference:**  
Explanation:

At a high level, an import job involves the following steps:

Step 1: Attach an external disk to Server1 and then run waimportexport.exe  
Determine data to be imported, number of drives you need, destination blob location for your data in Azure storage.  
Use the WAImportExport tool to copy data to disk drives. Encrypt the disk drives with BitLocker.

Step 2: From the Azure portal, create an import job.  
Create an import job in your target storage account in Azure portal. Upload the drive journal files.

Step 3: Detach the external disks from Server1 and ship the disks to an Azure data center.  
Provide the return address and carrier account number for shipping the drives back to you.  
Ship the disk drives to the shipping address provided during job creation.

Step 4: From the Azure portal, update the import job  
Update the delivery tracking number in the import job details and submit the import job.  
The drives are received and processed at the Azure data center.  
The drives are shipped using your carrier account to the return address provided in the import job.

Reference:  
<https://docs.microsoft.com/en-us/azure/storage/common/storage-import-export-service>

## QUESTION 6

### HOTSPOT

You have Azure subscription that includes following Azure file shares:

Name	In storage account	Location
share1	storage1	West US
share2	storage1	West US

You have the following on-premises servers:

Name	Folders
Server1	D:\Folder1, E:\Folder2
Server2	D:\Data

You create a Storage Sync Service named Sync1 and an Azure File Sync group named Group1. Group1 uses share1 as a cloud endpoint.

You register Server1 and Server2 in Sync1. You add D:\Folder1 on Server1 as a server endpoint of Group1.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

Statements	Yes	No
share2 can be added as a cloud endpoint for Group1	<input type="radio"/>	<input type="radio"/>
E:\Folder2 on Server1 can be added as a server endpoint for Group1	<input type="radio"/>	<input type="radio"/>
D:\Data on Server2 can be added as a server endpoint for Group1	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

### Answer Area

Statements	Yes	No
share2 can be added as a cloud endpoint for Group1	<input type="radio"/>	<input checked="" type="radio"/>
E:\Folder2 on Server1 can be added as a server endpoint for Group1	<input checked="" type="radio"/>	<input type="radio"/>
D:\Data on Server2 can be added as a server endpoint for Group1	<input checked="" type="radio"/>	<input type="radio"/>

**Section: (none)**  
**Explanation**

**Explanation/Reference:**  
Explanation:

Box 1: No  
Group1 already has a cloud endpoint named Share1.  
A sync group must contain one cloud endpoint, which represents an Azure file share and one or more server endpoints.

Box 2: Yes  
Yes, one or more server endpoints can be added to the sync group.

Box 3: Yes  
Yes, one or more server endpoints can be added to the sync group.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-deployment-guide>

## QUESTION 7

### DRAG DROP

You have an Azure subscription named Subscription1.

You create an Azure Storage account named contosostorage, and then you create a file share named data.

Which UNC path should you include in a script that references files from the data file share? To answer, drag the appropriate values to the correct targets. Each value may be used once, more than once or not at all. You may need to drag the split bar between panes or scroll to view content.

**NOTE:** Each correct selection is worth one point.

#### Select and Place:

Values	
blob	blob.core.windows.net
contosostorage	data
file	file.core.windows.net
portal.azure.com	subscription1

Answer Area

\\  .  \

#### Correct Answer:

Values	
blob	blob.core.windows.net
contosostorage	data
file	file.core.windows.net
portal.azure.com	subscription1

Answer Area

\\  .  \

Section: (none)

#### Explanation

#### Explanation/Reference:

Explanation:

Box 1: contosostorage

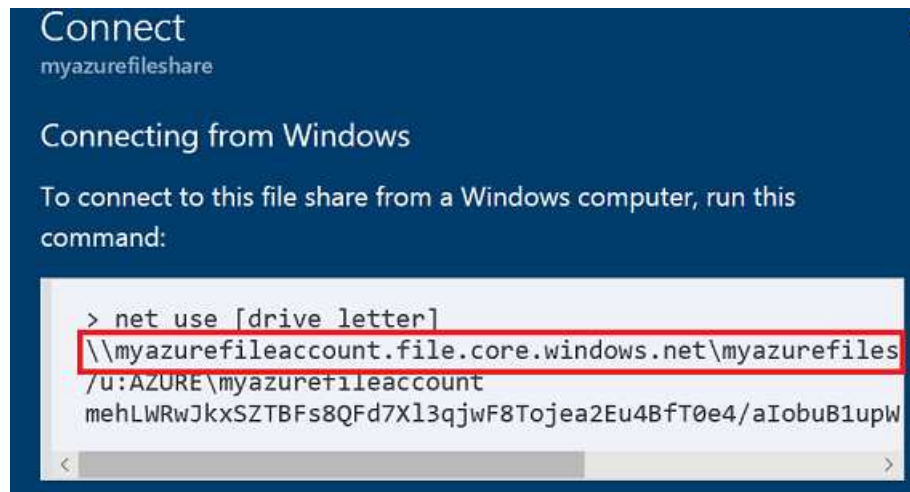
The name of account

Box 2: file.core.windows.net

Box 3: data

The name of the file share is data.

Example:



Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows>

## QUESTION 8

### HOTSPOT

You have an Azure subscription that contains an Azure Storage account.

You plan to copy an on-premises virtual machine image to a container named vmimages.

You need to create the container for the planned image.

Which command should you run? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

azcopy 

	▼
make	
sync	
copy	

'https://mystorageaccount.' 

	▼
blob	
dfs	
queue	
table	
images	
file	

 .core.windows.net/vmimages'

Correct Answer:

### Answer Area

azcopy 

	▼
make	
sync	
copy	

'https://mystorageaccount.' 

	▼
blob	
dfs	
queue	
table	
images	
file	

 .core.windows.net/vmimages'

Section: (none)

Explanation

Explanation/Reference:

**QUESTION 9**  
**HOTSPOT**

You have an Azure File sync group that has the endpoints shown in the following table.

Name	Type
Endpoint1	Cloud endpoint
Endpoint2	Server endpoint
Endpoint3	Server endpoint

Cloud tiering is enabled for Endpoint3.

You add a file named File1 to Endpoint1 and a file named File2 to Endpoint2.

On which endpoints will File1 and File2 be available within 24 hours of adding the files? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

File1: 

	▼
Endpoint1 only	
Endpoint3 only	
Endpoint2 and Endpoint3 only	
Endpoint1, Endpoint2, and Endpoint3	

File2: 

	▼
Endpoint2 only	
Endpoint3 only	
Endpoint2 and Endpoint3 only	
Endpoint1, Endpoint2, and Endpoint3	

**Correct Answer:**

## Answer Area

File1:

	▼
Endpoint1 only	
Endpoint3 only	
Endpoint2 and Endpoint3 only	
Endpoint1, Endpoint2, and Endpoint3	

File2:

	▼
Endpoint2 only	
Endpoint3 only	
Endpoint2 and Endpoint3 only	
Endpoint1, Endpoint2, and Endpoint3	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

File1: Endpoint3 only

Cloud Tiering: A switch to enable or disable cloud tiering. When enabled, cloud tiering will tier files to your Azure file shares. This converts on-premises file shares into a cache, rather than a complete copy of the dataset, to help you manage space efficiency on your server. With cloud tiering, infrequently used or accessed files can be tiered to Azure Files.

File2: Endpoint1, Endpoint2, and Endpoint3

Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-cloud-tiering>

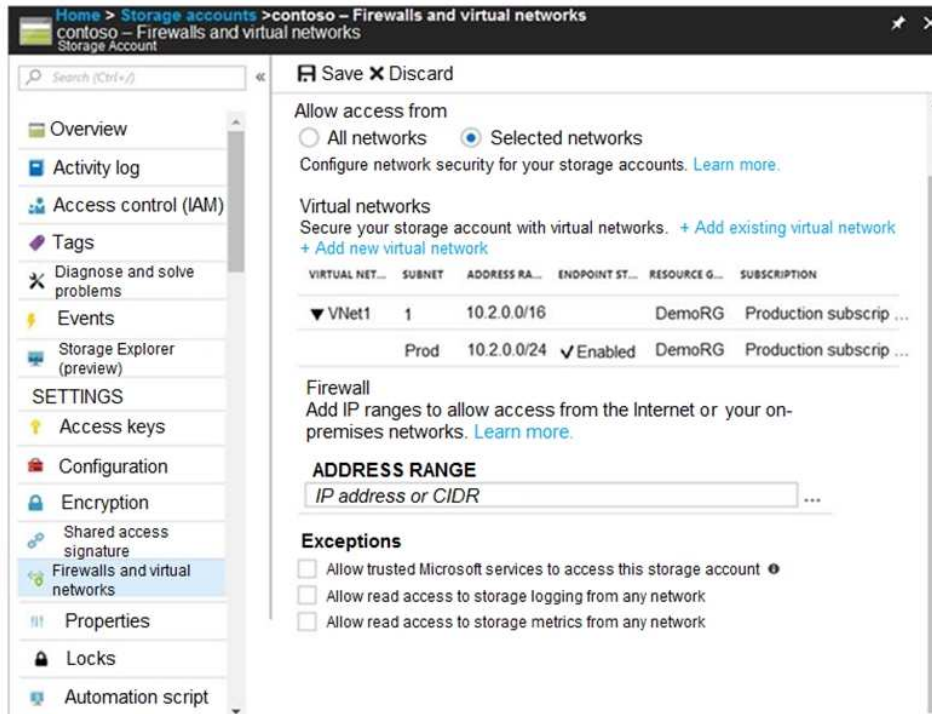
### QUESTION 10

HOTSPOT

You have several Azure virtual machines on a virtual network named VNet1.

You configure an Azure Storage account as shown in the following exhibit.





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

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

The virtual machines on the 10.2.9.0/24 subnet will have network connectivity to the file shares in the storage account [answer choice].

	▼
always	
during a backup	
never	

Azure Backup will be able to back up the unmanaged hard disks of the virtual machines in the storage account [answer choice].

	▼
always	
during a backup	
never	

**Correct Answer:**

### Answer Area

The virtual machines on the 10.2.9.0/24 subnet will have network connectivity to the file shares in the storage account [answer choice].

	▼
always	
during a backup	
never	

Azure Backup will be able to back up the unmanaged hard disks of the virtual machines in the storage account [answer choice].

	▼
always	
during a backup	
never	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

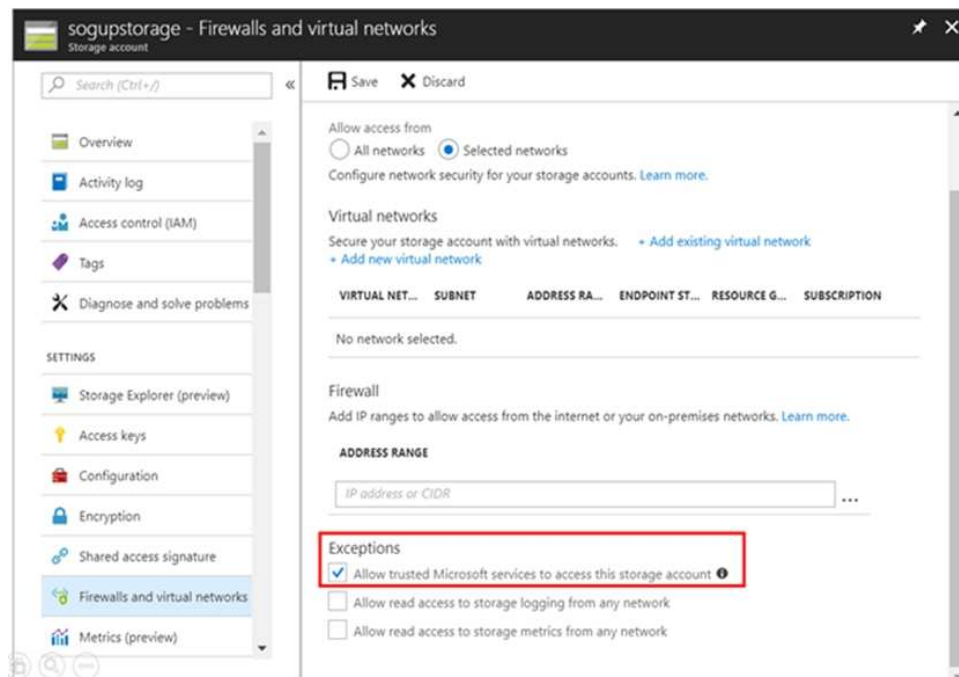
Explanation:

Box 1: always

Endpoint status is enabled.

Box 2: Never

After you configure firewall and virtual network settings for your storage account, select Allow trusted Microsoft services to access this storage account as an exception to enable Azure Backup service to access the network restricted storage account.



Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows>

<https://azure.microsoft.com/en-us/blog/azure-backup-now-supports-storage-accounts-secured-with-azure-storage-firewalls-and-virtual-networks/>

## QUESTION 11

### HOTSPOT

You have a sync group named Sync1 that has a cloud endpoint. The cloud endpoint includes a file named File1.txt.

Your on-premises network contains servers that run Windows Server 2016. The servers are configured as shown in the following table.

Name	Share	Share contents
Server1	Share1	File1.txt, File2.txt
Server2	Share2	File2.txt, File3.txt

You add Share1 as an endpoint for Sync1. One hour later, you add Share2 as an endpoint for Sync1.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Statements	Yes	No
On the cloud endpoint, File1.txt is overwritten by File1.txt from Share1.	<input type="radio"/>	<input type="radio"/>
On Server1, File1.txt is overwritten by File1.txt from the cloud endpoint.	<input type="radio"/>	<input type="radio"/>
File1.txt from Share1 replicates to Share2.	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

**Answer Area**

Statements	Yes	No
On the cloud endpoint, File1.txt is overwritten by File1.txt from Share1.	<input checked="" type="radio"/>	<input type="radio"/>
On Server1, File1.txt is overwritten by File1.txt from the cloud endpoint.	<input type="radio"/>	<input checked="" type="radio"/>
File1.txt from Share1 replicates to Share2.	<input checked="" type="radio"/>	<input type="radio"/>

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Yes

If you add an Azure file share that has an existing set of files as a cloud endpoint to a sync group, the existing files are merged with any other files that are already on other endpoints in the sync group.

Box 2: No

Box 3: Yes

Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-planning>

## QUESTION 12

You have an Azure subscription that contains the storage accounts shown in the following table.

Name	Kind	Performance	Replication	Access tier
storage1	Storage (general purpose v1)	Premium	Geo-redundant storage (GRS)	None
storage2	StorageV2 (general purpose v2)	Standard	Locally-redundant storage (LRS)	Cool
storage3	StorageV2 (general purpose v2)	Premium	Read-access geo-redundant storage (RA-GRS)	Hot
storage4	BlobStorage	Standard	Locally-redundant storage (LRS)	Hot

You need to identify which storage account can be converted to zone-redundant storage (ZRS) replication by requesting a live migration from Azure support.

What should you identify?

- A. storage1
- B. storage2
- C. storage3
- D. storage4

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

ZRS currently supports standard general-purpose v2, FileStorage and BlockBlobStorage storage account types.

Incorrect Answers:

A, not C: Live migration is supported only for storage accounts that use LRS replication. If your account uses GRS or RA-GRS, then you need to first change your account's replication type to LRS before proceeding. This intermediary step removes the secondary endpoint provided by GRS/RA-GRS.

Also, only standard storage account types support live migration. Premium storage accounts must be migrated manually.

D: ZRS currently supports standard general-purpose v2, FileStorage and BlockBlobStorage storage account types.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy-zrs>

### QUESTION 13

You have an Azure subscription that contains a storage account named account1.

You plan to upload the disk files of a virtual machine to account1 from your on-premises network. The on-premises network uses a public IP address space of 131.107.1.0/24.

You plan to use the disk files to provision an Azure virtual machine named VM1. VM1 will be attached to a virtual network named VNet1. VNet1 uses an IP address space of 192.168.0.0/24.

You need to configure account1 to meet the following requirements:

- Ensure that you can upload the disk files to account1.
- Ensure that you can attach the disks to VM1.
- Prevent all other access to account1.

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

**NOTE:** Each correct selection is worth one point.

- A. From the Firewalls and virtual networks blade of account1, select **Selected networks**.
- B. From the Firewalls and virtual networks blade of account1, select **Allow trusted Microsoft services to access this storage account**.
- C. From the Firewalls and virtual networks blade of account1, add the 131.107.1.0/24 IP address range.
- D. From the Firewalls and virtual networks blade of account1, add VNet1.
- E. From the Service endpoints blade of VNet1, add a service endpoint.

**Correct Answer:** AE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

A: By default, storage accounts accept connections from clients on any network. To limit access to selected networks, you must first change the default action.  
Azure portal

1. Navigate to the storage account you want to secure.
2. Click on the settings menu called Firewalls and virtual networks.
3. To deny access by default, choose to allow access from 'Selected networks'. To allow traffic from all networks, choose to allow access from 'All networks'.
4. Click Save to apply your changes.

E: Grant access from a Virtual Network

Storage accounts can be configured to allow access only from specific Azure Virtual Networks.

By enabling a Service Endpoint for Azure Storage within the Virtual Network, traffic is ensured an optimal route to the Azure Storage service. The identities of the virtual network and the subnet are also transmitted with each request.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-network-security>

#### **QUESTION 14**

DRAG DROP

You have an on-premises file server named Server1 that runs Windows Server 2016.

You have an Azure subscription that contains an Azure file share.

You deploy an Azure File Sync Storage Sync Service, and you create a sync group.

You need to synchronize files from Server1 to Azure.

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

**Select and Place:**

Actions	Answer Area
Install the Azure File Sync agent on Server1	
Create an Azure on-premises data gateway	
Create a Recovery Services vault	⬆
Register Server1	⬆
Add a server endpoint	
Install the DFS Replication server role on Server1	

**Correct Answer:**

Actions	Answer Area
Install the Azure File Sync agent on Server1	Install the Azure File Sync agent on Server1
Create an Azure on-premises data gateway	Register Server1
Create a Recovery Services vault	Add a server endpoint
Register Server1	⬆
Add a server endpoint	
Install the DFS Replication server role on Server1	

**Section: (none)**  
**Explanation**

**Explanation/Reference:**  
 Explanation:

Step 1: Install the Azure File Sync agent on Server1



The Azure File Sync agent is a downloadable package that enables Windows Server to be synced with an Azure file share

Step 2: Register Server1.

Register Windows Server with Storage Sync Service

Registering your Windows Server with a Storage Sync Service establishes a trust relationship between your server (or cluster) and the Storage Sync Service.

Step 3: Add a server endpoint

Create a sync group and a cloud endpoint.

A sync group defines the sync topology for a set of files. Endpoints within a sync group are kept in sync with each other. A sync group must contain one cloud endpoint, which represents an Azure file share and one or more server endpoints. A server endpoint represents a path on registered server.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-deployment-guide>

## QUESTION 15

### HOTSPOT

You plan to create an Azure Storage account in the Azure region of East US 2.

You need to create a storage account that meets the following requirements:

- Replicates synchronously.
- Remains available if a single data center in the region fails.

How should you configure the storage account? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

#### Answer Area

Replication:

	▼
Geo-redundant storage (GRS)	
Locally-redundant storage (LRS)	
Read-access geo-redundant storage (RA GRS)	
Zone-redundant storage (ZRS)	

Account type:

	▼
Blob storage	
Storage (general purpose v1)	
StorageV2 (general purpose v2)	

**Correct Answer:**

**Answer Area**

Replication:

	▼
Geo-redundant storage (GRS)	
Locally-redundant storage (LRS)	
Read-access geo-redundant storage (RA GRS)	
Zone-redundant storage (ZRS)	

Account type:

	▼
Blob storage	
Storage (general purpose v1)	
StorageV2 (general purpose v2)	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Zone-redundant storage (ZRS)

Zone-redundant storage (ZRS) replicates your data synchronously across three storage clusters in a single region.

LRS would not remain available if a data center in the region fails

GRS and RA GRS use asynchronous replication.

Box 2: StorageV2 (general purpose V2)

ZRS only support GPv2.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy>

<https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy-zrs>

**QUESTION 16**

You plan to use the Azure Import/Export service to copy files to a storage account.

Which two files should you create before you prepare the drives for the import job? Each correct answer presents part of the solution.

**NOTE:** Each correct selection is worth one point.

- A. an XML manifest file
- B. a dataset CSV file
- C. a JSON configuration file
- D. a PowerShell PS1 file
- E. a driveset CSV file

**Correct Answer:** DE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

D: Modify the dataset.csv file in the root folder where the tool resides. Depending on whether you want to import a file or folder or both, add entries in the dataset.csv file

E: Modify the driveset.csv file in the root folder where the tool resides.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-import-export-data-to-files>

#### **QUESTION 17**

You have a Recovery Service vault that you use to test backups. The test backups contain two protected virtual machines.

You need to delete the Recovery Services vault.

What should you do first?

- A. From the Recovery Service vault, delete the backup data.
- B. Modify the disaster recovery properties of each virtual machine.
- C. Modify the locks of each virtual machine.
- D. From the Recovery Service vault, stop the backup of each backup item.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

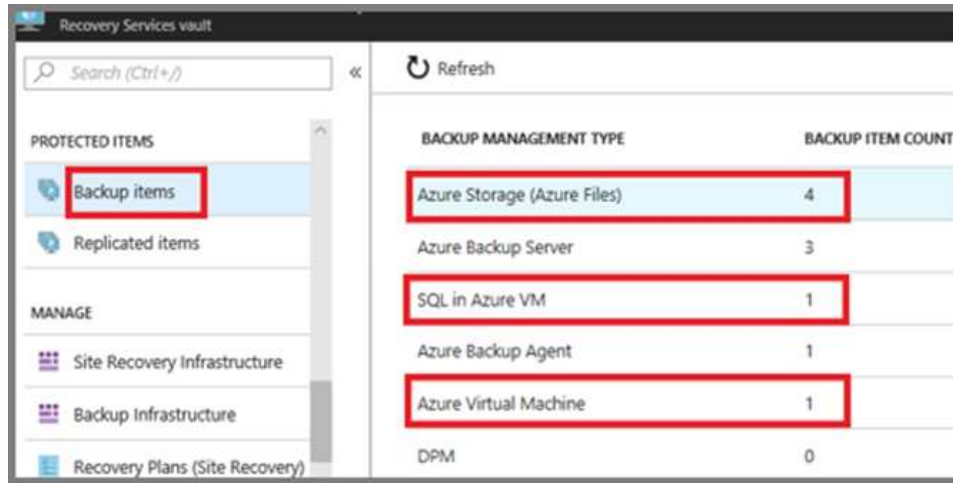
Explanation:

You can't delete a Recovery Services vault if it is registered to a server and holds backup data. If you try to delete a vault, but can't, the vault is still configured to

receive backup data.

Remove vault dependencies and delete vault

In the vault dashboard menu, scroll down to the Protected Items section, and click Backup Items. In this menu, you can stop and delete Azure File Servers, SQL Servers in Azure VM, and Azure virtual machines.



Reference:

<https://docs.microsoft.com/en-us/azure/backup/backup-azure-delete-vault>

## QUESTION 18

### HOTSPOT

You have an Azure subscription named Subscription1 that contains the resources shown in the following table.

Name	Type	Location	Resource group
RG1	Resource group	West US	Not applicable
RG2	Resource group	West US	Not applicable
Vault1	Recovery Services vault	Central US	RG1
Vault2	Recovery Services vault	West US	RG2
VM1	Virtual machine	Central US	RG2
storage1	Storage account	West US	RG1
SQL1	Azure SQL database	East US	RG2

In storage1, you create a blob container named blob1 and a file share named share1.

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

Which resources can be backed up to Vault1 and Vault2? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

Can use Vault1 for backups:	<div><div></div><div>▼</div></div> <div><div>VM1 only</div><div>VM1 and share1 only</div><div>VM1 and SQL1 only</div><div>VM1, storage1, and SQL1 only</div><div>VM1, blob1, share1, and SQL1</div></div>
Can use Vault2 for backups:	<div><div></div><div>▼</div></div> <div><div>storage1 only</div><div>share1 only</div><div>VM1 and share1 only</div><div>blob1 and share1 only</div><div>storage1 and SQL1 only</div></div>

**Correct Answer:**

## Answer Area

Can use Vault1 for backups:

	▼
VM1 only	
VM1 and share1 only	
VM1 and SQL1 only	
VM1, storage1, and SQL1 only	
VM1, blob1, share1, and SQL1	

Can use Vault2 for backups:

	▼
storage1 only	
share1 only	
VM1 and share1 only	
blob1 and share1 only	
storage1 and SQL1 only	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: VM1 only

VM1 is in the same region as Vault1.

File1 is not in the same region as Vault1.

SQL is not in the same region as Vault1.

Blobs cannot be backup up to service vaults.

Note: To create a vault to protect virtual machines, the vault must be in the same region as the virtual machines.

Box 2: Share1 only.

Storage1 is in the same region (West USA) as Vault2. Share1 is in Storage1.

Note: After you select Backup, the Backup pane opens and prompts you to select a storage account from a list of discovered supported storage accounts. They're either associated with this vault or present in the same region as the vault, but not yet associated to any Recovery Services vault.

Reference:

<https://docs.microsoft.com/bs-cyrl-ba/azure/backup/backup-create-rs-vault>

<https://docs.microsoft.com/en-us/azure/backup/backup-afs>

**QUESTION 19**

You have an Azure subscription named Subscription1.

You have 5 TB of data that you need to transfer to Subscription1.

You plan to use an Azure Import/Export job.

What can you use as the destination of the imported data?

- A. a virtual machine
- B. an Azure Cosmos DB database
- C. Azure File Storage
- D. the Azure File Sync Storage Sync Service

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Azure Import/Export service is used to securely import large amounts of data to Azure Blob storage and Azure Files by shipping disk drives to an Azure datacenter.

The maximum size of an Azure Files Resource of a file share is 5 TB.

Note:

There are several versions of this question in the exam. The question has two correct answers:

1. Azure File Storage
2. Azure Blob Storage

The question can have other incorrect answer options, including the following:

- Azure Data Lake Store
- Azure SQL Database
- Azure Data Factory

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-import-export-service>

#### **QUESTION 20**

You have an Azure Storage account named storage1.

You plan to use AzCopy to copy data to storage1.

You need to identify the storage services in storage1 to which you can copy the data.

What should you identify?

- A. blob, file, table, and queue
- B. blob and file only
- C. file and table only
- D. file only
- E. blob, table, and queue only

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

AzCopy is a command-line utility that you can use to copy blobs or files to or from a storage account.

Incorrect Answers:

A, C, E: AzCopy does not support table and queue storage services.

D: AzCopy supports file storage services, as well as blob storage services.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-v10>

#### **QUESTION 21**

**HOTSPOT**

You have an Azure Storage account named storage1 that uses Azure Blob storage and Azure File storage.

You need to use AzCopy to copy data to the blob storage and file storage in storage1.

Which authentication method should you use for each type of storage? To answer, select the appropriate options in the answer area.



**NOTE:** Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Blob storage:	<div><div></div><div>Azure Active Directory (Azure AD) only</div><div>Shared access signatures (SAS) only</div><div>Access keys and shared access signatures (SAS) only</div><div>Azure Active Directory (Azure AD) and shared access signatures (SAS) only</div><div>Azure Active Directory (Azure AD), access keys, and shared access signatures (SAS)</div></div>
File storage:	<div><div></div><div>Azure Active Directory (Azure AD) only</div><div>Shared access signatures (SAS) only</div><div>Access keys and shared access signatures (SAS) only</div><div>Azure Active Directory (Azure AD) and shared access signatures (SAS) only</div><div>Azure Active Directory (Azure AD), access keys, and shared access signatures (SAS)</div></div>

**Correct Answer:**

**Answer Area**

Blob storage:	<div><div></div><div>Azure Active Directory (Azure AD) only</div><div>Shared access signatures (SAS) only</div><div>Access keys and shared access signatures (SAS) only</div><div>Azure Active Directory (Azure AD) and shared access signatures (SAS) only</div><div>Azure Active Directory (Azure AD), access keys, and shared access signatures (SAS)</div></div>
File storage:	<div><div></div><div>Azure Active Directory (Azure AD) only</div><div>Shared access signatures (SAS) only</div><div>Access keys and shared access signatures (SAS) only</div><div>Azure Active Directory (Azure AD) and shared access signatures (SAS) only</div><div>Azure Active Directory (Azure AD), access keys, and shared access signatures (SAS)</div></div>

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

You can provide authorization credentials by using Azure Active Directory (AD), or by using a Shared Access Signature (SAS) token.

Box 1:

Both Azure Active Directory (AD) and Shared Access Signature (SAS) token are supported for Blob storage.

Box 2:

Only Shared Access Signature (SAS) token is supported for File storage.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-v10>

### QUESTION 22

You have an Azure subscription that contains an Azure Storage account.

You plan to create an Azure container instance named container1 that will use a Docker image named Image1. Image1 contains a Microsoft SQL Server instance that requires persistent storage.

You need to configure a storage service for Container1.

What should you use?

- A. Azure Files
- B. Azure Blob storage
- C. Azure Queue storage
- D. Azure Table storage

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

### QUESTION 23

You have an app named App1 that runs on two Azure virtual machines named VM1 and VM2.

You plan to implement an Azure Availability Set for App1. The solution must ensure that App1 is available during planned maintenance of the hardware hosting VM1 and VM2.

What should you include in the Availability Set?

- A. one update domain
- B. two fault domains
- C. one fault domain

D. two update domains

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Microsoft updates, which Microsoft refers to as planned maintenance events, sometimes require that VMs be rebooted to complete the update. To reduce the impact on VMs, the Azure fabric is divided into update domains to ensure that not all VMs are rebooted at the same time.

Incorrect Answers:

A: An update domain is a group of VMs and underlying physical hardware that can be rebooted at the same time.

B, C: A fault domain shares common storage as well as a common power source and network switch. It is used to protect against unplanned system failure.

References:

<https://petri.com/understanding-azure-availability-sets>

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/tutorial-availability-sets>

#### **QUESTION 24**

You have an Azure subscription named Subscription1.

You have 5 TB of data that you need to transfer to Subscription1.

You plan to use an Azure Import/Export job.

What can you use as the destination of the imported data?

A. an Azure Cosmos DB database

B. Azure Blob storage

C. Azure Data Lake Store

D. the Azure File Sync Storage Sync Service

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Azure Import/Export service is used to securely import large amounts of data to Azure Blob storage and Azure Files by shipping disk drives to an Azure datacenter.

Note:

There are several versions of this question in the exam. The question has two correct answers:

1. Azure File Storage
2. Azure Blob Storage

The question can have other incorrect answer options, including the following:

- a virtual machine
- Azure SQL Database
- Azure Data Factory

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-import-export-service>

## QUESTION 25

### DRAG DROP

You have an Azure subscription that contains an Azure file share.

You have an on-premises server named Server1 that runs Windows Server 2016.

You plan to set up Azure File Sync between Server1 and the Azure file share.

You need to prepare the subscription for the planned Azure File Sync.

Which two actions should you perform in the Azure subscription? To answer, drag the appropriate actions to the correct targets. Each action may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

**NOTE:** Each correct selection is worth one point.

**Select and Place:**

**Actions**

Create a Storage Sync Service

Install the Azure File Sync agent

Create a sync group

Run Server Registration

**Answer Area**

First action:

Action

Second action:

Action

**Correct Answer:**

**Actions**

Create a sync group

Run Server Registration

**Answer Area**

First action:

Create a Storage Sync Service

Second action:

Install the Azure File Sync agent

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

First action: Create a Storage Sync Service

The deployment of Azure File Sync starts with placing a Storage Sync Service resource into a resource group of your selected subscription.

Second action: Install the Azure File Sync agent

The Azure File Sync agent is a downloadable package that enables Windows Server to be synced with an Azure file share.

Reference:

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

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-deployment-guide>

## QUESTION 26

### HOTSPOT

You have an Azure subscription that contains the file shares shown in the following table.

Name	Location
share1	West US
share2	West US
share3	East US

You have the on-premises file shares shown in the following table.

Name	Server	Path
data1	Server1	D:\Folder1
data2	Server2	E:\Folder2
data3	Server3	E:\Folder2

You create an Azure file sync group named Sync1 and perform the following actions:

- Add share1 as the cloud endpoint for Sync1.
- Add data1 as a server endpoint for Sync1.
- Register Server1 and Server2 to Sync1.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

Statements	Yes	No
You can add share3 as an additional cloud endpoint for Sync1.	<input type="radio"/>	<input type="radio"/>
You can add data2 as an additional server endpoint for Sync1.	<input type="radio"/>	<input type="radio"/>
You can add data3 as an additional server endpoint for Sync1.	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

### Answer Area

Statements	Yes	No
You can add share3 as an additional cloud endpoint for Sync1.	<input type="radio"/>	<input checked="" type="radio"/>
You can add data2 as an additional server endpoint for Sync1.	<input checked="" type="radio"/>	<input type="radio"/>
You can add data3 as an additional server endpoint for Sync1.	<input type="radio"/>	<input checked="" type="radio"/>

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: No

A sync group must contain one cloud endpoint, which represents an Azure file share and one or more server endpoints.

Box 2: Yes

Data2 is located on Server2 which is registered to Sync1.

Box 3: No

Data3 is located on Server3 which is not registered to Sync1.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-sync-files-deployment-guide?tabs=azure-portal%2Cproactive-portal#create-a-sync-group-and-a-cloud->

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

[endpoint](#)

## QUESTION 27

### HOTSPOT

You have an Azure subscription named Subscription1 that contains the resources shown in the following table:

Name	Type	Location	Resource group
RG1	Resource group	East US	<i>Not applicable</i>
RG2	Resource group	West US	<i>Not applicable</i>
Vault1	Recovery Services vault	West Europe	RG1
storage1	Storage account	East US	RG2
storage2	Storage account	West US	RG1
storage3	Storage account	West Europe	RG2
Analytics1	Log Analytics workspace	East US	RG1
Analytics2	Log Analytics workspace	West US	RG2
Analytics3	Log Analytics workspace	West Europe	RG1

You plan to configure Azure Backup reports for Vault1.

You are configuring the Diagnostics settings for the AzureBackupReports log.

Which storage accounts and which Log Analytics workspaces can you use for the Azure Backup reports of Vault1? To answer, select the appropriate options in the answer area.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**



### Answer Area

Storage accounts:

	▼
storage1 only	
storage2 only	
storage3 only	
storage1, storage2, and storage3	

Log Analytics workspaces:

	▼
Analytics1 only	
Analytics2 only	
Analytics3 only	
Analytics1, Analytics2, and Analytics3	

**Correct Answer:**

### Answer Area

Storage accounts:

	▼
storage1 only	
storage2 only	
storage3 only	
storage1, storage2, and storage3	

Log Analytics workspaces:

	▼
Analytics1 only	
Analytics2 only	
Analytics3 only	
Analytics1, Analytics2, and Analytics3	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: storage3 only

Vault1 and storage3 are both in West Europe.

Box 2: Analytics3

Vault1 and Analytics3 are both in West Europe.

Reference:

<https://docs.microsoft.com/en-us/azure/backup/backup-azure-configure-reports>

## QUESTION 28

### HOTSPOT

You have an Azure subscription that contains the storage accounts shown in the following exhibit.





**Storage accounts** ✨

Default Directory

+ Add ⚙️ Manage view ▾ ↻ Refresh ⬇️ Export to CSV | 🏷️ Assign tags 🗑️ Delete | ❤️ Feedback

Filter by name... Subscription == all Resource group == all × Location == all × + Add filter

Showing 1 to 4 of 4 records.

<input type="checkbox"/>	Name ↑↓	Type ↑↓	Kind ↑↓	Resource group ↑↓	Location ↑↓
<input type="checkbox"/>	 contoso101	Storage account	StorageV2	RG1	East US
<input type="checkbox"/>	 contoso102	Storage account	Storage	RG1	East US
<input type="checkbox"/>	 contoso103	Storage account	BlobStorage	RG1	East US
<input type="checkbox"/>	 contoso104	Storage account	FileStorage	RG1	East US

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

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

You can create a premium file share in

▼
contoso101only
contoso104 only
contoso101 or contoso104 only
contoso101, contoso102, or contoso104 only
contoso101, contoso102, contoso103, or contoso104

You can use the Archive access tier in

▼
contoso101only
contoso101 or contoso103 only
contoso101, contoso102, and contoso103 only
contoso101, contoso102, and contoso104 only
contoso101, contoso102, contoso103, and contoso104

**Correct Answer:**

### Answer Area

You can create a premium file share in

▼
contoso101only
contoso104 only
contoso101 or contoso104 only
contoso101, contoso102, or contoso104 only
contoso101, contoso102, contoso103, or contoso104

You can use the Archive access tier in

▼
contoso101only
contoso101 or contoso103 only
contoso101, contoso102, and contoso103 only
contoso101, contoso102, and contoso104 only
contoso101, contoso102, contoso103, and contoso104

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: contoso104 only

Premium file shares are hosted in a special purpose storage account kind, called a FileStorage account.

Box 2: contoso101, contoso102, and contoso103 only

Reference:

<https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-create-premium-fileshare?tabs=azure-portal>

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers>

## **QUESTION 29**

### **HOTSPOT**

You have an Azure subscription named Subscription1.

In Subscription1, you create an Azure file share named share1.

You create a shared access signature (SAS) named SAS1 as shown in the following exhibit:

Allowed services ⓘ

☐ Blob ☒ File ☐ Queue ☐ Table

Allowed resource types ⓘ

☒ Service ☒ Container ☒ Object

Allowed permissions ⓘ

☒ Read ☒ Write ☐ Delete ☒ List ☐ Add ☐ Create ☐ Update ☐ Process

Start and expiry date/time ⓘ

Start

2018-09-01  2:00:00 PM

End

2018-09-14  2:00:00 PM

(UTC+02:00) --- Current Timezone --- ▼

Allowed IP addresses ⓘ

193.77.134.10-193.77.134.50 ✓

Allowed protocols ⓘ

☒ HTTPS only ☐ HTTPS and HTTP

Signing key ⓘ

key1 ▼

**Generate SAS and connection string**

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

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

If on September 2, 2018, you run Microsoft Azure Storage Explorer on a computer that has an IP address of 193.77.134.1, and you use SAS1 to connect to the storage account, you [answer choice].

	▼
will be prompted for credentials	
will have no access	
will have read, write, and list access	
will have read-only access	

If on September 10, 2018, you run the net use command on a computer that has an IP address of 193.77.134.50, and you use SAS1 as the password to connect to share1, you [answer choice].

	▼
will be prompted for credentials	
will have no access	
will have read, write, and list access	
will have read-only access	

**Correct Answer:**

### Answer Area

If on September 2, 2018, you run Microsoft Azure Storage Explorer on a computer that has an IP address of 193.77.134.1, and you use SAS1 to connect to the storage account, you [answer choice].

	▼
will be prompted for credentials	
will have no access	
will have read, write, and list access	
will have read-only access	

If on September 10, 2018, you run the net use command on a computer that has an IP address of 193.77.134.50, and you use SAS1 as the password to connect to share1, you [answer choice].

	▼
will be prompted for credentials	
will have no access	
will have read, write, and list access	
will have read-only access	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Will have no access

The IP 193.77.134.1 does not have access on the SAS.

Box 2: Will have read, write, and list access

The net use command is used to connect to file shares.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-dotnet-shared-access-signature-part-1>

<https://docs.microsoft.com/en-us/azure/vs-azure-tools-storage-manage-with-storage-explorer?tabs=windows>

### QUESTION 30

You have two Azure virtual machines named VM1 and VM2. You have two Recovery Services vaults named RSV1 and RSV2.

VM2 is backed up to RSV1.

You need to back up VM2 to RSV2.

What should you do first?

- A. From the RSV1 blade, click **Backup items** and stop the VM2 backup
- B. From the RSV2 blade, click **Backup**. From the Backup blade, select the backup for the virtual machine, and then click **Backup**
- C. From the VM2 blade, click **Disaster recovery**, click **Replication settings**, and then select RSV2 as the Recovery Services vault
- D. From the RSV1 blade, click **Backup Jobs** and export the VM2 job

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/backup/backup-azure-vms-first-look-arm>

## Implement and manage storage

### Testlet 2

#### Case study

This is a case study. **Case studies are not timed separately. You can use as much exam time as you would like to complete each case.** However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other questions in this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

#### To start the case study

To display the first question in this case study, click the **Next** button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an **All Information** tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the **Question** button to return to the question.

#### Overview

Contoso, Ltd. is a manufacturing company that has offices worldwide. Contoso works with partner organizations to bring products to market.

Contoso products are manufactured by using blueprint files that the company authors and maintains.

#### Existing Environment

Currently, Contoso uses multiple types of servers for business operations, including the following:

- File servers
- Domain controllers
- Microsoft SQL Server servers

Your network contains an Active Directory forest named contoso.com. All servers and client computers are joined to Active Directory.

You have a public-facing application named App1. App1 is comprised of the following three tiers:

- A SQL database



- A web front end
- A processing middle tier

Each tier is comprised of five virtual machines. Users access the web front end by using HTTPS only.

## **Requirements**

### **Planned Changes**

Contoso plans to implement the following changes to the infrastructure:

- Move all the tiers of App1 to Azure.
- Move the existing product blueprint files to Azure Blob storage.
- Create a hybrid directory to support an upcoming Microsoft Office 365 migration project.

### **Technical Requirements**

Contoso must meet the following technical requirements:

- Move all the virtual machines for App1 to Azure.
- Minimize the number of open ports between the App1 tiers.
- Ensure that all the virtual machines for App1 are protected by backups.
- Copy the blueprint files to Azure over the Internet.
- Ensure that the blueprint files are stored in the archive storage tier.
- Ensure that partner access to the blueprint files is secured and temporary.
- Prevent user passwords or hashes of passwords from being stored in Azure.
- Use unmanaged standard storage for the hard disks of the virtual machines.
- Ensure that when users join devices to Azure Active Directory (Azure AD), the users use a mobile phone to verify their identity.
- Minimize administrative effort whenever possible.

### **User Requirements**

Contoso identifies the following requirements for users:

- Ensure that only users who are part of a group named Pilot can join devices to Azure AD.
- Designate a new user named Admin1 as the service admin for the Azure subscription.
- Admin1 must receive email alerts regarding service outages.
- Ensure that a new user named User3 can create network objects for the Azure subscription.

## **QUESTION 1**

You need to implement a backup solution for App1 after the application is moved.

What should you create first?

- A. a recovery plan
- B. an Azure Backup Server
- C. a backup policy
- D. a Recovery Services vault

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

A Recovery Services vault is a logical container that stores the backup data for each protected resource, such as Azure VMs. When the backup job for a protected resource runs, it creates a recovery point inside the Recovery Services vault.

Scenario:

There are three application tiers, each with five virtual machines.

Move all the virtual machines for App1 to Azure.

Ensure that all the virtual machines for App1 are protected by backups.

Reference:

<https://docs.microsoft.com/en-us/azure/backup/quick-backup-vm-portal>

## **QUESTION 2**

You need to move the blueprint files to Azure.

What should you do?

- A. Generate an access key. Map a drive, and then copy the files by using File Explorer.
- B. Use Azure Storage Explorer to copy the files.
- C. Use the Azure Import/Export service.
- D. Generate a shared access signature (SAS). Map a drive, and then copy the files by using File Explorer.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Azure Storage Explorer is a free tool from Microsoft that allows you to work with Azure Storage data on Windows, macOS, and Linux. You can use it to upload and download data from Azure blob storage.

Scenario:

Planned Changes include: move the existing product blueprint files to Azure Blob storage.

Technical Requirements include: Copy the blueprint files to Azure over the Internet.

Reference:

<https://docs.microsoft.com/en-us/azure/machine-learning/team-data-science-process/move-data-to-azure-blob-using-azure-storage-explorer>

### QUESTION 3

#### HOTSPOT

You need to identify the storage requirements for Contoso.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

#### Answer Area

Statements	Yes	No
Contoso requires a storage account that supports Blob storage.	<input type="radio"/>	<input type="radio"/>
Contoso requires a storage account that supports Azure Table storage.	<input type="radio"/>	<input type="radio"/>
Contoso requires a storage account that supports Azure File Storage.	<input type="radio"/>	<input type="radio"/>

**Correct Answer:**

## Answer Area

Statements	Yes	No
Contoso requires a storage account that supports Blob storage.	<input checked="" type="radio"/>	<input type="radio"/>
Contoso requires a storage account that supports Azure Table storage.	<input type="radio"/>	<input checked="" type="radio"/>
Contoso requires a storage account that supports Azure File Storage.	<input type="radio"/>	<input checked="" type="radio"/>

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Yes

Contoso is moving the existing product blueprint files to Azure Blob storage.

Use unmanaged standard storage for the hard disks of the virtual machines. We use Page Blobs for these.

Box 2: No

Box 3: No

## Deploy and manage Azure compute resources

### Question Set 1

#### QUESTION 1

You have an Azure web app named App1. App1 has the deployment slots shown in the following table:

Name	Function
webapp1-prod	Production
webapp1-test	Staging

In webapp1-test, you test several changes to App1.

You back up App1.

You swap webapp1-test for webapp1-prod and discover that App1 is experiencing performance issues.

You need to revert to the previous version of App1 as quickly as possible.

What should you do?

- A. Redeploy App1
- B. Swap the slots
- C. Clone App1
- D. Restore the backup of App1

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

When you swap deployment slots, Azure swaps the Virtual IP addresses of the source and destination slots, thereby swapping the URLs of the slots. We can easily revert the deployment by swapping back.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots>

#### QUESTION 2

**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 have an Azure virtual machine named VM1 that runs Windows Server 2016.

You need to create an alert in Azure when more than two error events are logged to the System event log on VM1 within an hour.

Solution: You create an Azure Log Analytics workspace and configure the data settings. You add the Microsoft Monitoring Agent VM extension to VM1. You create an alert in Azure Monitor and specify the Log Analytics workspace as the source.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Instead: You create an Azure Log Analytics workspace and configure the data settings. You install the Microsoft Monitoring Agent on VM1. You create an alert in Azure Monitor and specify the Log Analytics workspace as the source.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/agents-overview>

### **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.**

**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 have an Azure virtual machine named VM1 that runs Windows Server 2016.

You need to create an alert in Azure when more than two error events are logged to the System event log on VM1 within an hour.

Solution: You create an Azure Log Analytics workspace and configure the data settings. You install the Microsoft Monitoring Agent on VM1. You create an alert in Azure Monitor and specify the Log Analytics workspace as the source.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Alerts in Azure Monitor can identify important information in your Log Analytics repository. They are created by alert rules that automatically run log searches at regular intervals, and if results of the log search match particular criteria, then an alert record is created and it can be configured to perform an automated response.

The Log Analytics agent collects monitoring data from the guest operating system and workloads of virtual machines in Azure, other cloud providers, and on-premises. It collects data into a Log Analytics workspace.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/learn/tutorial-response>

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/agents-overview>

#### **QUESTION 4**

**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 have an Azure virtual machine named VM1 that runs Windows Server 2016.

You need to create an alert in Azure when more than two error events are logged to the System event log on VM1 within an hour.

Solution: You create an Azure storage account and configure shared access signatures (SASs). You install the Microsoft Monitoring Agent on VM1. You create an alert in Azure Monitor and specify the storage account as the source.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** (none)

## Explanation

### Explanation/Reference:

Explanation:

Instead: You create an Azure Log Analytics workspace and configure the data settings. You install the Microsoft Monitoring Agent on VM1. You create an alert in Azure Monitor and specify the Log Analytics workspace as the source.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/agents-overview>

### QUESTION 5

You download an Azure Resource Manager template based on an existing virtual machine. The template will be used to deploy 100 virtual machines.

You need to modify the template to reference an administrative password. You must prevent the password from being stored in plain text.

What should you create to store the password?

- A. an Azure Key Vault and an access policy
- B. an Azure Storage account and an access policy
- C. a Recovery Services vault and a backup policy
- D. Azure Active Directory (AD) Identity Protection and an Azure policy

**Correct Answer: A**

**Section: (none)**

**Explanation**

### Explanation/Reference:

Explanation:

You can use a template that allows you to deploy a simple Windows VM by retrieving the password that is stored in a Key Vault. Therefore, the password is never put in plain text in the template parameter file.

Reference:

<https://azure.microsoft.com/en-us/resources/templates/101-vm-secure-password/>

### QUESTION 6

You plan to automate the deployment of a virtual machine scale set that uses the Windows Server 2016 Datacenter image.

You need to ensure that when the scale set virtual machines are provisioned, they have web server components installed.

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



**NOTE:** Each correct selection is worth one point.

- A. Upload a configuration script
- B. Create an automation account
- C. Create an Azure policy
- D. Modify the `extensionProfile` section of the Azure Resource Manager template
- E. Create a new virtual machine scale set in the Azure portal

**Correct Answer:** DE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Virtual Machine Scale Sets can be used with the Azure Desired State Configuration (DSC) extension handler. Virtual machine scale sets provide a way to deploy and manage large numbers of virtual machines, and can elastically scale in and out in response to load. DSC is used to configure the VMs as they come online so they are running the production software.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/virtual-machine-scale-sets-dsc>

## **QUESTION 7**

**DRAG DROP**

You onboard 10 Azure virtual machines to Azure Automation State Configuration.

You need to use Azure Automation State Configuration to manage the ongoing consistency of the virtual machine configurations.

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

**NOTE:** More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

**Select and Place:**

Actions	Answer Area
Assign tags to the virtual machines	
Check the compliance status of the node	
Compile a configuration into a node configuration	⤵
Upload a configuration to Azure Automation State Configuration	⤴
Create a management group	

**Correct Answer:**

Actions	Answer Area
Assign tags to the virtual machines	Upload a configuration to Azure Automation State Configuration
Check the compliance status of the node	Compile a configuration into a node configuration
Compile a configuration into a node configuration	Assign tags to the virtual machines
Upload a configuration to Azure Automation State Configuration	
Create a management group	

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Upload a configuration to Azure Automation State Configuration.  
Import the configuration into the Automation account.

Step 2: Compile a configuration into a node configuration.

A DSC configuration defining that state must be compiled into one or more node configurations (MOF document), and placed on the Automation DSC Pull Server.

Step 3: Assign the node configuration

Step 4: Check the compliance status of the node

Each time Azure Automation State Configuration performs a consistency check on a managed node, the node sends a status report back to the pull server. You can view these reports on the page for that node.

On the blade for an individual report, you can see the following status information for the corresponding consistency check:

The report status — whether the node is "Compliant", the configuration "Failed", or the node is "Not Compliant"

Reference:

<https://docs.microsoft.com/en-us/azure/automation/automation-dsc-getting-started>

### QUESTION 8

You have an Azure Resource Manager template named Template1 that is used to deploy an Azure virtual machine.

Template1 contains the following text:

```
"location": {  
  "type": "String",  
  "defaultValue": "eastus",  
  "allowedValues": [  
    "canadacentral",  
    "eastus",  
    "westeurope",  
    "westus" ]  
}
```

The variables section in Template1 contains the following text:

```
"location": "westeurope"
```

The resources section in Template1 contains the following text:

```
"type": "Microsoft.Compute/virtualMachines",  
"apiVersion": "2018-10-01",  
"name": "[variables('vmName')]",  
"location": "westeurope",
```

You need to deploy the virtual machine to the West US location by using Template1.

What should you do?

- A. Modify the location in the resources section to `westus`
- B. Select West US during the deployment
- C. Modify the location in the variables section to `westus`

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 9

You create an App Service plan named Plan1 and an Azure web app named webapp1.

You discover that the option to create a staging slot is unavailable.

You need to create a staging slot for Plan1.

What should you do first?

- A. From Plan1, scale up the App Service plan
- B. From webapp1, modify the Application settings
- C. From webapp1, add a custom domain
- D. From Plan1, scale out the App Service plan

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

The app must be running in the Standard, Premium, or Isolated tier in order for you to enable multiple deployment slots.

If the app isn't already in the Standard, Premium, or Isolated tier, you receive a message that indicates the supported tiers for enabling staged publishing. At this point, you have the option to select Upgrade and go to the Scale tab of your app before continuing.

Scale up: Get more CPU, memory, disk space, and extra features like dedicated virtual machines (VMs), custom domains and certificates, staging slots, autoscaling, and more.

Incorrect:

Scale out: Increase the number of VM instances that run your app. You can scale out to as many as 30 instances

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/deploy-staging-slots>

<https://docs.microsoft.com/en-us/azure/app-service/manage-scale-up>

### QUESTION 10

You plan to move a distributed on-premises app named App1 to an Azure subscription.

After the planned move, App1 will be hosted on several Azure virtual machines.

You need to ensure that App1 always runs on at least eight virtual machines during planned Azure maintenance.

What should you create?

- A. one virtual machine scale set that has 10 virtual machines instances
- B. one Availability Set that has three fault domains and one update domain
- C. one Availability Set that has 10 update domains and one fault domain
- D. one virtual machine scale set that has 12 virtual machines instances

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

An update domain is a logical group of underlying hardware that can undergo maintenance or be rebooted at the same time. As you create VMs within an availability set, the Azure platform automatically distributes your VMs across these update domains. This approach ensures that at least one instance of your application always remains running as the Azure platform undergoes periodic maintenance.

Reference:

<http://www.thatlazyadmin.com/azure-fault-update-domains/>

### QUESTION 11

**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 have an Azure virtual machine named VM1 that runs Windows Server 2016.

You need to create an alert in Azure when more than two error events are logged to the System event log on VM1 within an hour.

Solution: You create an event subscription on VM1. You create an alert in Azure Monitor and specify VM1 as the source

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Instead: You create an Azure Log Analytics workspace and configure the data settings. You install the Microsoft Monitoring Agent on VM1. You create an alert in Azure Monitor and specify the Log Analytics workspace as the source.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/platform/agents-overview>

## **QUESTION 12**

**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 have an Azure virtual machine named VM1. VM1 was deployed by using a custom Azure Resource Manager template named ARM1.json.

You receive a notification that VM1 will be affected by maintenance.

You need to move VM1 to a different host immediately.

Solution: From the Overview blade, you move the virtual machine to a different subscription.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

You would need to redeploy the VM.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/redeploy-to-new-node>

### 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 have an Azure virtual machine named VM1. VM1 was deployed by using a custom Azure Resource Manager template named ARM1.json.

You receive a notification that VM1 will be affected by maintenance.

You need to move VM1 to a different host immediately.

Solution: From the Redeploy blade, you click **Redeploy**.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

When you redeploy a VM, it moves the VM to a new node within the Azure infrastructure and then powers it back on, retaining all your configuration options and

associated resources.

References:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/redeploy-to-new-node>

#### 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 have an Azure virtual machine named VM1. VM1 was deployed by using a custom Azure Resource Manager template named ARM1.json.

You receive a notification that VM1 will be affected by maintenance.

You need to move VM1 to a different host immediately.

Solution: From the Update management blade, you click **Enable**.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

You would need to redeploy the VM.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/redeploy-to-new-node>

#### QUESTION 15

You have an Azure subscription that contains a web app named webapp1.

You need to add a custom domain named www.contoso.com to webapp1.

What should you do first?



- A. Create a DNS record
- B. Add a connection string
- C. Upload a certificate.
- D. Stop webapp1.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

You can use either a CNAME record or an A record to map a custom DNS name to App Service.

Reference:

<https://docs.microsoft.com/en-us/Azure/app-service/app-service-web-tutorial-custom-domain>

#### 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 have an Azure subscription that contains the resources shown in the following table.

Name	Type	Region
RG1	Resource group	West US
RG2	Resource group	East Asia
storage1	Storage account	West US
storage2	Storage account	East Asia
VM1	Virtual machine	West US
VNET1	Virtual network	West US
VNET2	Virtual network	East Asia

VM1 connects to VNET1.

You need to connect VM1 to VNET2.

Solution: You move VM1 to RG2, and then you add a new network interface to VM1.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Instead you should delete VM1. You recreate VM1, and then you add the network interface for VM1.

Note: When you create an Azure virtual machine (VM), you must create a virtual network (VNet) or use an existing VNet. You can change the subnet a VM is connected to after it's created, but you cannot change the VNet.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/network-overview>

#### 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 have an Azure subscription that contains the resources shown in the following table.

Name	Type	Region
RG1	Resource group	West US
RG2	Resource group	East Asia
storage1	Storage account	West US
storage2	Storage account	East Asia
VM1	Virtual machine	West US
VNET1	Virtual network	West US
VNET2	Virtual network	East Asia

VM1 connects to VNET1.

You need to connect VM1 to VNET2.

Solution: You delete VM1. You recreate VM1, and then you create a new network interface for VM1 and connect it to VNET2.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

You should delete VM1. You recreate VM1, and then you add the network interface for VM1.

Note: When you create an Azure virtual machine (VM), you must create a virtual network (VNet) or use an existing VNet. You can change the subnet a VM is connected to after it's created, but you cannot change the VNet.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/network-overview>

## 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 have an Azure subscription that contains the resources shown in the following table.

Name	Type	Region
RG1	Resource group	West US
RG2	Resource group	East Asia
storage1	Storage account	West US
storage2	Storage account	East Asia
VM1	Virtual machine	West US
VNET1	Virtual network	West US
VNET2	Virtual network	East Asia

VM1 connects to VNET1.

You need to connect VM1 to VNET2.

Solution: You turn off VM1, and then you add a new network interface to VM1.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Instead you should delete VM1. You recreate VM1, and then you add the network interface for VM1.

Note: When you create an Azure virtual machine (VM), you must create a virtual network (VNet) or use an existing VNet. You can change the subnet a VM is connected to after it's created, but you cannot change the VNet.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/network-overview>

#### **QUESTION 19**

You deploy an Azure Kubernetes Service (AKS) cluster named Cluster1 that uses the IP addresses shown in the following table.

IP address	Assigned to
131.107.2.1	Load balancer front end
192.168.10.2	Kubernetes DNS service
172.17.7.1	Docket bridge address
10.0.10.11	Kubernetes cluster node

You need to provide internet users with access to the applications that run in Cluster1.

Which IP address should you include in the DNS record for Cluster1?

A. 131.107.2.1

B. 10.0.10.11

- C. 172.17.7.1
- D. 192.168.10.2

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 20**

You have a deployment template named Template1 that is used to deploy 10 Azure web apps.

You need to identify what to deploy before you deploy Template1. The solution must minimize Azure costs.

What should you identify?

- A. five Azure Application Gateways
- B. one App Service plan
- C. 10 App Service plans
- D. one Azure Traffic Manager
- E. one Azure Application Gateway

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

You create Azure web apps in an App Service plan.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/overview-hosting-plans>

#### **QUESTION 21**

You have an Azure subscription that contains a virtual machine named VM1. VM1 hosts a line-of-business application that is available 24 hours a day. VM1 has one network interface and one managed disk. VM1 uses the D4s v3 size.

You plan to make the following changes to VM1:

- Change the size to D8s v3.
- Add a 500-GB managed disk.
- Add the Puppet Agent extension.
- Enable Desired State Configuration Management.

Which change will cause downtime for VM1?

- A. Enable Desired State Configuration Management
- B. Add a 500-GB managed disk
- C. Change the size to D8s v3
- D. Add the Puppet Agent extension

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

While resizing the VM it must be in a stopped state.

Reference:

<https://azure.microsoft.com/en-us/blog/resize-virtual-machines/>

## QUESTION 22

You have an app named App1 that runs on an Azure web app named webapp1.

The developers at your company upload an update of App1 to a Git repository named Git1.

Webapp1 has the deployment slots shown in the following table.

Name	Function
webapp1-prod	Production
webapp1-test	Staging

You need to ensure that the App1 update is tested before the update is made available to users.

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

- A. Swap the slots
- B. Deploy the App1 update to webapp1-prod, and then test the update

- C. Stop webapp1-prod
- D. Deploy the App1 update to webapp1-test, and then test the update
- E. Stop webapp1-test

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 23

You have an Azure subscription named Subscription1 that has the following providers registered:

- Authorization
- Automation
- Resources
- Compute
- KeyVault
- Network
- Storage
- Billing
- Web

Subscription1 contains an Azure virtual machine named VM1 that has the following configurations:

- Private IP address: 10.0.0.4 (dynamic)
- Network security group (NSG): NSG1
- Public IP address: None
- Availability set: AVSet
- Subnet: 10.0.0.0/24
- Managed disks: No
- Location: East US

You need to record all the successful and failed connection attempts to VM1.

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

**NOTE:** Each correct selection is worth one point.

- A. Enable Azure Network Watcher in the East US Azure region.

- B. Add an Azure Network Watcher connection monitor.
- C. Register the MicrosoftLogAnalytics provider.
- D. Create an Azure Storage account.
- E. Register the Microsoft.Insights resource provider.
- F. Enable Azure Network Watcher flow logs.

**Correct Answer:** ACD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

D: NSG flow log data is written to an Azure Storage account. You need to create an Azure Storage account,

With an Azure Storage account NSG flow logs can be enabled.

A: Enable network watcher in the East US region.

C: NSG flow logging requires the Microsoft.Insights provider.

Reference:

<https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-nsg-flow-logging-portal>

#### **QUESTION 24**

You need to deploy an Azure virtual machine scale set that contains five instances as quickly as possible.

What should you do?

- A. Deploy five virtual machines. Modify the Availability Zones settings for each virtual machine.
- B. Deploy five virtual machines. Modify the Size setting for each virtual machine.
- C. Deploy one virtual machine scale set that is set to VM (virtual machines) orchestration mode.
- D. Deploy one virtual machine scale set that is set to ScaleSetVM orchestration mode.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machine-scale-sets/orchestration-modes>



**QUESTION 25**

You plan to create the Azure web apps shown in the following table.

Name	Runtime stack
WebApp1	.NET Core 3.0
WebApp2	ASP.NET V4.7
WebApp3	PHP 7.3
WebApp4	Ruby 2.6

What is the minimum number of App Service plans you should create for the web apps?

- A. 1
- B. 2
- C. 3
- D. 4

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 26**

**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 have an Azure subscription named Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates.

You need to view the date and time when the resources were created in RG1.

Solution: From the Subscriptions blade, you select the subscription, and then click **Programmatic deployment**.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

From the RG1 blade, click Deployments. You see a history of deployment for the resource group.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-create-first-template?tabs=azure-powershell>

#### QUESTION 27

**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 have an Azure subscription that contains the resources shown in the following table.

Name	Type	Region
RG1	Resource group	West US
RG2	Resource group	East Asia
storage1	Storage account	West US
storage2	Storage account	East Asia
VM1	Virtual machine	West US
VNET1	Virtual network	West US
VNET2	Virtual network	East Asia

VM1 connects to VNET1.

You need to connect VM1 to VNET2.

Solution: You create a new network interface, and then you add the network interface to VM1.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

You should delete VM1. You recreate VM1, and then you add the network interface for VM1.

Note: When you create an Azure virtual machine (VM), you must create a virtual network (VNet) or use an existing VNet. You can change the subnet a VM is connected to after it's created, but you cannot change the VNet.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/network-overview>

#### QUESTION 28

You have an Azure Active Directory (Azure AD) tenant named adatum.com that contains the users shown in the following table.

Name	Role
User1	<i>None</i>
User2	Global administrator
User3	Cloud device administrator
User4	Intune administrator

Adatum.com has the following configurations:

- Users may join devices to Azure AD is set to **User1**.
- Additional local administrators on Azure AD joined devices is set to **None**.

You deploy Windows 10 to a computer named Computer1. User1 joins Computer1 to adatum.com.

You need to identify the local Administrator group membership on Computer1.

Which users are members of the local Administrators group?

- A. User1 only
- B. User2 only

- C. User1 and User2 only
- D. User1, User2, and User3 only
- E. User1, User2, User3, and User4

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Users may join devices to Azure AD - This setting enables you to select the users who can register their devices as Azure AD joined devices. The default is All.

Additional local administrators on Azure AD joined devices - You can select the users that are granted local administrator rights on a device. Users added here are added to the Device Administrators role in Azure AD. Global administrators, here User2, in Azure AD and device owners are granted local administrator rights by default.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/devices/device-management-azure-portal>

#### **QUESTION 29**

You have an Azure subscription named Subscription1 that contains the resources shown in the following table.

Name	Type	Region	Resource group
RG1	Resource group	West Europe	<i>Not applicable</i>
RG2	Resource group	North Europe	<i>Not applicable</i>
Vault1	Recovery Services vault	West Europe	RG1

You create virtual machines in Subscription1 as shown in the following table.

Name	Resource group	Region	Operating system
VM1	RG1	West Europe	Windows Server 2016
VM2	RG1	North Europe	Windows Server 2016
VM3	RG2	West Europe	Windows Server 2016
VMA	RG1	West Europe	Ubuntu Server 18.04
VMB	RG1	North Europe	Ubuntu Server 18.04
VMC	RG2	West Europe	Ubuntu Server 18.04

You plan to use Vault1 for the backup of as many virtual machines as possible.

Which virtual machines can be backed up to Vault1?

- A. VM1 only
- B. VM3 and VMC only
- C. VM1, VM2, VM3, VMA, VMB, and VMC
- D. VM1, VM3, VMA, and VMC only
- E. VM1 and VM3 only

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

To create a vault to protect virtual machines, the vault must be in the same region as the virtual machines. If you have virtual machines in several regions, create a Recovery Services vault in each region.

Reference:

<https://docs.microsoft.com/bs-cyrl-ba/azure/backup/backup-create-rs-vault>

### QUESTION 30

You have an Azure Kubernetes Service (AKS) cluster named AKS1.

You need to configure cluster autoscaler for AKS1.

Which two tools should you use? Each correct answer presents a complete solution.

**NOTE:** Each correct selection is worth one point.

- A. the `kubect1` command
- B. the `az aks` command
- C. the `Set-AzVm` cmdlet
- D. the Azure portal
- E. the `Set-AzAks` cmdlet

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

A: The following example uses the `kubectl autoscale` command to autoscale the number of pods in the `azure-vote-front` deployment. If average CPU utilization across all pods exceeds 50% of their requested usage, the autoscaler increases the pods up to a maximum of 10 instances. A minimum of 3 instances is then defined for the deployment:

```
kubectl autoscale deployment azure-vote-front --cpu-percent=50 --min=3 --max=10
```

B: Use the `az aks update` command to enable and configure the cluster autoscaler on the node pool for the existing cluster.

Reference:

<https://docs.microsoft.com/en-us/azure/aks/tutorial-kubernetes-scale>

<https://docs.microsoft.com/en-us/azure/aks/cluster-autoscaler>

**QUESTION 31**

You create the following resources in an Azure subscription:

- An Azure Container Registry instance named Registry1
- An Azure Kubernetes Service (AKS) cluster named Cluster1

You create a container image named App1 on your administrative workstation.

You need to deploy App1 to Cluster1.

What should you do first?

- A. Run the `docker push` command.
- B. Create an App Service plan.
- C. Run the `az acr build` command.
- D. Run the `az aks create` command.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

You should sign in and push a container image to Container Registry. Run the `az acr build` command to build and push the container image.

```
az acr build \  
  --image contoso-website \  
  --registry $ACR_NAME \  
  --file Dockerfile .
```

Reference:

<https://docs.microsoft.com/en-us/learn/modules/aks-deploy-container-app/5-exercise-deploy-app>

### QUESTION 32

You have an Azure subscription that contains the resources shown in the following table.

Name	Type	Resource group	Location
RG1	Resource group	<i>Not applicable</i>	Central US
RG2	Resource group	<i>Not applicable</i>	West US
VMSS1	Virtual machine scale set	RG2	West US
Proximity1	Proximity placement group	RG1	Central US
Proximity2	Proximity placement group	RG2	West US
Proximity3	Proximity placement group	RG1	Central US

You need to configure a proximity placement group for VMSS1.

Which proximity placement groups should you use?

- A. Proximity2 only
- B. Proximity1, Proximity2, and Proximity3
- C. Proximity1 only
- D. Proximity1 and Proximity3 only

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Resource Group location of VMSS1 is the RG2 location, which is West US.

Only Proximity2, which also in RG2, is location in West US

Reference:

<https://azure.microsoft.com/en-us/blog/introducing-proximity-placement-groups/>

### QUESTION 33

**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 have an Azure subscription named Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates.

You need to view the date and time when the resources were created in RG1.

Solution: From the Subscriptions blade, you select the subscription, and then click **Resource providers**.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 34

**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 have an Azure subscription named Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates.

You need to view the date and time when the resources were created in RG1.

Solution: From the RG1 blade, you click **Automation script**.

Does this meet the goal?

- A. Yes



B. No

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

From the RG1 blade, click Deployments. You see a history of deployment for the resource group.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-create-first-template?tabs=azure-powershell>

### QUESTION 35

**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 have an Azure subscription named Subscription1. Subscription1 contains a resource group named RG1. RG1 contains resources that were deployed by using templates.

You need to view the date and time when the resources were created in RG1.

Solution: From the RG1 blade, you click **Deployments**.

Does this meet the goal?

A. Yes

B. No

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

From the RG1 blade, click Deployments. You see a history of deployment for the resource group.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-create-first-template?tabs=azure-powershell>

**QUESTION 36**

You have an Azure subscription named Subscription1.

You deploy a Linux virtual machine named VM1 to Subscription1.

You need to monitor the metrics and the logs of VM1.

What should you use?

- A. Azure HDInsight
- B. Linux Diagnostic Extension (LAD) 3.0
- C. the AzurePerformanceDiagnostics extension
- D. Azure Analysis Services

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

You can use extensions to configure diagnostics on your VMs to collect additional metric data.

The basic host metrics are available, but to see more granular and VM-specific metrics, you need to install the Azure diagnostics extension on the VM. The Azure diagnostics extension allows additional monitoring and diagnostics data to be retrieved from the VM.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/linux/tutorial-monitoring>

**QUESTION 37**

You plan to deploy three Azure virtual machines named VM1, VM2, and VM3. The virtual machines will host a web app named App1.

You need to ensure that at least two virtual machines are available if a single Azure datacenter becomes unavailable.

What should you deploy?

- A. all three virtual machines in a single Availability Zone
- B. all virtual machines in a single Availability Set
- C. each virtual machine in a separate Availability Zone
- D. each virtual machine in a separate Availability Set

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Use availability zones to protect from datacenter level failures.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/manage-availability>

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/tutorial-availability-sets>

**QUESTION 38**

You have an Azure virtual machine named VM1 that runs Windows Server 2019.

You save VM1 as a template named Template1 to the Azure Resource Manager library.

You plan to deploy a virtual machine named VM2 from Template1.

What can you configure during the deployment of VM2?

- A. operating system
- B. administrator username
- C. virtual machine size
- D. resource group

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

When deploying a virtual machine from a template, you must specify:

- the Resource Group name and location for the VM
- the administrator username and password
- an unique DNS name for the public IP

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/ps-template>

**QUESTION 39**

You have an Azure subscription that contains an Azure virtual machine named VM1. VM1 runs a financial reporting app named App1 that does not support multiple active instances.

At the end of each month, CPU usage for VM1 peaks when App1 runs.

You need to create a scheduled runbook to increase the processor performance of VM1 at the end of each month.

What task should you include in the runbook?

- A. Add the Azure Performance Diagnostics agent to VM1.
- B. Modify the VM size property of VM1.
- C. Add VM1 to a scale set.
- D. Increase the vCPU quota for the subscription.
- E. Add a Desired State Configuration (DSC) extension to VM1.

**Correct Answer:** E

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/automation/automation-quickstart-dsc-configuration>

**QUESTION 40**

You plan to deploy several Azure virtual machines that will run Windows Server 2019 in a virtual machine scale set by using an Azure Resource Manager template.

You need to ensure that NGINX is available on all the virtual machines after they are deployed.

What should you use?

- A. Deployment Center in Azure App Service
- B. A Desired State Configuration (DSC) extension
- C. the `New-AzConfigurationAssignment` cmdlet
- D. a Microsoft Intune device configuration profile

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Azure virtual machine extensions are small packages that run post-deployment configuration and automation on Azure virtual machines.

In the following example, the Azure CLI is used to deploy a custom script extension to an existing virtual machine, which installs a Nginx webserver.

```
az vm extension set \  
  --resource-group myResourceGroup \  
  --vm-name myVM --name customScript \  
  --publisher Microsoft.Azure.Extensions \  
  --settings '{"commandToExecute": "apt-get install -y nginx"}'
```

Note:

There are several versions of this question in the exam. The question has two correct answers:

1. a Desired State Configuration (DSC) extension
2. Azure Custom Script Extension

The question can have other incorrect answer options, including the following:

- the Publish-AzVMDscConfiguration cmdlet
- Azure Application Insights

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/framework/devops/automation-configuration>

**QUESTION 41**

You have an Azure virtual machine named VM1 that runs Windows Server 2019. The VM was deployed using default drive settings.

You sign in to VM1 as a user named User1 and perform the following actions:

- Create files on drive C.
- Create files on drive D.
- Modify the screen saver timeout.
- Change the desktop background.

You plan to redeploy VM1.

Which changes will be lost after you redeploy VM1?

- A. the modified screen saver timeout
- B. the new desktop background
- C. the new files on drive D

D. the new files on drive C

**Correct Answer:** C

**Section:** (none)

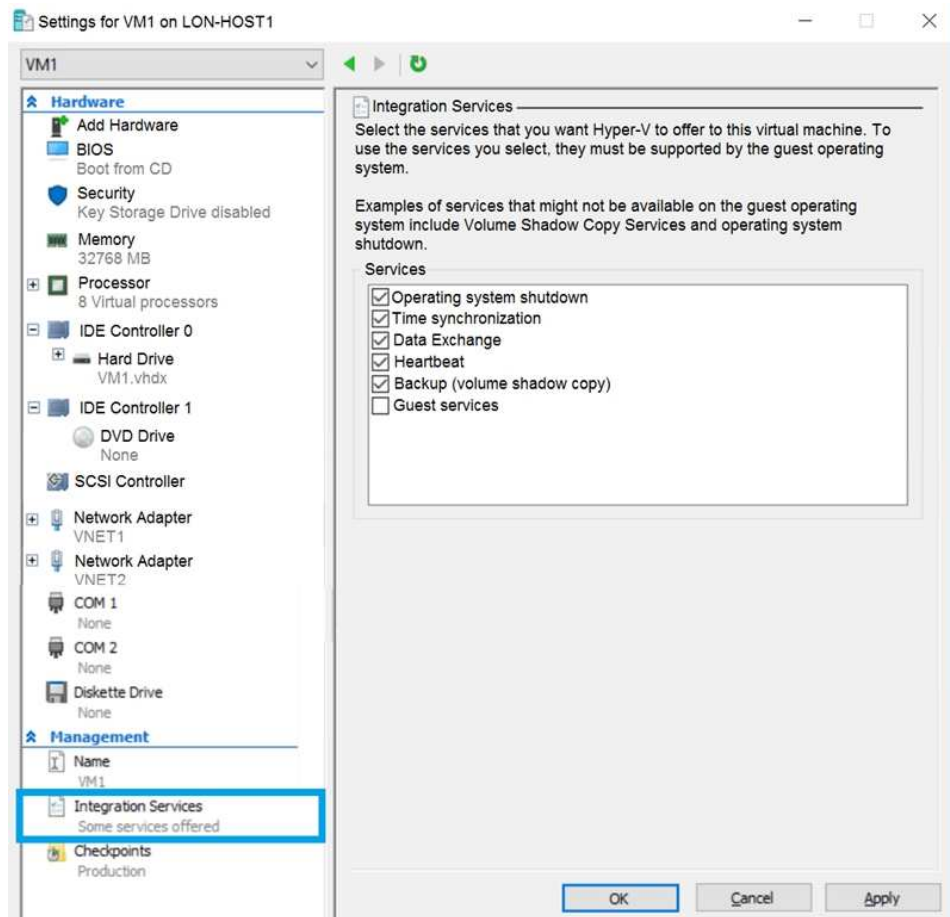
**Explanation**

**Explanation/Reference:**

**QUESTION 42**

You have an Azure subscription.

You have an on-premises virtual machine named VM1. The settings for VM1 are shown in the exhibit. (Click the **Exhibit** tab.)



You need to ensure that you can use the disks attached to VM1 as a template for Azure virtual machines.

What should you modify on VM1?

- A. the memory
- B. the network adapters
- C. the hard drive
- D. the processor
- E. Integration Services

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

From the exhibit we see that the disk is in the VHDX format.

Before you upload a Windows virtual machine (VM) from on-premises to Microsoft Azure, you must prepare the virtual hard disk (VHD or VHDX). Azure supports only generation 1 VMs that are in the VHD file format and have a fixed sized disk. The maximum size allowed for the VHD is 1,023 GB. You can convert a generation 1 VM from the VHDX file system to VHD and from a dynamically expanding disk to fixed-sized.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/prepare-for-upload-vhd-image>

#### **QUESTION 43**

You have an Azure subscription named Subscription1 that is used by several departments at your company. Subscription1 contains the resources in the following table:

Name	Type
storage1	Storage account
RG1	Resource group
container1	Blob container
share1	File share

Another administrator deploys a virtual machine named VM1 and an Azure Storage account named storage2 by using a single Azure Resource Manager template.

You need to view the template used for the deployment.

From which blade can you view the template that was used for the deployment?

- A. VM1
- B. RG1
- C. storage2
- D. container1

**Correct Answer: B**

**Section: (none)**



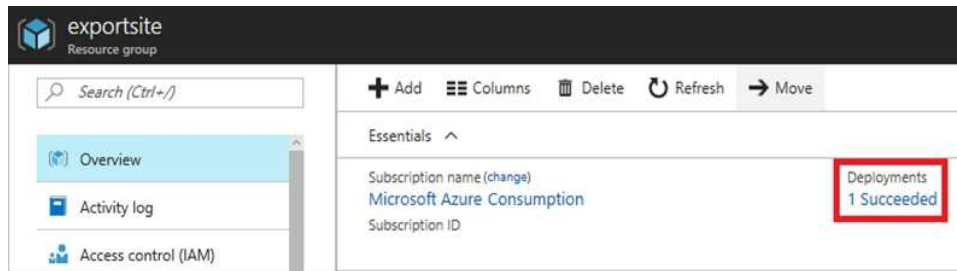
## Explanation

### Explanation/Reference:

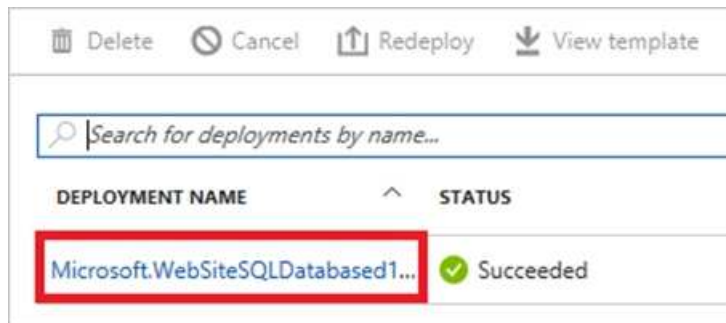
Explanation:

View template from deployment history

1. Go to the resource group for your new resource group. Notice that the portal shows the result of the last deployment. Select this link.



2. You see a history of deployments for the group. In your case, the portal probably lists only one deployment. Select this deployment.



3. The portal displays a summary of the deployment. The summary includes the status of the deployment and its operations and the values that you provided for parameters. To see the template that you used for the deployment, select View template.

Microsoft Azure << exportsite - Deployments > Microsoft.WebSiteSQLDatab

Microsoft.WebSiteSQLDatabased13386b0-9908  
Deployment

+ Delete Cancel Refresh Redeploy View template

Summary

DEPLOYMENT DATE	7/5/2017 4:01:15 PM
STATUS	Succeeded
DURATION	1 minute 30 seconds
RESOURCE GROUP	exportsite
RELATED	Events

Reference:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-manager-export-template>

## Deploy and manage Azure compute resources

### Testlet 2

#### Case study

This is a case study. **Case studies are not timed separately. You can use as much exam time as you would like to complete each case.** However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other questions in this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

#### To start the case study

To display the first question in this case study, click the **Next** button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an **All Information** tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the **Question** button to return to the question.

#### Overview

Litware, Inc. is a consulting company that has a main office in Montreal and two branch offices in Seattle and New York.

The Montreal office has 2,000 employees. The Seattle office has 1,000 employees. The New York office has 200 employees.

All the resources used by Litware are hosted on-premises.

Litware creates a new Azure subscription. The Azure Active Directory (Azure AD) tenant uses a domain named litware.onmicrosoft.com. The tenant uses the P1 pricing tier.

#### Existing Environment

The network contains an Active Directory forest named litware.com. All domain controllers are configured as DNS servers and host the litware.com DNS zone.

Litware has finance, human resources, sales, research, and information technology departments. Each department has an organizational unit (OU) that contains all the accounts of that respective department. All the user accounts have the **department** attribute set to their respective department. New users are added frequently.

Litware.com contains a user named User1.

All the offices connect by using private connections.

Litware has data centers in the Montreal and Seattle offices. Each office has a firewall that can be configured as a VPN device.

All infrastructure servers are virtualized. The virtualization environment contains the servers in the following table.

Name	Role	Contains virtual machine
Server1	VMware vCenter server	VM1
Server2	Hyper-V host	VM2

Litware uses two web applications named App1 and App2. Each instance on each web application requires 1 GB of memory.

The Azure subscription contains the resources in the following table.

Name	Type
VNet1	Virtual network
VM3	Virtual machine
VM4	Virtual machine

The network security team implements several network security groups (NSGs)

## Requirements

## Planned Changes

Litware plans to implement the following changes:

- Deploy Azure ExpressRoute to the Montreal office.
- Migrate the virtual machines hosted on Server1 and Server2 to Azure.
- Synchronize on-premises Active Directory to Azure Active Directory (Azure AD).
- Migrate App1 and App2 to two Azure web apps named WebApp1 and WebApp2.

## Technical Requirements

Litware must meet the following technical requirements:

- Ensure that WebApp1 can adjust the number of instances automatically based on the load and can scale up to five instances.
- Ensure that VM3 can establish outbound connections over TCP port 8080 to the applications servers in the Montreal office.
- Ensure that routing information is exchanged automatically between Azure and the routers in the Montreal office.

- Enable Azure Multi-Factor Authentication (MFA) for the users in the finance department only.
- Ensure that webapp2.azurewebsites.net can be accessed by using the name app2.litware.com.
- Connect the New York office to VNet1 over the Internet by using an encrypted connection.
- Create a workflow to send an email message when the settings of VM4 are modified.
- Create a custom Azure role named Role1 that is based on the Reader role.
- Minimize costs whenever possible.

### QUESTION 1

You discover that VM3 does **NOT** meet the technical requirements.

You need to verify whether the issue relates to the NSGs.

What should you use?

- A. Diagram in VNet1
- B. Diagnostic settings in Azure Monitor
- C. Diagnose and solve problems in Traffic Manager profiles
- D. The security recommendations in Azure Advisor
- E. IP flow verify in Azure Network Watcher

**Correct Answer:** E

**Section:** (none)

**Explanation**

#### **Explanation/Reference:**

Explanation:

Scenario: Contoso must meet technical requirements including:

Ensure that VM3 can establish outbound connections over TCP port 8080 to the applications servers in the Montreal office.

IP flow verify checks if a packet is allowed or denied to or from a virtual machine. The information consists of direction, protocol, local IP, remote IP, local port, and remote port. If the packet is denied by a security group, the name of the rule that denied the packet is returned. While any source or destination IP can be chosen, IP flow verify helps administrators quickly diagnose connectivity issues from or to the internet and from or to the on-premises environment.

Reference:

<https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-ip-flow-verify-overview>

## Configure and manage virtual networking

### Question Set 1

#### QUESTION 1

You have an Azure subscription that contains a policy-based virtual network gateway named GW1 and a virtual network named VNet1.

You need to ensure that you can configure a point-to-site connection from an on-premises computer to VNet1.

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

**NOTE:** Each correct selection is worth one point.

- A. Add a service endpoint to VNet1
- B. Reset GW1
- C. Create a route-based virtual network gateway
- D. Add a connection to GW1
- E. Delete GW1
- F. Add a public IP address space to VNet1

**Correct Answer:** CE

**Section:** (none)

**Explanation**

#### Explanation/Reference:

Explanation:

C: A VPN gateway is used when creating a VPN connection to your on-premises network.

Route-based VPN devices use any-to-any (wildcard) traffic selectors, and let routing/forwarding tables direct traffic to different IPsec tunnels. It is typically built on router platforms where each IPsec tunnel is modeled as a network interface or VTI (virtual tunnel interface).

E: Policy-based VPN devices use the combinations of prefixes from both networks to define how traffic is encrypted/decrypted through IPsec tunnels. It is typically built on firewall devices that perform packet filtering. IPsec tunnel encryption and decryption are added to the packet filtering and processing engine.

Incorrect Answers:

F: Point-to-Site connections do not require a VPN device or a public-facing IP address.

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/create-routebased-vpn-gateway-portal>

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-connect-multiple-policybased-rm-ps>

## QUESTION 2

You have five Azure virtual machines that run Windows Server 2016. The virtual machines are configured as web servers.

You have an Azure load balancer named LB1 that provides load balancing services for the virtual machines.

You need to ensure that visitors are serviced by the same web server for each request.

What should you configure?

- A. Floating IP (direct server return) to **Enabled**
- B. Floating IP (direct server return) to **Disabled**
- C. a health probe
- D. Session persistence to **Client IP and Protocol**

**Correct Answer: D**

**Section: (none)**

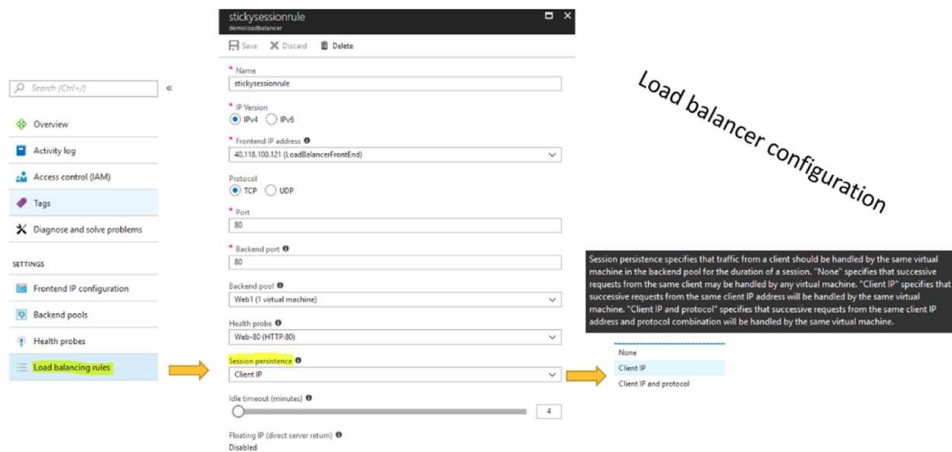
**Explanation**

### Explanation/Reference:

Explanation:

With Sticky Sessions when a client starts a session on one of your web servers, session stays on that specific server. To configure An Azure Load-Balancer For Sticky Sessions set Session persistence to Client IP.

On the following image you can see sticky session configuration:



Note:

There are several versions of this question in the exam. The question can have other incorrect answer options, including the following:

1. Idle Time-out (minutes) to **20**
2. Protocol to **UDP**

Reference:

<https://cloudopszone.com/configure-azure-load-balancer-for-sticky-sessions/>

### QUESTION 3

Your on-premises network contains an SMB share named Share1.

You have an Azure subscription that contains the following resources:

- A web app named webapp1
- A virtual network named VNET1

You need to ensure that webapp1 can connect to Share1.

What should you deploy?

- A. an Azure Application Gateway
- B. an Azure Active Directory (Azure AD) Application Proxy
- C. an Azure Virtual Network Gateway

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

A Site-to-Site VPN gateway connection can be used to connect your on-premises network to an Azure virtual network over an IPsec/IKE (IKEv1 or IKEv2) VPN tunnel.

This type of connection requires a VPN device, a VPN gateway, located on-premises that has an externally facing public IP address assigned to it.

Incorrect Answers:

B: Application Proxy is a feature of Azure AD that enables users to access on-premises web applications from a remote client.

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-site-to-site-resource-manager-portal>



#### QUESTION 4

You plan to deploy several Azure virtual machines that will run Windows Server 2019 in a virtual machine scale set by using an Azure Resource Manager template.

You need to ensure that NGINX is available on all the virtual machines after they are deployed.

What should you use?

- A. the `Publish-AzVMDscConfiguration` cmdlet
- B. Azure Application Insights
- C. Azure Custom Script Extension
- D. the `New-AzConfigurationAssignment` cmdlet

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

There are several versions of this question in the exam. The question has two correct answers:

1. a Desired State Configuration (DSC) extension
2. Azure Custom Script Extension

The question can have other incorrect answer options, including the following:

- Deployment Center in Azure App Service
- a Microsoft Intune device configuration profile

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/framework/devops/automation-configuration>

#### QUESTION 5

Your company has three offices. The offices are located in Miami, Los Angeles, and New York. Each office contains datacenter.

You have an Azure subscription that contains resources in the East US and West US Azure regions. Each region contains a virtual network. The virtual networks are peered.

You need to connect the datacenters to the subscription. The solution must minimize network latency between the datacenters.

What should you create?

- A. three Azure Application Gateways and one On-premises data gateway

- B. three virtual hubs and one virtual WAN
- C. three virtual WANs and one virtual hub
- D. three On-premises data gateways and one Azure Application Gateway

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-wan/virtual-wan-about>

### QUESTION 6

You have the Azure virtual networks shown in the following table.

Name	Address space	Subnet	Resource group Azure region
VNet1	10.11.0.0/16	10.11.0.0/17	West US
VNet2	10.11.0.0/17	10.11.0.0/25	West US
VNet3	10.10.0.0/22	10.10.1.0/24	East US
VNet4	192.168.16.0/22	192.168.16.0/24	North Europe

To which virtual networks can you establish a peering connection from VNet1?

- A. VNet2 and VNet3 only
- B. VNet2 only
- C. VNet3 and VNet4 only
- D. VNet2, VNet3, and VNet4

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Incorrect Answers:

A, B, C: The address space for VNet2 overlaps with VNet1. We therefore cannot establish a peering between VNet2 and VNet1.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/tutorial-connect-virtual-networks-portal>

### QUESTION 7

You have an Azure subscription that contains a virtual network named VNet1. VNet1 contains four subnets named Gateway, Perimeter, NVA, and Production.

The NVA subnet contains two network virtual appliances (NVAs) that will perform network traffic inspection between the Perimeter subnet and the Production subnet.

You need to implement an Azure load balancer for the NVAs. The solution must meet the following requirements:

- The NVAs must run in an active-active configuration that uses automatic failover.
- The NVA must load balance traffic to two services on the Production subnet. The services have different IP addresses.

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

**NOTE:** Each correct selection is worth one point.

- A. Deploy a basic load balancer
- B. Deploy a standard load balancer
- C. Add two load balancing rules that have HA Ports and Floating IP enabled
- D. Add two load balancing rules that have HA Ports enabled and Floating IP disabled
- E. Add a frontend IP configuration, a backend pool, and a health probe
- F. Add a frontend IP configuration, two backend pools, and a health probe

**Correct Answer:** BCF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

A standard load balancer is required for the HA ports.

Two backend pools are needed as there are two services with different IP addresses.

Floating IP rule is used where backend ports are reused.

Incorrect Answers:

E: HA Ports are not available for the basic load balancer.

Reference:

<https://docs.microsoft.com/en-us/azure/load-balancer/load-balancer-standard-overview>

<https://docs.microsoft.com/en-us/azure/load-balancer/load-balancer-multivip-overview>

### QUESTION 8

You have an Azure subscription named Subscription1 that contains two Azure virtual networks named VNet1 and VNet2. VNet1 contains a VPN gateway named VPNGW1 that uses static routing. There is a site-to-site VPN connection between your on-premises network and VNet1.

On a computer named Client1 that runs Windows 10, you configure a point-to-site VPN connection to VNet1.

You configure virtual network peering between VNet1 and VNet2. You verify that you can connect to VNet2 from the on-premises network. Client1 is unable to connect to VNet2.

You need to ensure that you can connect Client1 to VNet2.

What should you do?

- A. Download and re-install the VPN client configuration package on Client1.
- B. Select **Allow gateway transit** on VNet1.
- C. Select **Allow gateway transit** on VNet2.
- D. Enable BGP on VPNGW1

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-about-point-to-site-routing>

### QUESTION 9

You have an Azure subscription that contains the resources in the following table.

Name	Type	Azure region	Resource group
VNet1	Virtual network	West US	RG2
VNet2	Virtual network	West US	RG1
VNet3	Virtual network	East US	RG1
NSG1	Network security group (NSG)	East US	RG2

To which subnets can you apply NSG1?

- A. the subnets on VNet1 only
- B. the subnets on VNet2 and VNet3 only
- C. the subnets on VNet2 only

- D. the subnets on VNet3 only
- E. the subnets on VNet1, VNet2, and VNet3

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

All Azure resources are created in an Azure region and subscription. A resource can only be created in a virtual network that exists in the same region and subscription as the resource.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-vnet-plan-design-arm>

#### **QUESTION 10**

**DRAG DROP**

You have an Azure subscription that contains two virtual networks named VNet1 and VNet2. Virtual machines connect to the virtual networks.

The virtual networks have the address spaces and the subnets configured as shown in the following table.

Virtual network	Address space	Subnet	Peering
VNet1	10.1.0.0/16	10.1.0.0/24 10.1.1.0/26	VNet2
VNet2	10.2.0.0/16	10.2.0.0/24	VNet1

You need to add the address space of 10.33.0.0/16 to VNet1. The solution must ensure that the hosts on VNet1 and VNet2 can communicate.

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

**Select and Place:**

**Actions****Answer Area**

Remove VNet1.

Add the 10.33.0.0/16 address space to VNet1.

Create a new virtual network named VNet1.

On the peering connection in VNet2, allow gateway transit.

Recreate peering between VNet1 and VNet2.

On the peering connection in VNet1, allow gateway transit.

Remove peering between VNet1 and VNet2.



**Correct Answer:**

**Actions****Answer Area**

Remove VNet1.

Add the 10.33.0.0/16 address space to VNet1.

Create a new virtual network named VNet1.

On the peering connection in VNet2, allow gateway transit.

Recreate peering between VNet1 and VNet2.

On the peering connection in VNet1, allow gateway transit.

Remove peering between VNet1 and VNet2.



Remove peering between VNet1 and VNet2.

Add the 10.33.0.0/16 address space to VNet1.

Recreate peering between VNet1 and VNet2.



**Section: (none)**

## Explanation

### Explanation/Reference:

Explanation:

Step 1: Remove peering between Vnet1 and VNet2.

You can't add address ranges to, or delete address ranges from a virtual network's address space once a virtual network is peered with another virtual network. To add or remove address ranges, delete the peering, add or remove the address ranges, then re-create the peering.

Step 2: Add the 10.44.0.0/16 address space to VNet1.

Step 3: Recreate peering between VNet1 and VNet2

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-manage-peering>

### QUESTION 11

You have an Azure web app named webapp1.

You have a virtual network named VNET1 and an Azure virtual machine named VM1 that hosts a MySQL database. VM1 connects to VNET1.

You need to ensure that webapp1 can access the data hosted on VM1.

What should you do?

- A. Deploy an internal load balancer
- B. Peer VNET1 to another virtual network
- C. Connect webapp1 to VNET1
- D. Deploy an Azure Application Gateway

**Correct Answer: D**

**Section: (none)**

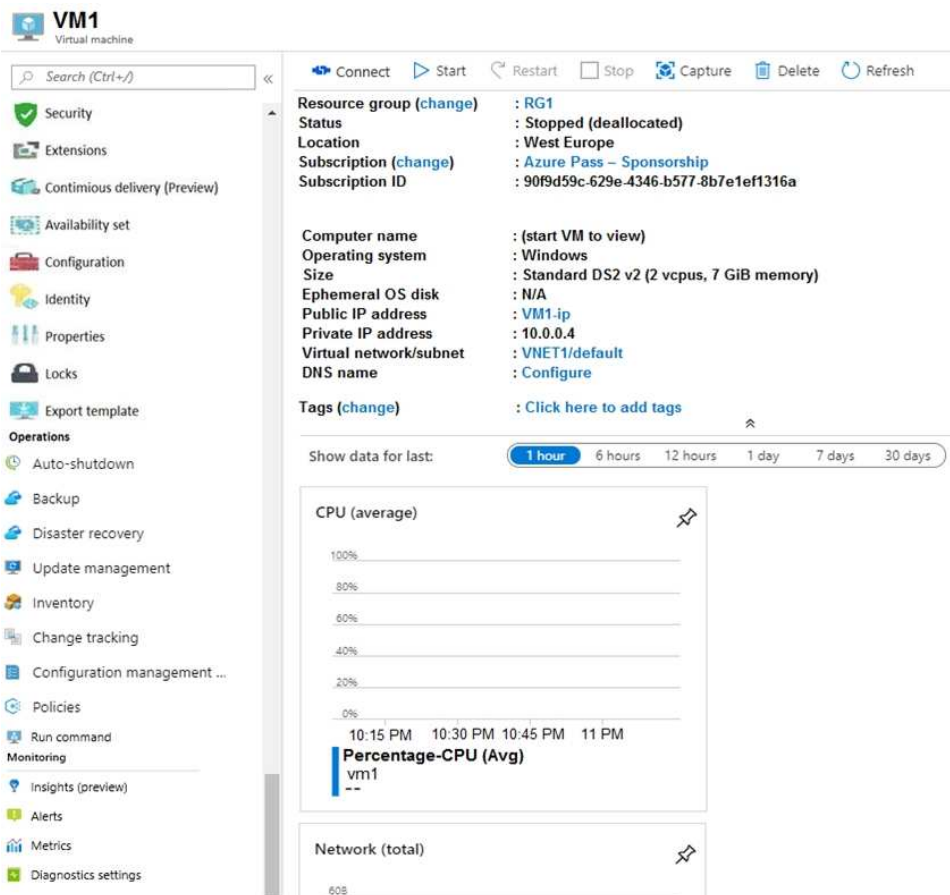
**Explanation**

**Explanation/Reference:**

### QUESTION 12

You create an Azure VM named VM1 that runs Windows Server 2019.

VM1 is configured as shown in the exhibit. (Click the Exhibit tab.)



You need to enable Desired State Configuration for VM1.

What should you do first?

- A. Connect to VM1.
- B. Start VM1.
- C. Capture a snapshot of VM1.
- D. Configure a DNS name for VM1.



**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Status is Stopped (Deallocated).

The DSC extension for Windows requires that the target virtual machine is able to communicate with Azure.

The VM needs to be started.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/extensions/dsc-windows>

### **QUESTION 13**

You have five Azure virtual machines that run Windows Server 2016. The virtual machines are configured as web servers.

You have an Azure load balancer named LB1 that provides load balancing services for the virtual machines.

You need to ensure that visitors are serviced by the same web server for each request.

What should you configure?

A. Floating IP (direct server return) to **Disabled**

B. Idle Time-out (minutes) to **20**

C. Protocol to **UDP**

D. Session persistence to **Client IP**

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

With Sticky Sessions when a client starts a session on one of your web servers, session stays on that specific server. To configure An Azure Load-Balancer For Sticky Sessions set Session persistence to Client IP or to Client IP and protocol.

On the following image you can see sticky session configuration:

Note:

- Client IP and protocol specifies that successive requests from the same client IP address and protocol combination will be handled by the same virtual machine.
- Client IP specifies that successive requests from the same client IP address will be handled by the same virtual machine.

Reference:

<https://cloudopszone.com/configure-azure-load-balancer-for-sticky-sessions/>

#### 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 have an Azure subscription that contains the following resources:

- A virtual network that has a subnet named Subnet1
- Two network security groups (NSGs) named NSG-VM1 and NSG-Subnet1
- A virtual machine named VM1 that has the required Windows Server configurations to allow Remote Desktop connections

NSG-Subnet1 has the default inbound security rules only.

NSG-VM1 has the default inbound security rules and the following custom inbound security rule:

- Priority: 100
- Source: Any
- Source port range: \*
- Destination: \*
- Destination port range: 3389
- Protocol: UDP
- Action: Allow

VM1 has a public IP address and is connected to Subnet1. NSG-VM1 is associated to the network interface of VM1. NSG-Subnet1 is associated to Subnet1.

You need to be able to establish Remote Desktop connections from the internet to VM1.

**Solution:** You add an inbound security rule to NSG-Subnet1 that allows connections from the Any source to the \*destination for port range 3389 and uses the TCP protocol. You remove NSG-VM1 from the network interface of VM1.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: (none)**

## Explanation

### Explanation/Reference:

Explanation:

The default port for RDP is TCP port 3389. A rule to permit RDP traffic must be created automatically when you create your VM.

Note on NSG-Subnet1: Azure routes network traffic between all subnets in a virtual network, by default.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/troubleshooting/troubleshoot-rdp-connection>

### 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 have an Azure subscription that contains the following resources:

- A virtual network that has a subnet named Subnet1
- Two network security groups (NSGs) named NSG-VM1 and NSG-Subnet1
- A virtual machine named VM1 that has the required Windows Server configurations to allow Remote Desktop connections

NSG-Subnet1 has the default inbound security rules only.

NSG-VM1 has the default inbound security rules and the following custom inbound security rule:

- Priority: 100
- Source: Any
- Source port range: \*
- Destination: \*
- Destination port range: 3389
- Protocol: UDP
- Action: Allow

VM1 has a public IP address and is connected to Subnet1. NSG-VM1 is associated to the network interface of VM1. NSG-Subnet1 is associated to Subnet1.

You need to be able to establish Remote Desktop connections from the internet to VM1.

Solution: You add an inbound security rule to NSG-Subnet1 that allows connections from the internet source to the VirtualNetwork destination for port range 3389 and uses the UDP protocol.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

The default port for RDP is TCP port 3389. A rule to permit RDP traffic must be created automatically when you create your VM.

Note on NSG-Subnet1: Azure routes network traffic between all subnets in a virtual network, by default.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/troubleshooting/troubleshoot-rdp-connection>

#### **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 have an Azure subscription that contains the following resources:

- A virtual network that has a subnet named Subnet1
- Two network security groups (NSGs) named NSG-VM1 and NSG-Subnet1
- A virtual machine named VM1 that has the required Windows Server configurations to allow Remote Desktop connections

NSG-Subnet1 has the default inbound security rules only.

NSG-VM1 has the default inbound security rules and the following custom inbound security rule:

- Priority: 100
- Source: Any
- Source port range: \*
- Destination: \*
- Destination port range: 3389
- Protocol: UDP
- Action: Allow

VM1 has a public IP address and is connected to Subnet1. NSG-VM1 is associated to the network interface of VM1. NSG-Subnet1 is associated to Subnet1.

You need to be able to establish Remote Desktop connections from the internet to VM1.

Solution: You add an inbound security rule to NSG-Subnet1 and NSG-VM1 that allows connections from the internet source to the VirtualNetwork destination for port range 3389 and uses the TCP protocol.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

The default port for RDP is TCP port 3389. A rule to permit RDP traffic must be created automatically when you create your VM.

Note on NSG-Subnet1: Azure routes network traffic between all subnets in a virtual network, by default.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-machines/troubleshooting/troubleshoot-rdp-connection>

### QUESTION 17

You have an Azure subscription that contains a virtual network named VNET1. VNET1 contains the subnets shown in the following table.

Name	Connected virtual machines
Subnet1	VM1, VM2
Subnet2	VM3, VM4
Subnet3	VM5, VM6

Each virtual machine uses a static IP address.

You need to create network security groups (NSGs) to meet following requirements:

- Allow web requests from the internet to VM3, VM4, VM5, and VM6.
- Allow all connections between VM1 and VM2.
- Allow Remote Desktop connections to VM1.

- Prevent all other network traffic to VNET1.

What is the minimum number of NSGs you should create?

- A. 1
- B. 3
- C. 4
- D. 12

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Each network security group also contains default security rules.

Note: A network security group (NSG) contains a list of security rules that allow or deny network traffic to resources connected to Azure Virtual Networks (VNet). NSGs can be associated to subnets, individual VMs (classic), or individual network interfaces (NIC) attached to VMs (Resource Manager).

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/security-overview#default-security-rules>

### QUESTION 18

You have an Azure subscription that contains the resources shown in the following table.

Name	Type	Resource group
VNET1	Virtual network	RG1
VM1	Virtual machine	RG1

The Not allowed resource types Azure policy is assigned to RG1 and uses the following parameters:

Microsoft.Network/virtualNetworks  
Microsoft.Compute/virtualMachines

In RG1, you need to create a new virtual machine named VM2, and then connect VM2 to VNET1.

What should you do first?

- A. Remove Microsoft.Compute/virtualMachines from the policy.

- B. Create an Azure Resource Manager template
- C. Add a subnet to VNET1.
- D. Remove `Microsoft.Network/virtualNetworks` from the policy.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

The Not allowed resource types Azure policy prohibits the deployment of specified resource types. You specify an array of the resource types to block.

Virtual Networks and Virtual Machines are prohibited.

Reference:

<https://docs.microsoft.com/en-us/azure/governance/policy/samples/not-allowed-resource-types>

#### **QUESTION 19**

Your company has an Azure subscription named Subscription1.

The company also has two on-premises servers named Server1 and Server2 that run Windows Server 2016. Server1 is configured as a DNS server that has a primary DNS zone named adatum.com. Adatum.com contains 1,000 DNS records.

You manage Server1 and Subscription1 from Server2. Server2 has the following tools installed:

- The DNS Manager console
- Azure PowerShell
- Azure CLI 2.0

You need to move the adatum.com zone to an Azure DNS zone in Subscription1. The solution must minimize administrative effort.

What should you use?

- A. Azure CLI
- B. Azure PowerShell
- C. the Azure portal
- D. the DNS Manager console

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Step 1: Installing the DNS migration script

Open an elevated PowerShell window (Administrative mode) and run following command

```
install-script PrivateDnsMigrationScript
```

Step 2: Running the script

Execute following command to run the script

```
PrivateDnsMigrationScript.ps1
```

Reference:

<https://docs.microsoft.com/en-us/azure/dns/private-dns-migration-guide>

**QUESTION 20**

You have a public load balancer that balances ports 80 and 443 across three virtual machines.

You need to direct all the Remote Desktop Protocol (RDP) connections to VM3 only.

What should you configure?

- A. an inbound NAT rule
- B. a new public load balancer for VM3
- C. a frontend IP configuration
- D. a load balancing rule

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/load-balancer/tutorial-load-balancer-port-forwarding-portal>

<https://pixelrobots.co.uk/2017/08/azure-load-balancer-for-rds/>

**QUESTION 21**

DRAG DROP



You have an on-premises network that you plan to connect to Azure by using a site-to-site VPN.

In Azure, you have an Azure virtual network named VNet1 that uses an address space of 10.0.0.0/16 VNet1 contains a subnet named Subnet1 that uses an address space of 10.0.0.0/24.

You need to create a site-to-site VPN to Azure.

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.

**NOTE:** More than one order of answer choice is correct. You will receive credit for any of the correct orders you select.

**Select and Place:**

Actions		Answer Area
Create a local gateway.		
Create a VPN gateway.		
Create a gateway subnet.	⬅	⬆
Create a custom DNS server.	➡	⬇
Create a VPN connection.		
Create an Azure Content Delivery Network (CDN) profile.		

**Correct Answer:**

### Actions

Create a local gateway.

Create a VPN gateway.

Create a gateway subnet.

Create a custom DNS server.

Create a VPN connection.

Create an Azure Content Delivery Network (CDN) profile.

### Answer Area

Create a gateway subnet.

Create a VPN gateway.

Create a local gateway.

Create a VPN connection.



Section: (none)

Explanation

Explanation/Reference:

### QUESTION 22

You have an Azure subscription that contains the resources in the following table.

Name	Type	Details
VNet1	Virtual network	<i>Not applicable</i>
Subnet1	Subnet	Hosted on VNet1
VM1	Virtual machine	On Subnet1
VM2	Virtual machine	On Subnet1

VM1 and VM2 are deployed from the same template and host line-of-business applications.

You configure the network security group (NSG) shown in the exhibit. (Click the **Exhibit** tab.)

→ Move Delete Refresh

Resource group (change) : RG1lod9053488 Custom security rules : 1 inbound, 1 outbound  
 Location : East US Associated with : 0 subnets, 0 network interfaces  
 Subscription (change) : Microsoft AZ  
 Subscription ID : ac344a74-f85a-4b2e-8057-642088faaf20  
 Tags (change) : Click here to add tags

Inbound security rules

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
100	Port_80	80	TCP	Internet	Any	Deny
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	Allow AzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

Outbound security rules

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
100	DenyWebSites	80	TCP	Any	Internet	Deny
65000	AllowVnetOutBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowInternetOutBound	Any	Any	Any	Internet	Allow
65500	DenyAllOutBound	Any	Any	Any	Any	Deny

You need to prevent users of VM1 and VM2 from accessing websites on the Internet over TCP port 80.

What should you do?

- A. Disassociate the NSG from a network interface
- B. Change the Port\_80 inbound security rule.
- C. Associate the NSG to Subnet1.
- D. Change the DenyWebSites outbound security rule.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

You can associate or dissociate a network security group from a network interface or subnet.

The NSG has the appropriate rule to block users from accessing the Internet. We just need to associate it with Subnet1.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/manage-network-security-group>

**QUESTION 23**

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

You have two subscriptions named Subscription1 and Subscription2. Each subscription is associated to a different Azure AD tenant.

Subscription1 contains a virtual network named VNet1. VNet1 contains an Azure virtual machine named VM1 and has an IP address space of 10.0.0.0/16.

Subscription2 contains a virtual network named VNet2. VNet2 contains an Azure virtual machine named VM2 and has an IP address space of 10.10.0.0/24.

You need to connect VNet1 to VNet2.

What should you do first?

- A. Move VM1 to Subscription2.
- B. Move VNet1 to Subscription2.
- C. Modify the IP address space of VNet2.
- D. Provision virtual network gateways.

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

The virtual networks can be in the same or different regions, and from the same or different subscriptions. When connecting VNets from different subscriptions, the subscriptions do not need to be associated with the same Active Directory tenant.

Configuring a VNet-to-VNet connection is a good way to easily connect VNets. Connecting a virtual network to another virtual network using the VNet-to-VNet connection type (VNet2VNet) is similar to creating a Site-to-Site IPsec connection to an on-premises location. Both connectivity types use a VPN gateway to provide a secure tunnel using IPsec/IKE, and both function the same way when communicating.

The local network gateway for each VNet treats the other VNet as a local site. This lets you specify additional address space for the local network gateway in order to route traffic.

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-vnet-vnet-resource-manager-portal>

#### **QUESTION 24**

You plan to create an Azure virtual machine named VM1 that will be configured as shown in the following exhibit.

## Create a virtual machine

⚠ Changing Basic options may reset selections you have made. Review all options prior to creating the virtual machine.

**Basics** Disks Networking Management Advanced Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image.  
Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization.  
Looking for classic VMs? [Create VM from Azure Marketplace](#)

### PROJECT DETAILS

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

\* Subscription ⓘ

\* Resource group ⓘ   
[Create new](#)

### INSTANCE DETAILS

\* Virtual machine name ⓘ

\* Region ⓘ

Availability options ⓘ

\* Image ⓘ   
[Browse all public and private images](#)

Azure Spot instance ⓘ ☐ Yes ☒ No

\* Size ⓘ **Standard DS1 v2**  
1 vcpu, 3.5 GiB memory (ZAR 632.47/month)  
[Change size](#)

The planned disk configurations for VM1 are shown in the following exhibit.

Basics **Disks** Networking Management Advanced Tags Review + create

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

**Disk options**

\* OS disk type ⓘ Standard HDD ▾

The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.

Enable Ultra Disk compatibility (Preview) ⓘ ☐ Yes ☒ No  
Ultra Disks are only available when using Managed Disks.

**Data disks**

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

ⓘ Adding unmanaged data disks is currently not supported at the time of VM creation. You can add them after the VM is created.

**Advanced**

Use managed disks ⓘ ☒ No ☐ Yes

\* Storage account ⓘ (new) rg1 disks799 ▾  
[Create new](#)

You need to ensure that VM1 can be created in an Availability Zone.

Which two settings should you modify? Each correct answer presents part of the solution.

**NOTE:** Each correct selection is worth one point.

- A. Use managed disks
- B. OS disk type
- C. Availability options
- D. Size
- E. Image

**Correct Answer:** AB

**Section:** (none)

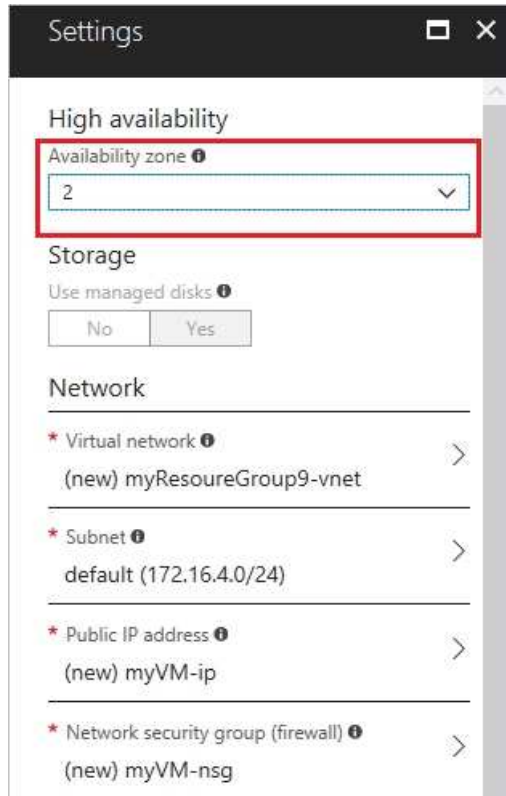
## Explanation

### Explanation/Reference:

Explanation:

A: Your VMs should use managed disks if you want to move them to an Availability Zone by using Site Recovery.

B: When you create a VM for an Availability Zone, Under Settings > High availability, select one of the numbered zones from the Availability zone dropdown.



Reference:

<https://docs.microsoft.com/en-us/azure/site-recovery/move-azure-vms-avset-azone>

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/create-portal-availability-zone>

## QUESTION 25

**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 have a computer named Computer1 that has a point-to-site VPN connection to an Azure virtual network named VNet1. The point-to-site connection uses a self-signed certificate.

From Azure, you download and install the VPN client configuration package on a computer named Computer2.

You need to ensure that you can establish a point-to-site VPN connection to VNet1 from Computer2.

Solution: You modify the Azure Active Directory (Azure AD) authentication policies.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Instead export the client certificate from Computer1 and install the certificate on Computer2.

Note:

Each client computer that connects to a VNet using Point-to-Site must have a client certificate installed. You generate a client certificate from the self-signed root certificate, and then export and install the client certificate. If the client certificate is not installed, authentication fails.

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-certificates-point-to-site>

## QUESTION 26

**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 have a computer named Computer1 that has a point-to-site VPN connection to an Azure virtual network named VNet1. The point-to-site connection uses a self-



signed certificate.

From Azure, you download and install the VPN client configuration package on a computer named Computer2.

You need to ensure that you can establish a point-to-site VPN connection to VNet1 from Computer2.

Solution: You join Computer2 to Azure Active Directory (Azure AD)

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

A client computer that connects to a VNet using Point-to-Site must have a client certificate installed.

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-certificates-point-to-site>

## **QUESTION 27**

**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 have an Azure subscription that contains 10 virtual networks. The virtual networks are hosted in separate resource groups.

Another administrator plans to create several network security groups (NSGs) in the subscription.

You need to ensure that when an NSG is created, it automatically blocks TCP port 8080 between the virtual networks.

Solution: You create a resource lock, and then you assign the lock to the subscription.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**


**Explanation/Reference:**

### QUESTION 28

You have an Azure subscription named Subscription1. Subscription1 contains a virtual machine named VM1.

You have a computer named Computer1 that runs Windows 10. Computer1 is connected to the Internet.

You add a network interface named vm1173 to VM1 as shown in the exhibit. (Click the **Exhibit** tab.)


 **Network Interface: vm1173**      **Effective security rules**      Topology

Virtual network/subnet: RG1-vnet/default      Public IP: VM1-ip      Private IP: 10.0.0.5      Accelerated






networking: **Disabled**

---

Inbound port rules      Outbound port rules      Application security groups      Load balancing

 Network security group **VM1-nsg** (attached to network interface: vm1173 )      [Add inbound port rule](#)

Impacts 0 subnets, 1 network interfaces

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINA...	ACTION
300	 RDP	3389	TCP	Any	Any	 Allow ...
65000	AllowVnetInBound	Any	Any	VirtualN...	VirtualN...	 Allow ...
65001	AllowAzureLoadB...	Any	Any	AzureLo...	Any	 Allow ...
65500	DenyAllInBound	Any	Any	Any	Any	 Deny ...

From Computer1, you attempt to connect to VM1 by using Remote Desktop, but the connection fails.

You need to establish a Remote Desktop connection to VM1.

What should you do first?

- A. Change the priority of the RDP rule
- B. Attach a network interface
- C. Delete the DenyAllInBound rule
- D. Start VM1

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Incorrect Answers:

A: Rules are processed in priority order, with lower numbers processed before higher numbers, because lower numbers have higher priority. Once traffic matches a rule, processing stops. RDP already has the lowest number and thus the highest priority.

B: The network interface has already been added to VM.

C: The Outbound rules are fine.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/security-overview>

#### QUESTION 29

You have the Azure virtual machines shown in the following table.

Name	IP address	Connected to
VM1	10.1.0.4	VNET1/Subnet1
VM2	10.1.10.4	VNET1/Subnet2
VM3	172.16.0.4	VNET2/SubnetA
VM4	10.2.0.8	VNET3/SubnetB

A DNS service is installed on VM1.

You configure the DNS servers settings for each virtual network as shown in the following exhibit.

 Save  Discard

DNS servers ⓘ

- ☐ Default (Azure-provided)
- ☒ Custom

10.1.0.4

...

Add DNS server

...

You need to ensure that all the virtual machines can resolve DNS names by using the DNS service on VM1.

What should you do?

- A. Configure a conditional forwarder on VM1
- B. Add service endpoints on VNET1
- C. Add service endpoints on VNET2 and VNET3
- D. Configure peering between VNET1, VNET2, and VNET3

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Virtual network peering enables you to seamlessly connect networks in Azure Virtual Network. The virtual networks appear as one for connectivity purposes. The traffic between virtual machines uses the Microsoft backbone infrastructure.

Incorrect Answers:

B, C: Virtual Network (VNet) service endpoint provides secure and direct connectivity to Azure services over an optimized route over the Azure backbone network. Endpoints allow you to secure your critical Azure service resources to only your virtual networks. Service Endpoints enables private IP addresses in the VNet to reach the endpoint of an Azure service without needing a public IP address on the VNet.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-service-endpoints-overview>

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-peering-overview>

**QUESTION 30**

You have the Azure virtual network named VNet1 that contains a subnet named Subnet1. Subnet1 contains three Azure virtual machines. Each virtual machine has a public IP address.

The virtual machines host several applications that are accessible over port 443 to users on the Internet.

Your on-premises network has a site-to-site VPN connection to VNet1.

You discover that the virtual machines can be accessed by using the Remote Desktop Protocol (RDP) from the Internet and from the on-premises network.

You need to prevent RDP access to the virtual machines from the Internet, unless the RDP connection is established from the on-premises network. The solution must ensure that all the applications can still be accessed by the Internet users.

What should you do?

- A. Modify the address space of the local network gateway
- B. Create a deny rule in a network security group (NSG) that is linked to Subnet1
- C. Remove the public IP addresses from the virtual machines
- D. Modify the address space of Subnet1

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

You can use a site-to-site VPN to connect your on-premises network to an Azure virtual network. Users on your on-premises network connect by using the RDP or SSH protocol over the site-to-site VPN connection. You don't have to allow direct RDP or SSH access over the internet.

Reference:

<https://docs.microsoft.com/en-us/azure/security/fundamentals/network-best-practices>

**QUESTION 31**

You have an Azure subscription that contains the resources in the following table.

Name	Type
ASG1	Application security group
NSG1	Network security group (NSG)
Subnet1	Subnet
VNet1	Virtual network
NIC1	Network interface
VM1	Virtual machine

Subnet1 is associated to VNet1. NIC1 attaches VM1 to Subnet1.

You need to apply ASG1 to VM1.

What should you do?

- A. Associate NIC1 to ASG1
- B. Modify the properties of ASG1
- C. Modify the properties of NSG1

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Application Security Group can be associated with NICs.

References:

<https://docs.microsoft.com/en-us/azure/virtual-network/security-overview#application-security-groups>

### QUESTION 32

You have an Azure subscription named Subscription1 that contains an Azure virtual network named VNet1. VNet1 connects to your on-premises network by using Azure ExpressRoute.

You plan to prepare the environment for automatic failover in case of ExpressRoute failure.

You need to connect VNet1 to the on-premises network by using a site-to-site VPN. The solution must minimize cost.

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

**NOTE:** Each correct selection is worth one point.

- A. Create a connection
- B. Create a local site VPN gateway
- C. Create a VPN gateway that uses the VpnGw1 SKU
- D. Create a gateway subnet
- E. Create a VPN gateway that uses the Basic SKU

**Correct Answer:** ADE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-site-to-site-resource-manager-portal>

### QUESTION 33

You have an Azure subscription that contains the resources shown in the following table.

Name	Type	Location
VNET1	Virtual network	East US
IP1	Public IP address	West Europe
RT1	Route table	North Europe

You need to create a network interface named NIC1.

In which location can you create NIC1?

- A. East US and North Europe only
- B. East US only
- C. East US, West Europe, and North Europe
- D. East US and West Europe only

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Before creating a network interface, you must have an existing virtual network in the same location and subscription you create a network interface in.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-network-interface>

**QUESTION 34**

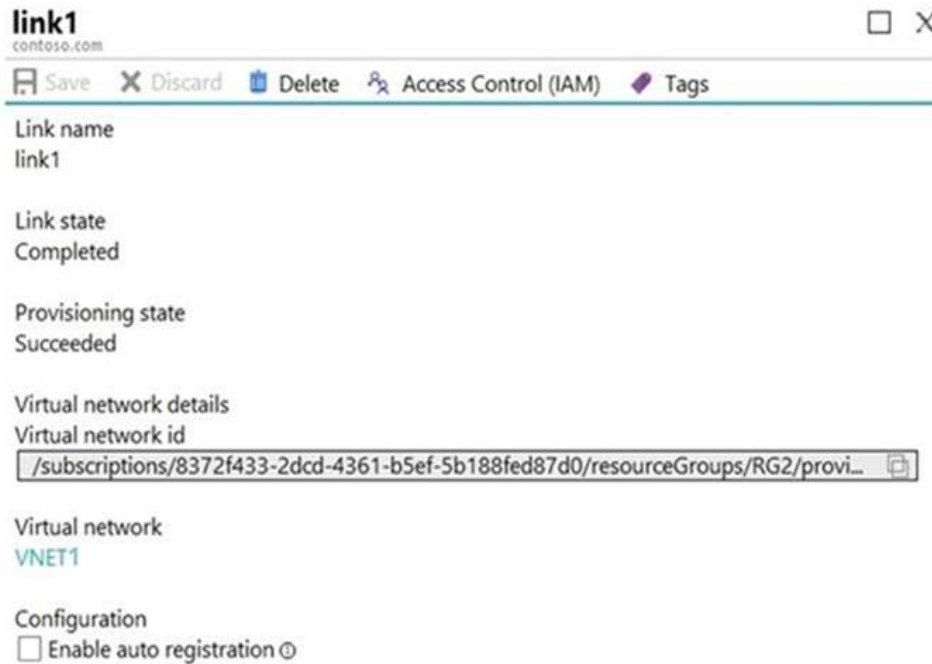
You have Azure virtual machines that run Windows Server 2019 and are configured as shown in the following table.

Name	Virtual network name	DNS suffix configured in Windows Server
VM1	VNET1	Contoso.com
VM2	VNET2	Contoso.com

You create a public Azure DNS zone named adatum.com and a private Azure DNS zone named contoso.com.

For contoso.com, you create a virtual network link named link1 as shown in the exhibit. (Click the **Exhibit** tab.)





You discover that VM1 can resolve names in contoso.com but **cannot** resolve names in adatum.com. VM1 can resolve other hosts on the Internet.

You need to ensure that VM1 can resolve host names in adatum.com.

What should you do?

- A. Update the DNS suffix on VM1 to be adatum.com
- B. Configure the name servers for adatum.com at the domain registrar
- C. Create an SRV record in the contoso.com zone
- D. Modify the Access control (IAM) settings for link1

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

If you use Azure Provided DNS then appropriate DNS suffix will be automatically applied to your virtual machines. For all other options you must either use Fully Qualified Domain Names (FQDN) or manually apply appropriate DNS suffix to your virtual machines.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-networks-name-resolution-for-vms-and-role-instances>

### QUESTION 35

**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 have an Azure subscription that contains the virtual machines shown in the following table.

Name	Public IP SKU	Connected to	Status
VM1	<i>None</i>	VNET1/Subnet1	Stopped (deallocated)
VM2	Basic	VNET1/Subnet2	Running

You deploy a load balancer that has the following configurations:

- Name: LB1
- Type: Internal
- SKU: Standard
- Virtual network: VNET1

You need to ensure that you can add VM1 and VM2 to the backend pool of LB1.

Solution: You create a Basic SKU public IP address, associate the address to the network interface of VM1, and then start VM1.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

A Backend Pool configured by IP address has the following limitations:

- Standard load balancer only

Reference:

<https://docs.microsoft.com/en-us/azure/load-balancer/backend-pool-management>

### QUESTION 36

**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 have an Azure subscription that contains the virtual machines shown in the following table.

Name	Public IP SKU	Connected to	Status
VM1	<i>None</i>	VNET1/Subnet1	Stopped (deallocated)
VM2	Basic	VNET1/Subnet2	Running

You deploy a load balancer that has the following configurations:

- Name: LB1
- Type: Internal
- SKU: Standard
- Virtual network: VNET1

You need to ensure that you can add VM1 and VM2 to the backend pool of LB1.

Solution: You create a Standard SKU public IP address, associate the address to the network interface of VM1, and then stop VM2.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

A Backend Pool configured by IP address has the following limitations:

- Standard load balancer only

Reference:

<https://docs.microsoft.com/en-us/azure/load-balancer/backend-pool-management>

### QUESTION 37

**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 have an Azure subscription that contains the virtual machines shown in the following table.

Name	Public IP SKU	Connected to	Status
VM1	<i>None</i>	VNET1/Subnet1	Stopped (deallocated)
VM2	Basic	VNET1/Subnet2	Running

You deploy a load balancer that has the following configurations:

- Name: LB1
- Type: Internal
- SKU: Standard
- Virtual network: VNET1

You need to ensure that you can add VM1 and VM2 to the backend pool of LB1.

Solution: You create two Standard public IP addresses and associate a Standard SKU public IP address to the network interface of each virtual machine.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

A Backend Pool configured by IP address has the following limitations:

- Standard load balancer only

Reference:

<https://docs.microsoft.com/en-us/azure/load-balancer/backend-pool-management>

### QUESTION 38

**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 have a computer named Computer1 that has a point-to-site VPN connection to an Azure virtual network named VNet1. The point-to-site connection uses a self-signed certificate.

From Azure, you download and install the VPN client configuration package on a computer named Computer2.

You need to ensure that you can establish a point-to-site VPN connection to VNet1 from Computer2.

Solution: You export the client certificate from Computer1 and install the certificate on Computer2.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Each client computer that connects to a VNet using Point-to-Site must have a client certificate installed. You generate a client certificate from the self-signed root certificate, and then export and install the client certificate. If the client certificate is not installed, authentication fails.

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-certificates-point-to-site>

### QUESTION 39

You have an Azure virtual machine named VM1.

The network interface for VM1 is configured as shown in the exhibit. (Click the **Exhibit** tab.)

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

**Network Interface: vm1175** Effective security rules Topology

Virtual network/subnet: RGS-vnet/default Public IP: 40.127.109.108 Private IP: 172.16.1.4 Accelerated networking: Disabled

**APPLICATION SECURITY GROUPS**

Configure the application security groups

**INBOUND PORT RULES**

Network security group VM1-nsg (attached to network interface: vm1175)  
Impacts 0 subnets. 1 network interfaces

Add inbound port rule

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION	
300	RDP	3389	TCP	Any	Any	Allow	...
400	Rule1	80	TCP	Any	Any	Deny	...
500	Rule2	80,443	TCP	Any	Any	Deny	...
1000	Rule4	50-100,400-500	UDP	Any	Any	Allow	...
2000	Rule5	50-5000	Any	Any	VirtualNetwork	Deny	...
3000	Rule6	150-300	Any	Any	Any	Allow	...
4000	Rule3	60-500	Any	Any	VirtualNetwork	Allow	...
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow	...
65001	AllowAzureLoadBalancerInBo...	Any	Any	AzureLoadBale...	Any	Allow	...
65500	DenyAllInBound	Any	Any	Any	Any	Deny	...

You deploy a web server on VM1, and then create a secure website that is accessible by using the HTTPS protocol. VM1 is used as a web server only.

You need to ensure that users can connect to the website from the Internet.

What should you do?

- A. Modify the protocol of Rule4
- B. Delete Rule1
- C. For Rule5, change the Action to **Allow** and change the priority to **401**
- D. Create a new inbound rule that allows TCP protocol 443 and configure the rule to have a priority of **501**.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

HTTPS uses port 443.

Rule2, with priority 500, denies HTTPS traffic.

Rule5, with priority changed from 2000 to 401, would allow HTTPS traffic.

Note: Priority is a number between 100 and 4096. Rules are processed in priority order, with lower numbers processed before higher numbers, because lower numbers have higher priority. Once traffic matches a rule, processing stops. As a result, any rules that exist with lower priorities (higher numbers) that have the same attributes as rules with higher priorities are not processed.

Note:

There are several versions of this question in the exam. The question has two possible correct answers:

1. Change the priority of Rule3 to **450**.
2. For Rule5, change the Action to **Allow** and change the priority to **401**.

Other incorrect answer options you may see on the exam include the following:

- Modify the action of Rule1.
- Change the priority of Rule6 to **100**.
- For Rule4, change the protocol from UDP to **Any**.

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/network-security-groups-overview>

**QUESTION 40**

**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 have an Azure subscription that contains 10 virtual networks. The virtual networks are hosted in separate resource groups.

Another administrator plans to create several network security groups (NSGs) in the subscription.

You need to ensure that when an NSG is created, it automatically blocks TCP port 8080 between the virtual networks.

Solution: From the Resource providers blade, you unregister the Microsoft.ClassicNetwork provider.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

You should use a policy definition.

Resource policy definition used by Azure Policy enables you to establish conventions for resources in your organization by describing when the policy is enforced and what effect to take. By defining conventions, you can control costs and more easily manage your resources.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-policy/policy-definition>

#### QUESTION 41

**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 have an app named App1 that is installed on two Azure virtual machines named VM1 and VM2. Connections to App1 are managed by using an Azure Load Balancer.

The effective network security configurations for VM2 are shown in the following exhibit.

Priority	Name	Port	Protocol	Source	Destination	Action
100	Allow_131.107.100.50	443	TCP	131.107.100.50	VirtualNetwork	Allow
200	BlockAllOther441	443	Any	Any	Any	Deny
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny



You discover that connections to App1 from 131.107.100.50 over TCP port 443 fail.

You verify that the Load Balancer rules are configured correctly.

You need to ensure that connections to App1 can be established successfully from 131.107.100.50 over TCP port 443.

Solution: You create an inbound security rule that denies all traffic from the 131.107.100.50 source and has a cost of 64999.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference:

<https://fastroute.com/azure-network-security-groups-explained/>

#### **QUESTION 42**

**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 have an app named App1 that is installed on two Azure virtual machines named VM1 and VM2. Connections to App1 are managed by using an Azure Load Balancer.

The effective network security configurations for VM2 are shown in the following exhibit.

Home > VM2 - Networking

VM2 - Networking  
Virtual machine

Search (Ctrl+F)

Attach network interface Detach network interface

**Network Interface: VM2-NIC1** Effective security rules Topology

Virtual network/subnet: Vnet1/Subnet11 NIC Public IP: - NIC Private IP: 10.240.11.5 Accelerated networking: Disabled

Inbound port rules Outbound port rules Application security groups Load balancing

Network security group NSG2 (attached to network interface: Subnet11)  
Impacts 1 subnets, 0 network interfaces

Priority	Name	Port	Protocol	Source	Destination	Action
100	Allow_131.107.100.50	443	TCP	131.107.100.50	VirtualNetwork	Allow
200	BlockAllOther443	443	Any	Any	Any	Deny
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

You discover that connections to App1 from 131.107.100.50 over TCP port 443 fail.

You verify that the Load Balancer rules are configured correctly.

You need to ensure that connections to App1 can be established successfully from 131.107.100.50 over TCP port 443.

Solution: You delete the BlockAllOther443 inbound security rule.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference:

<https://fastreroute.com/azure-network-security-groups-explained/>

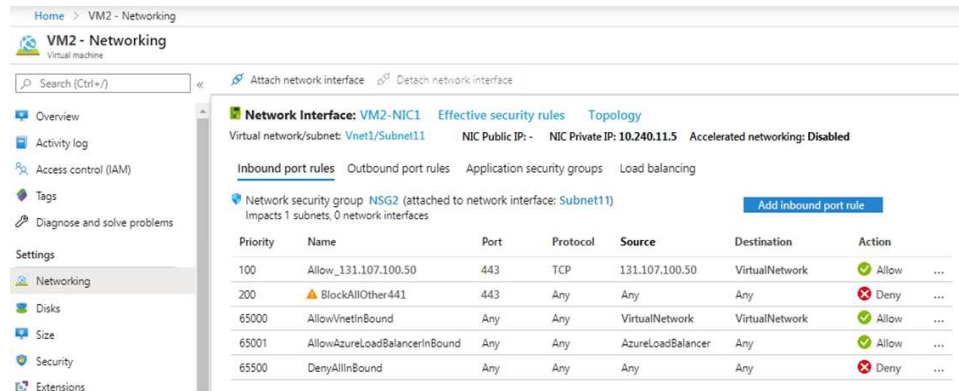
### QUESTION 43

**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 have an app named App1 that is installed on two Azure virtual machines named VM1 and VM2. Connections to App1 are managed by using an Azure Load Balancer.

The effective network security configurations for VM2 are shown in the following exhibit.



Home > VM2 - Networking

VM2 - Networking  
Virtual machine

Search (Ctrl+J)

Attach network interface Detach network interface

Network Interface: VM2-NIC1 Effective security rules Topology

Virtual network/subnet: Vnet1/Subnet11 NIC Public IP: - NIC Private IP: 10.240.11.5 Accelerated networking: Disabled

Inbound port rules Outbound port rules Application security groups Load balancing

Network security group NSG2 (attached to network interface: Subnet11)  
Impacts 1 subnets, 0 network interfaces

Add inbound port rule

Priority	Name	Port	Protocol	Source	Destination	Action
100	Allow_131.107.100.50	443	TCP	131.107.100.50	VirtualNetwork	Allow
200	BlockAllOther443	443	Any	Any	Any	Deny
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

You discover that connections to App1 from 131.107.100.50 over TCP port 443 fail.

You verify that the Load Balancer rules are configured correctly.

You need to ensure that connections to App1 can be established successfully from 131.107.100.50 over TCP port 443.

Solution: You modify the priority of the Allow\_131.107.100.50 inbound security rule.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

The rule currently has the highest priority.

Reference:

<https://fastroute.com/azure-network-security-groups-explained/>

#### QUESTION 44

**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 have an Azure subscription that contains 10 virtual networks. The virtual networks are hosted in separate resource groups.

Another administrator plans to create several network security groups (NSGs) in the subscription.

You need to ensure that when an NSG is created, it automatically blocks TCP port 8080 between the virtual networks.

Solution: You assign a built-in policy definition to the subscription.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Resource policy definition used by Azure Policy enables you to establish conventions for resources in your organization by describing when the policy is enforced and what effect to take. By defining conventions, you can control costs and more easily manage your resources.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-policy/policy-definition>

#### QUESTION 45

You have an Azure subscription.

You plan to deploy an Azure Kubernetes Service (AKS) cluster to support an app named App1. On-premises clients connect to App1 by using the IP address of the pod.

For the AKS cluster, you need to choose a network type that will support App1.

What should you choose?

- A. kubenet
- B. Azure Container Networking Interface (CNI)
- C. Hybrid Connection endpoints
- D. Azure Private Link

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

With Azure CNI, every pod gets an IP address from the subnet and can be accessed directly. These IP addresses must be unique across your network space.

Incorrect Answers:

A: The kubenet networking option is the default configuration for AKS cluster creation. With kubenet, nodes get an IP address from the Azure virtual network subnet. Pods receive an IP address from a logically different address space to the Azure virtual network subnet of the nodes. Network address translation (NAT) is then configured so that the pods can reach resources on the Azure virtual network.

C, D: AKS only supports Kubenet networking and Azure Container Networking Interface (CNI) networking

Reference:

<https://docs.microsoft.com/en-us/azure/aks/concepts-network>

#### QUESTION 46

**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 have an Azure subscription that contains the virtual machines shown in the following table.

Name	Public IP SKU	Connected to	Status
VM1	None	VNET1/Subnet1	Stopped (deallocated)
VM2	Basic	VNET1/Subnet2	Running

You deploy a load balancer that has the following configurations:

- Name: LB1

- Type: Internal
- SKU: Standard
- Virtual network: VNET1

You need to ensure that you can add VM1 and VM2 to the backend pool of LB1.

Solution: You disassociate the public IP address from the network interface of VM2.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 47**

**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 have an Azure subscription that contains 10 virtual networks. The virtual networks are hosted in separate resource groups.

Another administrator plans to create several network security groups (NSGs) in the subscription.

You need to ensure that when an NSG is created, it automatically blocks TCP port 8080 between the virtual networks.

Solution: You configure a custom policy definition, and then you assign the policy to the subscription.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: A**

**Section: (none)**

## Explanation

### Explanation/Reference:

Explanation:

Resource policy definition used by Azure Policy enables you to establish conventions for resources in your organization by describing when the policy is enforced and what effect to take. By defining conventions, you can control costs and more easily manage your resources.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-policy/policy-definition>

### QUESTION 48

You have two Azure virtual networks named VNet1 and VNet2. VNet1 contains an Azure virtual machine named VM1. VNet2 contains an Azure virtual machine named VM2.

VM1 hosts a frontend application that connects to VM2 to retrieve data.

Users report that the frontend application is slower than usual.

You need to view the average round-trip time (RTT) of the packets from VM1 to VM2.

Which Azure Network Watcher feature should you use?

- A. IP flow verify
- B. Connection troubleshoot
- C. Connection monitor
- D. NSG flow logs

**Correct Answer: C**

**Section: (none)**

### Explanation

### Explanation/Reference:

Explanation:

The connection monitor capability monitors communication at a regular interval and informs you of reachability, latency, and network topology changes between the VM and the endpoint

Incorrect Answers:

A: The IP flow verify capability enables you to specify a source and destination IPv4 address, port, protocol (TCP or UDP), and traffic direction (inbound or outbound). IP flow verify then tests the communication and informs you if the connection succeeds or fails. If the connection fails, IP flow verify tells you which security rule allowed or denied the communication, so that you can resolve the problem.

B: The connection troubleshoot capability enables you to test a connection between a VM and another VM, an FQDN, a URI, or an IPv4 address. The test returns similar information returned when using the connection monitor capability, but tests the connection at a point in time, rather than monitoring it over time, as connection monitor does.

D: The NSG flow log capability allows you to log the source and destination IP address, port, protocol, and whether traffic was allowed or denied by an NSG.

Reference:

<https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-monitoring-overview>

#### QUESTION 49

You have an Azure subscription that contains two virtual machines as shown in the following table.

Name	Operating system	Location	IP address	DNS server
VM1	Windows Server 2019	West Europe	10.0.0.4	Default (Azure-provided)
VM2	Windows Server 2019	West Europe	10.0.0.5	Default (Azure-provided)

You perform a reverse DNS lookup for 10.0.0.4 from VM2.

Which FQDN will be returned?

- A. vm1.core.windows.net
- B. vm1.azure.com
- C. vm1.westeurope.cloudapp.azure.com
- D. vm1.internal.cloudapp.net

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 50

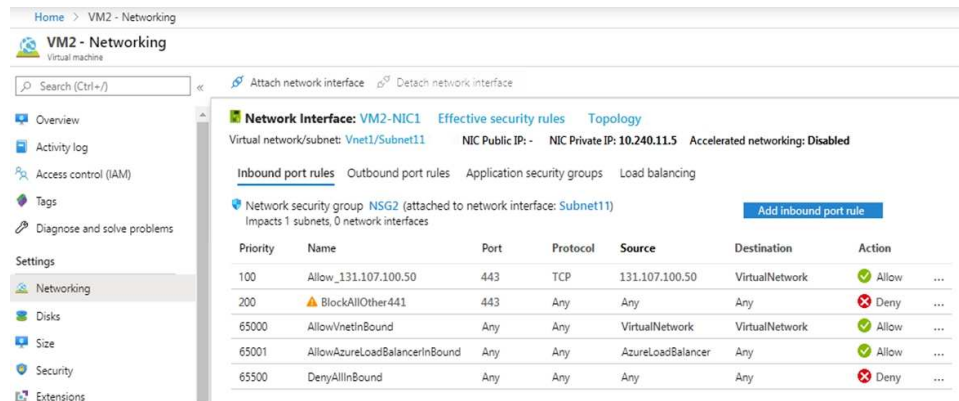
**Note:** This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

**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 have an app named App1 that is installed on two Azure virtual machines named VM1 and VM2. Connections to App1 are managed by using an Azure Load Balancer.



The effective network security configurations for VM2 are shown in the following exhibit.



Home > VM2 - Networking

VM2 - Networking

Virtual machine

Search (Ctrl+F)

Attach network interface Detach network interface

Network Interface: VM2-NIC1 Effective security rules Topology

Virtual network/subnet: Vnet1/Subnet11 NIC Public IP: - NIC Private IP: 10.240.11.5 Accelerated networking: Disabled

Inbound port rules Outbound port rules Application security groups Load balancing

Network security group NSG2 (attached to network interface: Subnet11) Add inbound port rule

Impacts 1 subnets, 0 network interfaces

Priority	Name	Port	Protocol	Source	Destination	Action
100	Allow_131.107.100.50	443	TCP	131.107.100.50	VirtualNetwork	Allow
200	BlockAllOther441	443	Any	Any	Any	Deny
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

You discover that connections to App1 from 131.107.100.50 over TCP port 443 fail.

You verify that the Load Balancer rules are configured correctly.

You need to ensure that connections to App1 can be established successfully from 131.107.100.50 over TCP port 443.

Solution: You create an inbound security rule that allows any traffic from the AzureLoadBalancer source and has a cost of 150.

Does this meet the goal?

A. Yes

B. No

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/virtual-network/network-security-groups-overview>

## Configure and manage virtual networking

### Testlet 2

#### Case study

This is a case study. **Case studies are not timed separately. You can use as much exam time as you would like to complete each case.** However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other questions in this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

#### To start the case study

To display the first question in this case study, click the **Next** button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an **All Information** tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the **Question** button to return to the question.

#### Overview

Litware, Inc. is a consulting company that has a main office in Montreal and two branch offices in Seattle and New York.

The Montreal office has 2,000 employees. The Seattle office has 1,000 employees. The New York office has 200 employees.

All the resources used by Litware are hosted on-premises.

Litware creates a new Azure subscription. The Azure Active Directory (Azure AD) tenant uses a domain named litware.onmicrosoft.com. The tenant uses the P1 pricing tier.

#### Existing Environment

The network contains an Active Directory forest named litware.com. All domain controllers are configured as DNS servers and host the litware.com DNS zone.

Litware has finance, human resources, sales, research, and information technology departments. Each department has an organizational unit (OU) that contains all the accounts of that respective department. All the user accounts have the **department** attribute set to their respective department. New users are added frequently.

Litware.com contains a user named User1.

All the offices connect by using private connections.

Litware has data centers in the Montreal and Seattle offices. Each office has a firewall that can be configured as a VPN device.

All infrastructure servers are virtualized. The virtualization environment contains the servers in the following table.

Name	Role	Contains virtual machine
Server1	VMware vCenter server	VM1
Server2	Hyper-V host	VM2

Litware uses two web applications named App1 and App2. Each instance on each web application requires 1 GB of memory.

The Azure subscription contains the resources in the following table.

Name	Type
VNet1	Virtual network
VM3	Virtual machine
VM4	Virtual machine

The network security team implements several network security groups (NSGs)

## Requirements

## Planned Changes

Litware plans to implement the following changes:

- Deploy Azure ExpressRoute to the Montreal office.
- Migrate the virtual machines hosted on Server1 and Server2 to Azure.
- Synchronize on-premises Active Directory to Azure Active Directory (Azure AD).
- Migrate App1 and App2 to two Azure web apps named WebApp1 and WebApp2.

## Technical Requirements

Litware must meet the following technical requirements:

- Ensure that WebApp1 can adjust the number of instances automatically based on the load and can scale up to five instances.
- Ensure that VM3 can establish outbound connections over TCP port 8080 to the applications servers in the Montreal office.
- Ensure that routing information is exchanged automatically between Azure and the routers in the Montreal office.

- Enable Azure Multi-Factor Authentication (MFA) for the users in the finance department only.
- Ensure that webapp2.azurewebsites.net can be accessed by using the name app2.litware.com.
- Connect the New York office to VNet1 over the Internet by using an encrypted connection.
- Create a workflow to send an email message when the settings of VM4 are modified.
- Create a custom Azure role named Role1 that is based on the Reader role.
- Minimize costs whenever possible.

## QUESTION 1

### HOTSPOT

You need to meet the connection requirements for the New York office.

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

**NOTE:** Each correct selection is worth one point.

**Hot Area:**

### Answer Area

From the Azure portal:

	▼
Create an ExpressRoute circuit only.	
Create a virtual network gateway only.	
Create a virtual network gateway and a local network gateway.	
Create an ExpressRoute circuit and an on-premises data gateway.	
Create a virtual network gateway and an on-premises data gateway.	

In the New York office:

	▼
Deploy ExpressRoute.	
Deploy a DirectAccess server.	
Implement a Web Application Proxy.	
Configure a site-to-site VPN connection.	

**Correct Answer:**

## Answer Area

From the Azure portal:

Create an ExpressRoute circuit only.
Create a virtual network gateway only.
Create a virtual network gateway and a local network gateway.
Create an ExpressRoute circuit and an on-premises data gateway.
Create a virtual network gateway and an on-premises data gateway.

In the New York office:

Deploy ExpressRoute.
Deploy a DirectAccess server.
Implement a Web Application Proxy.
Configure a site-to-site VPN connection.

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

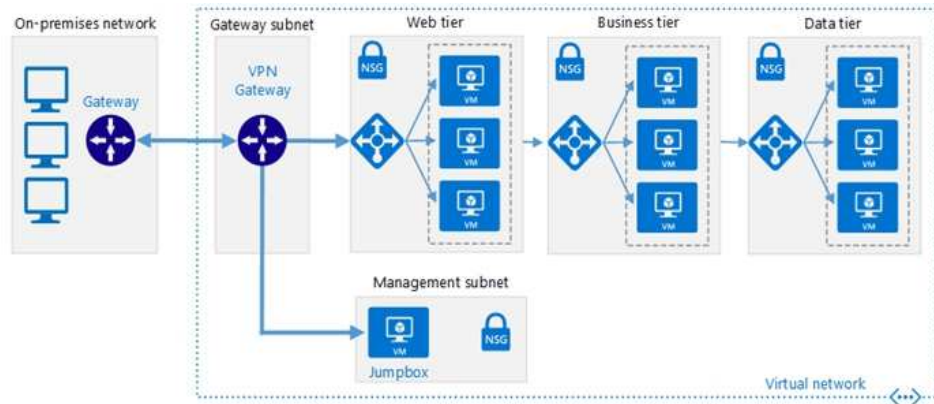
Box 1: Create a virtual network gateway and a local network gateway.

Azure VPN gateway. The VPN gateway service enables you to connect the VNet to the on-premises network through a VPN appliance. For more information, see [Connect an on-premises network to a Microsoft Azure virtual network](#). The VPN gateway includes the following elements:

- Virtual network gateway. A resource that provides a virtual VPN appliance for the VNet. It is responsible for routing traffic from the on-premises network to the VNet.
- Local network gateway. An abstraction of the on-premises VPN appliance. Network traffic from the cloud application to the on-premises network is routed through this gateway.
- Connection. The connection has properties that specify the connection type (IPSec) and the key shared with the on-premises VPN appliance to encrypt traffic.
- Gateway subnet. The virtual network gateway is held in its own subnet, which is subject to various requirements, described in the Recommendations section below.

Box 2: Configure a site-to-site VPN connection

On premises create a site-to-site connection for the virtual network gateway and the local network gateway.



Scenario: Connect the New York office to VNet1 over the Internet by using an encrypted connection.

Incorrect Answers:

Azure ExpressRoute: Established between your network and Azure, through an ExpressRoute partner. This connection is private. Traffic does not go over the internet.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/vpn>