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**Exam Code: AZ-305**  
**Exam Name: Designing Microsoft Azure Infrastructure Solutions**



## Topic 1

### 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 Qbutton to return to the question.

Overview. General Overview

Litware, Inc. is a medium-sized finance company.

Overview. Physical Locations

Litware has a main office in Boston.

Existing Environment. Identity Environment

The network contains an Active Directory forest named Litware.com that is linked to an Azure Active Directory (Azure AD) tenant named Litware.com. All users have Azure Active Directory Premium P2 licenses.

Litware has a second Azure AD tenant named dev.Litware.com that is used as a development environment.

The Litware.com tenant has a conditional access policy named capolicy1. Capolicy1 requires that when users manage the Azure subscription for a production environment by using the Azure portal, they must connect from a hybrid Azure

AD-joined device.

Existing Environment. Azure Environment

Litware has 10 Azure subscriptions that are linked to the Litware.com tenant and five Azure subscriptions that are linked to the dev.Litware.com tenant. All the subscriptions are in an Enterprise Agreement (EA).

The Litware.com tenant contains a custom Azure role-based access control (Azure RBAC) role named Role1 that grants the DataActions read permission to the blobs and files in Azure Storage.

Existing Environment. On-premises Environment

The on-premises network of Litware contains the resources shown in the following table.

Name	Type	Configuration
SERVER1 SERVER2 SERVER3	Ubuntu 18.04 virtual machines hosted on Hyper-V	The virtual machines host a third-party app named App1. App1 uses an external storage solution that provides Apache Hadoop-compatible data storage. The data storage supports POSIX access control list (ACL) file-level permissions.
SERVER10	Server that runs Windows Server 2016	The server contains a Microsoft SQL Server instance that hosts two databases named DB1 and DB2.

Existing Environment. Network Environment

Litware has ExpressRoute connectivity to Azure.

Planned Changes and Requirements. Planned Changes

Litware plans to implement the following changes:

Migrate DB1 and DB2 to Azure.

Migrate App1 to Azure virtual machines.

Deploy the Azure virtual machines that will host App1 to Azure dedicated hosts.

Planned Changes and Requirements. Authentication and Authorization Requirements Litware identifies the following authentication and authorization requirements:

Users that manage the production environment by using the Azure portal must connect from a hybrid Azure AD-joined device and authenticate by using Azure Multi-Factor Authentication (MFA).

The Network Contributor built-in RBAC role must be used to grant permission to all the virtual networks in all the Azure subscriptions.

To access the resources in Azure, App1 must use the managed identity of the virtual machines that will host the app.

Role1 must be used to assign permissions to the storage accounts of all the Azure subscriptions.

RBAC roles must be applied at the highest level possible.

Planned Changes and Requirements. Resiliency Requirements

Litware identifies the following resiliency requirements:

Once migrated to Azure, DB1 and DB2 must meet the following requirements:

- Maintain availability if two availability zones in the local Azure region fail.
- Fail over automatically.
- Minimize I/O latency.

App1 must meet the following requirements:

- Be hosted in an Azure region that supports availability zones.
- Be hosted on Azure virtual machines that support automatic scaling.
- Maintain availability if two availability zones in the local Azure region fail.

Planned Changes and Requirements. Security and Compliance Requirements Litware identifies the following security and compliance requirements:

Once App1 is migrated to Azure, you must ensure that new data can be written to the app, and the modification of new and existing data is prevented for a period of three years.

On-premises users and services must be able to access the Azure Storage account that will host the data in App1.

Access to the public endpoint of the Azure Storage account that will host the App1 data must be prevented.

All Azure SQL databases in the production environment must have Transparent Data Encryption (TDE) enabled.

App1 must not share physical hardware with other workloads.

Planned Changes and Requirements. Business Requirements

Litware identifies the following business requirements:

Minimize administrative effort.

Minimize costs.

**QUESTION 1**

**HOTSPOT**

You plan to migrate App1 to Azure.

You need to recommend a high-availability solution for App1. The solution must meet the resiliency requirements. What should you include in the recommendation? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.



**Hot Area:**

Number of host groups:

Number of virtual machine scale sets:

**Answer Area:**

Number of host groups:

Number of virtual machine scale sets:

**Section:**

**Explanation:**

Box 1: 3

Scenario: App1 must meet the following requirements:

Be hosted in an Azure region that supports availability zones.

Maintain availability if two availability zones in the local Azure region fail.

A host group is a resource that represents a collection of dedicated hosts. You create a host group in a region and an availability zone, and add hosts to it. Use Availability Zones for fault isolation

Availability zones are unique physical locations within an Azure region. Each zone is made up of one or more datacenters equipped with independent power, cooling, and networking. A host group is created in a single availability zone. Once created, all hosts will be placed within that zone. To achieve high availability across zones, you need to create multiple host groups (one per zone) and spread your hosts accordingly.

Box 2: 1

When creating a virtual machine scale set you can specify an existing host group to have all of the VM instances created on dedicated hosts. Which means one scale set for each host group with dedicated hosts.

<https://docs.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts>

**QUESTION 2**

HOTSPOT

You plan to migrate App1 to Azure.

You need to estimate the compute costs for App1 in Azure. The solution must meet the security and compliance requirements. What should you use to estimate the costs, and what should you implement to minimize the costs?

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

NOTE: Each correct selection is worth one point.

**Hot Area:**

To estimate the costs, use:

- Azure Advisor
- The Azure Cost Management Power BI app
- The Azure Total Cost of Ownership (TCO) calculator

Implement:

- Azure Reservations
- Azure Hybrid Benefit
- Azure Spot Virtual Machine pricing



**Answer Area:**

To estimate the costs, use:

- Azure Advisor
- The Azure Cost Management Power BI app
- The Azure Total Cost of Ownership (TCO) calculator

Implement:

- Azure Reservations
- Azure Hybrid Benefit
- Azure Spot Virtual Machine pricing

**Section:**

**Explanation:**

**QUESTION 3**

You plan to migrate App1 to Azure.

You need to recommend a network connectivity solution for the Azure Storage account that will host the App1 data. The solution must meet the security and compliance requirements. What should you include in the

recommendation?

- A. a private endpoint
- B. a service endpoint that has a service endpoint policy
- C. Azure public peering for an ExpressRoute circuit
- D. Microsoft peering for an ExpressRoute circuit

**Correct Answer: A**

**Section:**

**Explanation:**

Private Endpoint securely connect to storage accounts from on-premises networks that connect to the VNet using VPN or ExpressRoutes with private-peering. Private Endpoint also secure your storage account by configuring the storage firewall to block all connections on the public endpoint for the storage service. <https://docs.microsoft.com/en-us/azure/expressroute/expressroute-faqs#microsoft-peering>

#### QUESTION 4

You plan to migrate App1 to Azure. The solution must meet the authentication and authorization requirements. Which type of endpoint should App1 use to obtain an access token?

- A. Azure Instance Metadata Service (IMDS)
- B. Azure AD
- C. Azure Service Management
- D. Microsoft identity platform

**Correct Answer: D**

**Section:**

**Explanation:**

Scenario: To access the resources in Azure, App1 must use the managed identity of the virtual machines that will host the app. Managed identities provide an identity for applications to use when connecting to resources that support Azure Active Directory (Azure AD) authentication. Applications may use the managed identity to obtain Azure AD tokens.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azureresources/overview>

#### QUESTION 5

You migrate App1 to Azure. You need to ensure that the data storage for App1 meets the security and compliance requirement What should you do?

- A. Create an access policy for the blob
- B. Modify the access level of the blob service.
- C. Implement Azure resource locks.
- D. Create Azure RBAC assignments.

**Correct Answer: A**

**Section:**

**Explanation:**

Scenario: Once App1 is migrated to Azure, you must ensure that new data can be written to the app, and the modification of new and existing data is prevented for a period of three years. As an administrator, you can lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. The lock overrides any permissions the user might have.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/lock-resources>

#### QUESTION 6

You need to implement the Azure RBAC role assignments for the Network Contributor role. The solution must meet the authentication and authorization requirements. What is the minimum number of assignments that you must use?

- A. 1
- B. 2
- C. 5
- D. 10
- E. 15

**Correct Answer: B**

**Section:**

**Explanation:**

**QUESTION 7**

**HOTSPOT**

You need to ensure that users managing the production environment are registered for Azure MFA and must authenticate by using Azure MFA when they sign in to the Azure portal. The solution must meet the authentication and authorization requirements.

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

NOTE: Each correct selection is worth one point.

**Hot Area:**

To register the users for Azure MFA, use:

- Azure AD Identity Protection
- Security defaults in Azure AD
- Per-user MFA in the MFA management UI

To enforce Azure MFA authentication, configure:

- Grant control in capolicy1
- Session control in capolicy1
- Sign-in risk policy in Azure AD Identity Protection for the Litware.com tenant

**Answer Area:**

To register the users for Azure MFA, use:

- Azure AD Identity Protection
- Security defaults in Azure AD
- Per-user MFA in the MFA management UI

To enforce Azure MFA authentication, configure:

- Grant control in capolicy1
- Session control in capolicy1
- Sign-in risk policy in Azure AD Identity Protection for the Litware.com tenant

**Section:**

**Explanation:**

- 1: Azure AD Identity Protection
- 2: Grant control in capolicy1

**QUESTION 8**

DRAG DROP

You need to configure an Azure policy to ensure that the Azure SQL databases have TDE enabled. The solution must meet the security and compliance requirements. 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**

- Create an Azure policy definition that uses the deployIfNotExists effect.
- Create a user-assigned managed identity.
- Invoke a remediation task.
- Create an Azure policy assignment.
- Create an Azure policy definition that uses the Modify effect.

**Answer Area**

Correct Answer:

**Actions**

- Create a user-assigned managed identity.
- Create an Azure policy definition that uses the Modify effect.

**Answer Area**

- Create an Azure policy definition that uses the deployIfNotExists effect.
- Create an Azure policy assignment.
- Invoke a remediation task.

**Section:**

**Explanation:**

Scenario: All Azure SQL databases in the production environment must have Transparent Data Encryption (TDE) enabled. Step 1: Create an Azure policy definition that uses the deployIfNotExists identity. The first step is to define the roles that deployIfNotExists and modify needs in the policy definition to successfully deploy the content of your included template. Step 2: Create an Azure policy assignment. When creating an assignment using the portal, Azure Policy both generates the managed identity and grants it the roles defined in roleDefinitionIds. Step 3: Invoke a remediation task. Resources that are non-compliant to a deployIfNotExists or modify policy can be put into a compliant state through Remediation. Remediation is accomplished by instructing Azure Policy to run the deployIfNotExists effect or the modify operations of the assigned policy on your existing resources and subscriptions, whether that assignment is to a management group, a subscription, a resource group, or an individual resource. During evaluation, the policy assignment with deployIfNotExists or modify effects determines if there are non-compliant resources or subscriptions. When non-compliant resources or subscriptions are found, the details are provided on the

Remediation page.

Reference:

<https://docs.microsoft.com/en-us/azure/governance/policy/how-to/remediate-resources>

**QUESTION 9**

HOTSPOT

You plan to migrate App1 to Azure.

You need to recommend a storage solution for App1 that meets the security and compliance requirements. Which type of storage should you recommend, and how should you recommend configuring the storage? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

Storage account type:

Premium page blobs
Premium file shares
Standard general-purpose v2

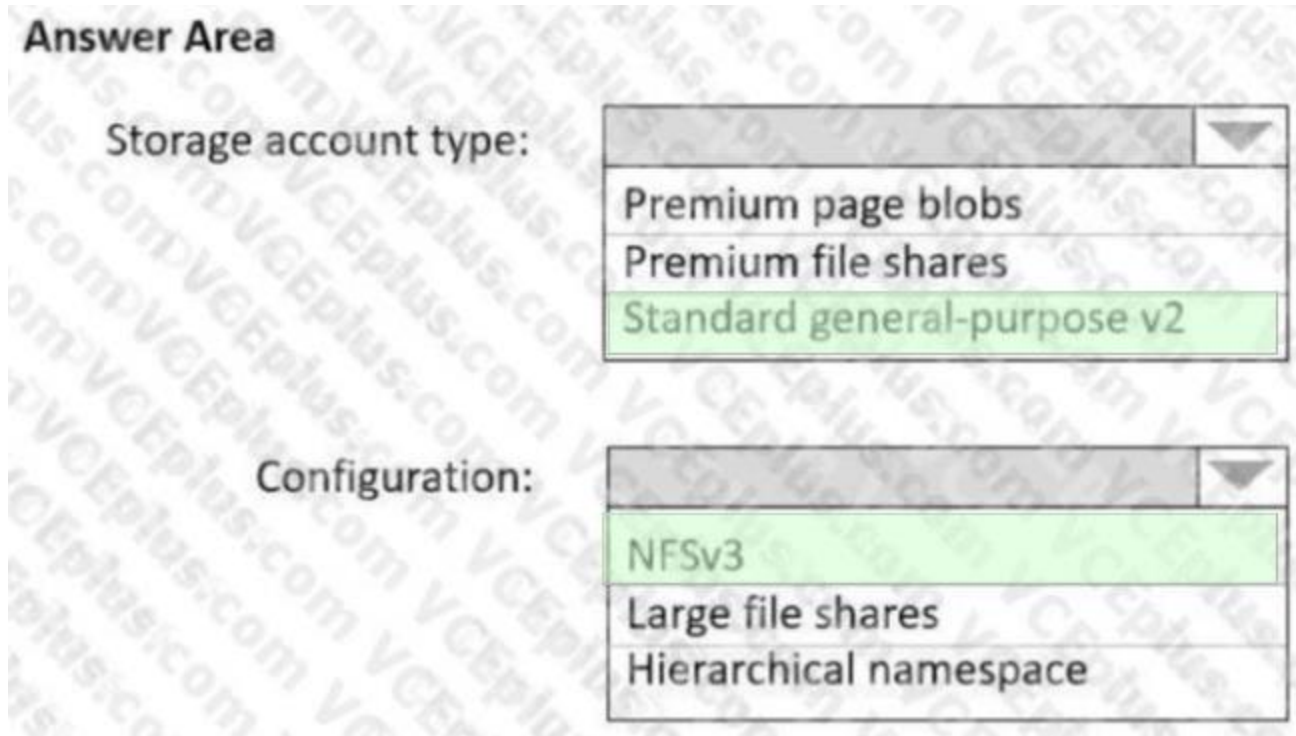
Configuration:

NFSv3
Large file shares
Hierarchical namespace

Answer Area:







**Section:**

**Explanation:**

Box 1: Standard general-purpose v2

Standard general-purpose v2 supports Blob Storage.

Azure Storage provides data protection for Blob Storage and Azure Data Lake Storage Gen2.

Scenario:

Litware identifies the following security and compliance requirements:

Once App1 is migrated to Azure, you must ensure that new data can be written to the app, and the modification of new and existing data is prevented for a period of three years. On-premises users and services must be able to access the Azure Storage account that will host the data in App1.

Access to the public endpoint of the Azure Storage account that will host the App1 data must be prevented. All Azure SQL databases in the production environment must have Transparent Data Encryption (TDE) enabled.

App1 must NOT share physical hardware with other workloads. Box 2: NFSv3

Scenario: Plan: Migrate App1 to Azure virtual machines.

Blob storage now supports the Network File System (NFS) 3.0 protocol. This support provides Linux file system compatibility at object storage scale and prices and enables Linux clients to mount a container in Blob storage from an Azure Virtual Machine (VM) or a computer on-premises.

Reference: <https://docs.microsoft.com/en-us/azure/storage/blobs/data-protection-overview>

**QUESTION 10**

HOTSPOT

How should the migrated databases DB1 and DB2 be implemented in Azure?

**Hot Area:**

**Answer Area**

Database:

	▼
A single Azure SQL database	
Azure SQL Managed Instance	
An Azure SQL Database elastic pool	

Service tier:

	▼
Hyperscale	
Business Critical	
General Purpose	

Answer Area:

**Answer Area**

Database:

	▼
A single Azure SQL database	
Azure SQL Managed Instance	
An Azure SQL Database elastic pool	

Service tier:

	▼
Hyperscale	
Business Critical	
General Purpose	

Vdumps

**Section:**

**Explanation:**

Box 1: SQL Managed Instance

Scenario: Once migrated to Azure, DB1 and DB2 must meet the following requirements:

Maintain availability if two availability zones in the local Azure region fail. Fail over automatically. Minimize I/O latency. The auto-failover groups feature allows you to manage the replication and failover of a group of databases on a server or all databases in a managed instance to another region. It is a declarative abstraction on top of the existing active georeplication feature, designed to simplify deployment and management of geo-

replicated databases at scale. You can initiate a geo-failover manually or you can delegate it to the Azure service based on a user-defined policy. The latter option allows you to automatically recover multiple related databases in a secondary region after a catastrophic failure or other unplanned event that results in full or partial loss of the SQL Database or SQL Managed Instance availability in the primary region.

Box 2: Business critical

SQL Managed Instance is available in two service tiers:

General purpose: Designed for applications with typical performance and I/O latency requirements.

Business critical: Designed for applications with low I/O latency requirements and minimal impact of underlying maintenance operations on the workload.

Reference: <https://docs.microsoft.com/en-us/azure/azure-sql/database/auto-failover-group-overview>

<https://docs.microsoft.com/en-us/azure/azure-sql/managed-instance/sql-managed-instance-paas-overview>

## Topic 2

Overview:

Existing Environment

Fabrikam, Inc. is an engineering company that has offices throughout Europe. The company has a main office in London and three branch offices in Amsterdam Berlin, and Rome. Active Directory Environment:

The network contains two Active Directory forests named corp.fabrikam.com and rd.fabrikam.com.

There are no trust relationships between the forests. Corp.fabrikam.com is a production forest that contains identities used for internal user and computer authentication. Rd.fabrikam.com is used by the research and development (R&D) department only. The R&D department is restricted to using on-premises resources only.

Network Infrastructure:

Each office contains at least one domain controller from the corp.fabrikam.com domain. The main office contains all the domain controllers for the rd.fabrikam.com forest. All the offices have a high-speed connection to the Internet.

An existing application named WebApp1 is hosted in the data center of the London office. WebApp1 is used by customers to place and track orders. WebApp1 has a web tier that uses Microsoft Internet Information Services (IIS) and a database tier that runs Microsoft SQL Server 2016. The web tier and the database tier are deployed to virtual machines that run on Hyper-V. The IT department currently uses a separate Hyper-V environment to test updates to WebApp1.

Fabrikam purchases all Microsoft licenses through a Microsoft Enterprise Agreement that includes Software Assurance. Problem Statement:

The use of Web App1 is unpredictable. At peak times, users often report delays. At other times, many resources for WebApp1 are underutilized. Requirements:

Planned Changes:

Fabrikam plans to move most of its production workloads to Azure during the next few years.

As one of its first projects, the company plans to establish a hybrid identity model, facilitating an upcoming Microsoft Office 365 deployment All R&D operations will remain on-premises. Fabrikam plans to migrate the production and test instances of WebApp1 to Azure.

Technical Requirements:

Fabrikam identifies the following technical requirements:

- Web site content must be easily updated from a single point.
- User input must be minimized when provisioning new app instances.
- Whenever possible, existing on premises licenses must be used to reduce cost.
- Users must always authenticate by using their corp.fabrikam.com UPN identity.
- Any new deployments to Azure must be redundant in case an Azure region fails.
- Whenever possible, solutions must be deployed to Azure by using platform as a service (PaaS).
- An email distribution group named IT Support must be notified of any issues relating to the directory synchronization services.
- Directory synchronization between Azure Active Directory (Azure AD) and corp.fabhkam.com must not be affected by a link failure between Azure and the on premises network. Database Requirements:

Fabrikam identifies the following database requirements:

- Database metrics for the production instance of WebApp1 must be available for analysis so that database administrators can optimize the performance settings.
- To avoid disrupting customer access, database downtime must be minimized when databases are migrated.
- Database backups must be retained for a minimum of seven years to meet compliance requirement Security Requirements:

Fabrikam identifies the following security requirements:

\*Company information including policies, templates, and data must be inaccessible to anyone outside the company \*Users on the on-premises network must be able to authenticate to corp.fabrikam.com if an Internet link fails. \*Administrators must be able authenticate to the Azure portal by using their corp.fabrikam.com credentials.

\*All administrative access to the Azure portal must be secured by using multi-factor authentication.

\*The testing of WebApp1 updates must not be visible to anyone outside the company.

## QUESTION 1

You need to recommend a strategy for the web tier of WebApp1. The solution must minimize What should you recommend?

- A. Create a runbook that resizes virtual machines automatically to a smaller size outside of business hours.
- B. Configure the Scale Up settings for a web app.
- C. Deploy a virtual machine scale set that scales out on a 75 percent CPU threshold.
- D. Configure the Scale Out settings for a web app.

**Correct Answer: D**

**Section:**

### QUESTION 2

You need to recommend a solution to meet the database retention requirement. What should you recommend?

- A. Configure a long-term retention policy for the database.
- B. Configure Azure Site Recovery.
- C. Configure geo replication of the database.
- D. Use automatic Azure SQL Database backups.

**Correct Answer: A**

**Section:**

**Explanation:**

<https://docs.microsoft.com/en-us/azure/azure-sql/database/long-term-retention-overview>In Azure SQL Database, you can configure a database with a long-term backup retention policy (LTR)to automatically retain the database backups in separate Azure Blob storage containers for up to 10years

### QUESTION 3

HOTSPOT

You design a solution for the web tier of WebApp1 as shown in the exhibit.



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

**Hot Area:**

The logo for Vdumps.com, featuring a stylized orange 'V' followed by the word 'dumps' in a grey, lowercase, sans-serif font.

Statements	Yes	No
The design supports the technical requirements for redundancy.	<input type="radio"/>	<input type="radio"/>
The design supports autoscaling.	<input type="radio"/>	<input type="radio"/>
The design requires a manual configuration if an Azure region fails.	<input type="radio"/>	<input type="radio"/>

Answer Area:

Statements	Yes	No
The design supports the technical requirements for redundancy.	<input checked="" type="radio"/>	<input type="radio"/>
The design supports autoscaling.	<input checked="" type="radio"/>	<input type="radio"/>
The design requires a manual configuration if an Azure region fails.	<input type="radio"/>	<input checked="" type="radio"/>

Section:

Explanation:

Box 1: Yes

Any new deployments to Azure must be redundant in case an Azure region fails.

Traffic Manager uses DNS to direct client requests to the most appropriate service endpoint based on a traffic-routing method and the health of the endpoints. An endpoint is any Internet-facing service hosted inside or outside of Azure. Traffic Manager provides a range of traffic-routing methods and endpoint monitoring options to suit different application needs and automatic failover models. Traffic Manager is resilient to failure, including the failure of an entire Azure region.

Box 2: Yes

Recent changes in Azure brought some significant changes in autoscaling options for Azure Web Apps

(i.e. Azure App Service to be precise as scaling happens on App Service plan level and has effect on all Web Apps running in that App Service plan). Box 3: No

Traffic Manager provides a range of traffic-routing methods and endpoint monitoring options to suit different application needs and automatic failover models. Traffic Manager is resilient to failure, including the failure of an entire Azure region.

Reference:

<https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-overview>

<https://blogs.msdn.microsoft.com/hsirtl/2017/07/03/autoscaling-azure-web-apps/>

#### QUESTION 4

What should you include in the identity management strategy to support the planned changes?

- A. Move all the domain controllers from corp.fabrikam.com to virtual networks in Azure.
- B. Deploy domain controllers for corp.fabrikam.com to virtual networks in Azure.
- C. Deploy a new Azure AD tenant for the authentication of new R&D projects.
- D. Deploy domain controllers for the rd.fabrikam.com forest to virtual networks in Azure.

Correct Answer: B

Section:

Explanation:

Directory synchronization between Azure Active Directory (Azure AD) and corp.fabrikam.com must not be affected by a link failure between Azure and the on-premises network. (This requires domain controllers in Azure)  
Users on the on-premises network must be able to authenticate to corp.fabrikam.com if an Internet link fails. (This requires domain controllers on-premises)

**QUESTION 5**

You need to recommend a notification solution for the IT Support distribution group.  
What should you include in the recommendation?

- A. Azure Network Watcher
- B. an action group
- C. a SendGrid account with advanced reporting
- D. Azure AD Connect Health

**Correct Answer: D**

**Section:**

**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/hybrid/how-to-connect-health-operations>

**QUESTION 6**

**HOTSPOT**

To meet the authentication requirements of Fabrikam, what should you include in the solution? To answer, select the appropriate options in the answer area. **NOTE:** Each correct selection is worth one point.

**Hot Area:**

The screenshot shows a hot spot question interface with three dropdown menus. Each dropdown menu has a label and a list of options (0, 1, 2, 3, 4). The first dropdown is labeled "Minimum number of Azure AD tenants:" and has options 0, 1, 2, 3, 4. The second dropdown is labeled "Minimum number of custom domains to add:" and has options 0, 1, 2, 3, 4. The third dropdown is labeled "Minimum number of conditional access policies to create:" and has options 0, 1, 2, 3, 4. The background of the screenshot is watermarked with "VCEP" and "VCP" text.

**Answer Area:**



Minimum number of Azure AD tenants:

0
1
2
3
4

Minimum number of custom domains to add:

0
1
2
3
4

Minimum number of conditional access policies to create:

0
1
2
3
4

**Section:**

**Explanation:**

1  
1  
0

**QUESTION 7**

You need to recommend a data storage strategy for WebApp1.  
What should you include in the recommendation?

- A. an Azure SQL Database elastic pool
- B. a vCore-based Azure SQL database
- C. an Azure virtual machine that runs SQL Server
- D. a fixed-size DTU AzureSQL database.

**Correct Answer: B**

**Section:**

**QUESTION 8**

You need to recommend a strategy for migrating the database content of WebApp1 to Azure. What should you include in the recommendation?

- A. Use Azure Site Recovery to replicate the SQL servers to Azure.
- B. Use SQL Server transactional replication.
- C. Copy the BACPAC file that contains the Azure SQL database file to Azure Blob storage.



D. Copy the VHD that contains the Azure SQL database files to Azure Blob storage

**Correct Answer: D**

**Section:**

**Explanation:**

Before you upload a Windows virtual machine (VM) from on-premises to Azure, you must prepare the virtual hard disk (VHD or VHDX). Scenario: WebApp1 has a web tier that uses Microsoft Internet Information Services (IIS) and a database tier that runs Microsoft SQL Server 2016. The web tier and the database tier are deployed to virtual machines that run on Hyper-V.

Reference:

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

### QUESTION 9

HOTSPOT

You are evaluating the components of the migration to Azure that require you to provision an Azure Storage account. 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 must provision an Azure Storage account for the SQL Server database migration.	<input type="checkbox"/>	<input type="checkbox"/>
You must provision an Azure Storage account for the Web site content storage.	<input type="checkbox"/>	<input type="checkbox"/>
You must provision an Azure Storage account for the Database metric monitoring.	<input type="checkbox"/>	<input type="checkbox"/>

**Answer Area:**

Answer Area

Statements	Yes	No
You must provision an Azure Storage account for the SQL Server database migration.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
You must provision an Azure Storage account for the Web site content storage.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
You must provision an Azure Storage account for the Database metric monitoring.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Section:**

**Explanation:**

### Topic 3

Case Study

An insurance company, HABInsurance, operates in three states and provides home, auto, and boat insurance. Besides the head office, HABInsurance has three regional offices. Current environment

General

An insurance company, HABInsurance, operates in three states and provides home, auto, and boat insurance. Besides the head office, HABInsurance has three regional offices. Technology assessment

The company has two Active Directory forests: main.habinsurance.com and region.habinsurance.com. HABInsurance's primary internal system is Insurance Processing System (IPS). It is an ASP.Net/C# application running on IIS/Windows Servers hosted in a data center. IPS has three tiers: web, business logic API, and a datastore on a back end. The company uses Microsoft SQL Server and MongoDB for the backend. The system has two parts:

Customer data and Insurance forms and documents. Customer data is stored in Microsoft SQL Server and Insurance forms and documents — in MongoDB. The company also has 10 TB of Human Resources (HR) data stored on NAS at the head office location. Requirements

General

HABInsurance plans to migrate its workloads to Azure. They purchased an Azure subscription.



## Changes

During a transition period, HABInsurance wants to create a hybrid identity model along with a Microsoft Office 365 deployment. The company intends to sync its AD forests to Azure AD and benefit from Azure AD administrative units functionality.

HABInsurance needs to migrate the current IPSCustomers SQL database to a new fully managed SQL database in Azure that would be budget-oriented, balanced with scalable compute and storage options. The management team expects the Azure database service to scale the database resources dynamically with minimal downtime. The technical team proposes implementing a DTU-based purchasing model for the new database. HABInsurance wants to migrate Insurance forms and documents to Azure database service.

HABInsurance plans to move IPS first two tiers to Azure without any modifications. The technology team discusses the possibility of running IPS tiers on a set of virtual machines instances. The number of instances should be adjusted automatically based on the CPU utilization. An SLA of 99.95% must be guaranteed for the compute infrastructure. The company needs to move HR data to Azure File shares.

In their new Azure ecosystem, HABInsurance plans to use internal and third-party applications. The company considers adding user consent for data access to the registered applications. Later, the technology team contemplates adding a customer self-service portal to IPS and deploying a new IPS to multi-region AKS. But the management team is worried about performance and availability of the multi-region AKS deployments during regional outages.

### QUESTION 1

A company is planning on deploying an application onto Azure. The application will be based on the .Net core programming language. The application would be hosted using Azure Web apps. Below is part of the various requirements for the application Give the ability to correlate Azure resource usage and the performance data with the actual application configuration and performance data

Give the ability to visualize the relationships between application components

Give the ability to track requests and exceptions to specific lines of code from within the application Give the ability to actually analyse how users return to an application and see how often they only select a particular drop-down value Which of the following service would be best suited for fulfilling the requirement of "Give the ability to correlate Azure resource usage and the performance data with the actual application configuration and performance data"

- A. Azure Application Insights
- B. Azure Service Map
- C. Azure Log Analytics
- D. Azure Activity Log

**Correct Answer: C**

**Section:**

### QUESTION 2

A company has an on-premises file server cbflserver that runs Windows Server 2019. Windows Admin Center manages this server. The company owns an Azure subscription. You need to provide an Azure solution to prevent data loss if the file server fails.

Solution: You decide to register Windows Admin Center in Azure and then configure Azure Backup.

Would this meet the requirement?

- A. Yes
- B. No

**Correct Answer: A**

**Section:**

**Explanation:**

### QUESTION 3

A company has an on-premises file server cbflserver that runs Windows Server 2019. Windows Admin Center manages this server. The company owns an Azure subscription. You need to provide an Azure solution to prevent data loss if the file server fails.

Solution: You decide to create an Azure Recovery Services vault. You then decide to install the Azure Backup agent and then schedule the backup. Would this meet the requirement?

- A. Yes
- B. No



**Correct Answer: A**

**Section:**

**QUESTION 4**

What two parameters would you recommend set up to ensure that the new IPSCustomers database will scale to meet the workload demands?

- A. Define the maximum of CPU cores
- B. Define the maximum resource limit per group of databases
- C. Define the maximum of Database Transaction Units
- D. Define the maximum of the allocated storage
- E. Define the maximum size for a database

**Correct Answer: C, E**

**Section:**

**Exam C**

**QUESTION 1**

You are designing a large Azure environment that will contain many subscriptions.

You plan to use Azure Policy as part of a governance solution.

To which three scopes can you assign Azure Policy definitions? Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point.

- A. management groups
- B. subscriptions
- C. Azure Active Directory (Azure AD) tenants
- D. resource groups
- E. Azure Active Directory (Azure AD) administrative units
- F. compute resources



**Correct Answer: A, D, E**

**Section:**

**Explanation:**

Azure Policy evaluates resources in Azure by comparing the properties of those resources to business rules. Once your business rules have been formed, the policy definition or initiative is assigned to any scope of resources that Azure supports, such as management groups, subscriptions, resource groups, or individual resources.

Reference:

<https://docs.microsoft.com/en-us/azure/governance/policy/overview>

**QUESTION 2**

You need to recommend a solution to generate a monthly report of all the new Azure Resource Manager resource deployment in your subscription. What should you include in the recommendation?

- A. Azure Analysis Services
- B. Application Insights
- C. Azure Monitor action groups
- D. Azure Log Analytics

**Correct Answer: D**

**Section:**

**Explanation:**

Activity logs are kept for 90 days. You can query for any range of dates, as long as the starting date isn't more than 90 days in the past. Through activity logs, you can determine: what operations were taken on the resources in your subscription who started the operation when the operation occurred the status of the operation the values of other properties that might help you research the operation

Reference:

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/view-activity-logs>

<https://docs.microsoft.com/en-us/azure/automation/change-tracking>

**QUESTION 3**

You have 100 servers that run Windows Server 2012 R2 and host Microsoft SQL Server 2012 R2 instances. The instances host databases that have the following characteristics:

The largest database is currently 3 TB. None of the databases will ever exceed 4 TB.

Stored procedures are implemented by using CLR.

You plan to move all the data from SQL Server to Azure.

You need to recommend an Azure service to host the databases. The solution must meet the following requirements:

Whenever possible, minimize management overhead for the migrated databases.

Minimize the number of database changes required to facilitate the migration.

Ensure that users can authenticate by using their Active Directory credentials.

What should you include in the recommendation?

- A. Azure SQL Database single databases
- B. Azure SQL Database Managed Instance
- C. Azure SQL Database elastic pools
- D. SQL Server 2016 on Azure virtual machines

**Correct Answer: B**

**Section:**

**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-managed-instance> SQL Managed Instance allows existing SQL Server customers to lift and shift their on-premises applications to the cloud with minimal application and database changes. At the same time, SQL Managed Instance preserves all PaaS capabilities (automatic patching and version updates, automated backups, high availability) that drastically reduce management overhead and TCO.

<https://docs.microsoft.com/en-us/azure/azure-sql/managed-instance/transact-sql-tsql-differences-sql-server#clr> <https://docs.microsoft.com/en-gb/azure/azure-sql/database/transact-sql-tsql-differences-sqlserver#transact-sql-syntax-not-supported-in-azure-sql-database>

**QUESTION 4**

You have an Azure subscription that contains an Azure Blob storage account named store1.

You have an on-premises file server named Setver1 that runs Windows Server 2016. Server1 stores 500 GB of company files. You need to store a copy of the company files from Server 1 in store1.

Which two possible Azure services achieve this goal? Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point

- A. an Azure Batch account
- B. an integration account
- C. an On-premises data gateway
- D. an Azure Import/Export job
- E. Azure Data factory

**Correct Answer: D, E**

**Section:**

**Explanation:**

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

<https://docs.microsoft.com/en-us/answers/questions/31113/fastest-method-to-copy-500gb-tablefrom-on-premise.html>



#### QUESTION 5

You have an Azure subscription that contains two applications named App1 and App2. App1 is a sales processing application. When a transaction in App1 requires shipping, a message is added to an Azure Storage account queue, and then App2 listens to the queue for relevant transactions.

In the future, additional applications will be added that will process some of the shipping requests based on the specific details of the transactions. You need to recommend a replacement for the storage account queue to ensure that each additional application will be able to read the relevant transactions. What should you recommend?

- A. one Azure Service Bus queue
- B. one Azure Service Bus topic
- C. one Azure Data Factory pipeline
- D. multiple storage account queues

**Correct Answer: B**

**Section:**

**Explanation:**

A queue allows processing of a message by a single consumer. In contrast to queues, topics and subscriptions provide a one-to-many form of communication in a publish and subscribe pattern. It's useful for scaling to large numbers of recipients. Each published message is made available to each subscription registered with the topic. Publisher sends a message to a topic and one or more subscribers receive a copy of the message, depending on filter rules set on these subscriptions.

Reference:

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-queues-topicssubscriptions>

#### QUESTION 6

The application will host video files that range from 50 MB to 12 GB. The application will use certificate-based authentication and will be available to users on the internet. You need to recommend a storage option for the video files. The solution must provide the fastest read performance and must minimize storage costs. What should you recommend?

- A. Azure Files
- B. Azure Data Lake Storage Gen2
- C. Azure Blob Storage
- D. Azure SQL Database

**Correct Answer: C**

**Section:**

**Explanation:**

Blob Storage: Stores large amounts of unstructured data, such as text or binary data, that can be accessed from anywhere in the world via HTTP or HTTPS. You can use Blob storage to expose data publicly to the world, or to store application data privately.

Max file in Blob Storage. 4.77 TB.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/solution-ideas/articles/digital-media-video>

#### QUESTION 7

You are designing a SQL database solution. The solution will include 20 databases that will be 20 GB each and have varying usage patterns. You need to recommend a database platform to host the databases. The solution must meet the following requirements:

- The compute resources allocated to the databases must scale dynamically.
- The solution must meet an SLA of 99.99% uptime.
- The solution must have reserved capacity.
- Compute charges must be minimized.

What should you include in the recommendation?

- A. 20 databases on a Microsoft SQL server that runs on an Azure virtual machine



- B. 20 instances of Azure SQL Database serverless
- C. 20 databases on a Microsoft SQL server that runs on an Azure virtual machine in an availability set
- D. an elastic pool that contains 20 Azure SQL databases

**Correct Answer: D**

**Section:**

**Explanation:**

Azure SQL Database elastic pools are a simple, cost-effective solution for managing and scaling multiple databases that have varying and unpredictable usage demands. The databases in an elastic pool are on a single server and share a set number of resources at a set price. Elastic pools in Azure SQL Database enable SaaS developers to optimize the price performance for a group of databases within a prescribed budget while delivering performance elasticity for each database.

Guaranteed 99.995 percent uptime for SQL Database

Reference:

<https://docs.microsoft.com/en-us/azure/azure-sql/database/elastic-pool-overview>

<https://azure.microsoft.com/en-us/pricing/details/sql-database/elastic/>

<https://www.azure.cn/en-us/support/sla/virtual-machines/>

<https://techcommunity.microsoft.com/t5/azure-sql/optimize-price-performance-with-computeauto-scaling-in-azure/ba-p/966149>

#### QUESTION 8

You are planning an Azure IoT Hub solution that will include 50,000 IoT devices.

Each device will stream data, including temperature, device ID, and time data. Approximately 50,000 records will be written every second. The data will be visualized in near real time. You need to recommend a service to store and query the data.

Which two services can you recommend? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Azure Table Storage
- B. Azure Event Grid
- C. Azure Cosmos DB SQL API
- D. Azure Time Series Insights



**Correct Answer: C, D**

**Section:**

**Explanation:**

D: Time Series Insights is a fully managed service for time series data. In this architecture, Time Series Insights performs the roles of stream processing, data store, and analytics and reporting. It accepts streaming data from either IoT Hub or Event Hubs and stores, processes, analyzes, and displays the data in near real time.

C: The processed data is stored in an analytical data store, such as Azure Data Explorer, HBase, Azure Cosmos DB, Azure Data Lake, or Blob Storage.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/scenarios/time-series>

#### QUESTION 9

You are designing an application that will aggregate content for users.

You need to recommend a database solution for the application. The solution must meet the following requirements:

Support SQL commands.

Support multi-master writes.

Guarantee low latency read operations.

What should you include in the recommendation?

- A. Azure Cosmos DB SQL API
- B. Azure SQL Database that uses active geo-replication
- C. Azure SQL Database Hyperscale

D. Azure Database for PostgreSQL

**Correct Answer: A**

**Section:**

**Explanation:**

With Cosmos DB's novel multi-region (multi-master) writes replication protocol, every region supports both writes and reads. The multi-region writes capability also enables:

Unlimited elastic write and read scalability.

99.999% read and write availability all around the world.

Guaranteed reads and writes served in less than 10 milliseconds at the 99th percentile.

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/distribute-data-globally>

#### QUESTION 10

You have SQL Server on an Azure virtual machine. The databases are written to nightly as part of a batch process. You need to recommend a disaster recovery solution for the data. The solution must meet the following requirements:

Provide the ability to recover in the event of a regional outage.

Support a recovery time objective (RTO) of 15 minutes.

Support a recovery point objective (RPO) of 24 hours.

Support automated recovery.

Minimize costs.

What should you include in the recommendation?

A. Azure virtual machine availability sets

B. Azure Disk Backup

C. an Always On availability group

D. Azure Site Recovery



**Correct Answer: D**

**Section:**

**Explanation:**

Replication with Azure Site Recover:

RTO is typically less than 15 minutes.

RPO: One hour for application consistency and five minutes for crash consistency.

Reference:

<https://docs.microsoft.com/en-us/azure/site-recovery/site-recovery-sql>

#### 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 need to deploy resources to host a stateless web app in an Azure subscription. The solution must meet the following requirements:

Provide access to the full .NET framework.

Provide redundancy if an Azure region fails.

Grant administrators access to the operating system to install custom application dependencies.

Solution: You deploy two Azure virtual machines to two Azure regions, and you create a Traffic Manager profile. Does this meet the goal?

A. Yes

B. No

**Correct Answer: A**

**Section:**

**Explanation:**

Azure Traffic Manager is a DNS-based traffic load balancer that enables you to distribute traffic optimally to services across global Azure regions, while providing high availability and responsiveness.  
<https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-overview>

**QUESTION 12**

You need to deploy resources to host a stateless web app in an Azure subscription. The solution must meet the following requirements:

- Provide access to the full .NET framework.
- Provide redundancy if an Azure region fails.
- Grant administrators access to the operating system to install custom application dependencies.

Solution: You deploy an Azure virtual machine to two Azure regions, and you deploy an Azure Application Gateway. Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section:**

**Explanation:**

You need to deploy two Azure virtual machines to two Azure regions, but also create a Traffic Manager profile.

**QUESTION 13**

You need to deploy resources to host a stateless web app in an Azure subscription. The solution must meet the following requirements:

- Provide access to the full .NET framework.
- Provide redundancy if an Azure region fails.
- Grant administrators access to the operating system to install custom application dependencies.

Solution: You deploy a Azure virtual machine scale set that uses autoscaling.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section:**

**Explanation:**

Instead, you should deploy two Azure virtual machines to two Azure regions, and you create a Traffic Manager profile.

**QUESTION 14**

You plan to move a web application named App1 from an on-premises data center to Azure.

App1 depends on a custom COM component that is installed on the host server.

You need to recommend a solution to host App1 in Azure. The solution must meet the following requirements:

App1 must be available to users if an Azure data center becomes unavailable.

Costs must be minimized.

What should you include in the recommendation?

- A. In two Azure regions, deploy a load balancer and a virtual machine scale set.
- B. In two Azure regions, deploy a Traffic Manager profile and a web app.
- C. In two Azure regions, deploy a load balancer and a web app.
- D. Deploy a load balancer and a virtual machine scale set across two availability zones.

**Correct Answer: D**

**Section:**

**Explanation:**

(<https://docs.microsoft.com/en-us/dotnet/azure/migration/app-service#com-and-com-components>) Azure App Service does not allow the registration of COM components on the platform. If your app makes use of any COM components, these need to be rewritten in managed code and deployed with the site or application. <https://docs.microsoft.com/en-us/dotnet/azure/migration/app-service> "Azure App Service with Windows Containers If your app cannot be migrated directly to App Service, consider App Service using Windows Containers, which enables usage of the GAC, COM components, MSIs, full access to .NET FX APIs, DirectX, and more."

#### QUESTION 15

You have an Azure subscription that contains a Basic Azure virtual WAN named VirtualWAN1 and the virtual hubs shown in the following table.

Name	Azure region
Hub1	US East
Hub2	US West

You have an ExpressRoute circuit in the US East region.

You need to create an ExpressRoute association to VirtualWAN1.

What should you do first?

- A. Upgrade VirtualWAN1 to Standard.
- B. Create a gateway on Hub1.
- C. Create a hub virtual network in US East.
- D. Enable the ExpressRoute premium add-on.

**Correct Answer: A**

**Section:**

**Explanation:**

US East and US West are in the same geopolitical region so there is no need for enabling ExpressRoute premium add-on <https://docs.microsoft.com/en-us/azure/virtual-wan/virtual-wan-about#basicstandard> The current config of virtual WAN is only Basic as given, so it can connect to only site to site VPN, to connect to express route it needs to be upgraded from basic to standard. <https://docs.microsoft.com/en-us/azure/virtual-wan/virtual-wan-about> <https://docs.microsoft.com/en-us/azure/virtual-wan/virtual-wan-about>

#### QUESTION 16

You have an Azure subscription that contains a storage account.

An application sometimes writes duplicate files to the storage account.

You have a PowerShell script that identifies and deletes duplicate files in the storage account.

Currently, the script is run manually after approval from the operations manager.

You need to recommend a serverless solution that performs the following actions:

Runs the script once an hour to identify whether duplicate files exist Sends an email notification to the operations manager requesting approval to delete the duplicate files Processes an email response from the operations manager specifying whether the deletion was approved Runs the script if the deletion was approved What should you include in the recommendation?

- A. Azure Logic Apps and Azure Functions
- B. Azure Pipelines and Azure Service Fabric
- C. Azure Logic Apps and Azure Event Grid
- D. Azure Functions and Azure Batch

**Correct Answer: A**

**Section:**

**Explanation:**

You can schedule a powershell script with Azure Logic Apps.

When you want to run code that performs a specific job in your logic apps, you can create your own function by using Azure Functions. This service helps you create Node.js, C#, and F# functions so you don't have to build a complete app or infrastructure to run code. You can also call logic apps from inside Azure functions. Azure Functions provides serverless computing in the cloud and is useful for performing tasks such as these examples:

Reference:



<https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-azure-functions>

### QUESTION 17

Your company has the infrastructure shown in the following table.

Location	Resource
Azure	<ul style="list-style-type: none"><li>• Azure subscription named Subscription1</li><li>• 20 Azure web apps</li></ul>
On-premises datacenter	<ul style="list-style-type: none"><li>• Active Directory domain</li><li>• Server running Azure AD Connect</li><li>• Linux computer named Server1</li></ul>

The on-premises Active Directory domain syncs to Azure Active Directory (Azure AD).

Server1 runs an application named Appl that uses LDAP queries to verify user identities in the onpremises Active Directory domain. You plan to migrate Server1 to a virtual machine in Subscription1.

A company security policy states that the virtual machines and services deployed to Subscription1 must be prevented from accessing the on-premises network. You need to recommend a solution to ensure that Appl continues to function after the migration. The solution must meet the security policy. What should you include in the recommendation?

- A. Azure AD Domain Services (Azure AD DS)
- B. an Azure VPN gateway
- C. the Active Directory Domain Services role on a virtual machine
- D. Azure AD Application Proxy

**Correct Answer: A**

**Section:**

**Explanation:**

<https://docs.microsoft.com/en-us/azure/active-directory-domain-services/overview> Azure Active Directory Domain Services (Azure AD DS) provides managed domain services such as domain join, group policy, lightweight directory access protocol (LDAP), and Kerberos/NTLM authentication. Azure AD Domain Services (Azure AD DS) - This one could work since AAD DS will bring in the existing accounts from Azure AD which in turn are synchronised from on-premise AD over AD connect.

However, you would probably need to reconfigure the app and update the LDAP connection. Azure Active Directory (Azure AD) supports LDAP Authentication via Azure AD Domain Services (AD DS). <https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/auth-ldap>

<https://docs.microsoft.com/en-us/azure/active-directory-domain-services/synchronization>

### QUESTION 18

You need to design a solution that will execute custom C# code in response to an event routed to Azure Event Grid. The solution must meet the following requirements:

The executed code must be able to access the private IP address of a Microsoft SQL Server instance that runs on an Azure virtual machine. Costs must be minimized.

What should you include in the solution?

- A. Azure Logic Apps in the integrated service environment
- B. Azure Functions in the Dedicated plan and the Basic Azure App Service plan
- C. Azure Logic Apps in the Consumption plan
- D. Azure Functions in the Consumption plan

**Correct Answer: D**

**Section:**

**Explanation:**

When you create a function app in Azure, you must choose a hosting plan for your app. There are three basic hosting plans available for Azure Functions: Consumption plan, Premium plan, and Dedicated (App Service) plan. For the Consumption plan, you don't have to pay for idle VMs or reserve capacity in advance.

Connect to private endpoints with Azure Functions

As enterprises continue to adopt serverless (and Platform-as-a-Service, or PaaS) solutions, they often need a way to integrate with existing resources on a virtual network. These existing resources could be databases, file storage, message queues or event streams, or REST APIs.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale>

<https://techcommunity.microsoft.com/t5/azure-functions/connect-to-private-endpoints-with-azurefunctions/ba-p/1426615>

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-scale#hosting-plans-comparison>

#### QUESTION 19

You have an on-premises network and an Azure subscription. The on-premises network has several branch offices. A branch office in Toronto contains a virtual machine named VM1 that is configured as a file server. Users access the shared files on VM1 from all the offices.

You need to recommend a solution to ensure that the users can access the shares files as quickly as possible if the Toronto branch office is inaccessible. What should you include in the recommendation?

- A. a Recovery Services vault and Azure Backup
- B. an Azure file share and Azure File Sync
- C. Azure blob containers and Azure File Sync
- D. a Recovery Services vault and Windows Server Backup

**Correct Answer: B**

**Section:**

**Explanation:**

Use Azure File Sync to centralize your organization's file shares in Azure Files, while keeping the flexibility, performance, and compatibility of an on-premises file server. Azure File Sync transforms Windows Server into a quick cache of your Azure file share.

You need an Azure file share in the same region that you want to deploy Azure File Sync.

Reference:

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

#### QUESTION 20

You are designing a microservices architecture that will be hosted in an Azure Kubernetes Service (AKS) cluster. Apps that will consume the microservices will be hosted on Azure virtual machines. The virtual machines and the AKS cluster will reside on the same virtual network. You need to design a solution to expose the microservices to the consumer apps. The solution must meet the following requirements:

- Ingress access to the microservices must be restricted to a single private IP address and protected by using mutual TLS authentication.
- The number of incoming microservice calls must be rate-limited.
- Costs must be minimized.

What should you include in the solution?

- A. Azure API Management Premium tier with virtual network connection
- B. Azure Front Door with Azure Web Application Firewall (WAF)
- C. Azure API Management Standard tier with a service endpoint
- D. Azure App Gateway with Azure Web Application Firewall (WAF)

**Correct Answer: A**

**Section:**

**Explanation:**

One option is to deploy APIM (API Management) inside the cluster VNet.

The AKS cluster and the applications that consume the microservices might reside within the same VNet, hence there is no reason to expose the cluster publicly as all API traffic will remain within the VNet. For these scenarios, you can deploy API Management into the cluster VNet. API Management Premium tier supports VNet deployment.

Reference:

<https://docs.microsoft.com/en-us/azure/api-management/api-management-kubernetes>

#### QUESTION 21

You have .NET web service named service1 that has the following requirements.

Must read and write to the local file system.

Must write to the Windows Application event log.

You need to recommend a solution to host Service1 in Azure . The solution must meet the following requirements:

Minimize maintenance overhead.

Minimize costs.

What should you include in the recommendation?

- A. an Azure App Service web app
- B. an Azure virtual machine scale set
- C. an App Service Environment (ASE)
- D. an Azure Functions app

**Correct Answer: A**

**Section:**

**Explanation:**

<https://social.msdn.microsoft.com/Forums/vstudio/en-US/294b9e3e-e89c-4095-b8d0-ee1646e77268/writing-to-local-file-system-from-web-app-inazure?forum=windowsazurewebsitespreview>

#### QUESTION 22

DRAG DROP

Your on-premises network contains a server named Server1 that runs an ASP.NET application named App1. You have a hybrid deployment of Azure Active Directory (Azure AD).

You need to recommend a solution to ensure that users sign in by using their Azure AD account and Azure Multi-Factor Authentication (MFA) when they connect to App1 from the internet. Which three features should you recommend be deployed and configured in sequence? To answer, move the appropriate features from the list of features to the answer area and arrange them in the correct order.

Select and Place:

#### Services

an internal Azure Load Balancer

an Azure AD conditional access policy

Azure AD Application Proxy

an Azure AD managed identity

a public Azure Load Balancer

an Azure AD enterprise application

an App Service plan

Answer Area

 **vdumps**



**Correct Answer:**

**Services**

- an internal Azure Load Balancer
- 
- 
- an Azure AD managed identity
- a public Azure Load Balancer
- 
- an App Service plan

**Answer Area**

- Azure AD Application Proxy
- an Azure AD enterprise application
- an Azure AD conditional access policy



**Section:**

**Explanation:**

**QUESTION 23**

HOTSPOT

You need to design a storage solution for an app that will store large amounts of frequently used data. The solution must meet the following requirements:

Maximize data throughput.

Prevent the modification of data for one year.

Minimize latency for read and write operations.

Which Azure Storage account type and storage service should you recommend? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Storage account type:

	▼
BlobStorage	
BlockBlobStorage	
FileStorage	
StorageV2 with Premium performance	
StorageV2 with Standard performance	

Storage service:

	▼
Blob	
File	
Table	

Answer Area:

Answer Area

Storage account type:

	▼
BlobStorage	
BlockBlobStorage	
FileStorage	
StorageV2 with Premium performance	
StorageV2 with Standard performance	

Storage service:

	▼
Blob	
File	
Table	

Section:

Explanation:

Box 1: BlockBlobStorage

Block Blob is a premium storage account type for block blobs and append blobs. Recommended for scenarios with high transactions rates, or scenarios that use smaller objects or require consistently low storage latency. Box 2: Blob

The Archive tier is an offline tier for storing blob data that is rarely accessed. The Archive tier offers the lowest storage costs, but higher data retrieval costs and latency compared to the online tiers (Hot and Cool). Data must remain in the Archive tier for at least 180 days or be subject to an early deletion charge.

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

#### QUESTION 24

HOTSPOT

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

Name	Type	Performance
storage1	StorageV2	Standard
storage2	StorageV2	Premium
storage3	BlobStorage	Standard
storage4	FileStorage	Premium

You plan to implement two new apps that have the requirements shown in the following table.

Name	Requirement
App1	Use lifecycle management to migrate app data between storage tiers
App2	Store app data in an Azure file share

Which storage accounts should you recommend using 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:

<input type="checkbox"/> Storage1 and storage2 only <input type="checkbox"/> Storage1 and storage3 only <input type="checkbox"/> Storage1, storage2, and storage3 only <input type="checkbox"/> Storage1, storage2, storage3, and storage4	▼
---	---

App2:

<input type="checkbox"/> Storage4 only <input type="checkbox"/> Storage1 and storage4 only <input type="checkbox"/> Storage1, storage2, and storage4 only <input type="checkbox"/> Storage1, storage2, storage3, and storage4	▼
--	---

Answer Area:



**Answer Area**

App1:

Storage1 and storage2 only
Storage1 and storage3 only
Storage1, storage2, and storage3 only
Storage1, storage2, storage3, and storage4

App2:

Storage4 only
Storage1 and storage4 only
Storage1, storage2, and storage4 only
Storage1, storage2, storage3, and storage4

**Section:**

**Explanation:**

Box 1: Storage1 and storage3 only

Azure Blob Storage lifecycle management offers a rich, rule-based policy for GPv2 and blob storage accounts. Storage 2 does not support access tiers. Box 2: Storage1 and storage4 only  
FileStorage storage accounts allow you to deploy Azure file shares on premium/solid-state disk-based (SSD-based) hardware.

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-lifecycle-management-concepts> <https://docs.microsoft.com/jajp/azure/storage/common/storage-account-overview>

**QUESTION 25**

**HOTSPOT**

You have an on-premises database that you plan to migrate to Azure.

You need to design the database architecture to meet the following requirements:

Support scaling up and down.

Support geo-redundant backups.

Support a database of up to 75 TB.

Be optimized for online transaction processing (OLTP).

What should you include in the design? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Service:

	▼
Azure SQL Database	
Azure SQL Managed Instance	
Azure Synapse Analytics	
SQL Server on Azure Virtual Machines	

Service tier:

	▼
Basic	
Business Critical	
General Purpose	
Hyperscale	
Premium	
Standard	

Answer Area:

**Answer Area**

Service:

	▼
Azure SQL Database	
Azure SQL Managed Instance	
Azure Synapse Analytics	
SQL Server on Azure Virtual Machines	

Service tier:

	▼
Basic	
Business Critical	
General Purpose	
Hyperscale	
Premium	
Standard	



**Section:**

**Explanation:**

Box 1: Azure SQL Database Azure SQL Database:

Database size always depends on the underlying service tiers (e.g. Basic, Business Critical, Hyperscale). It supports databases of up to 100 TB with Hyperscale service tier model. Active geo-replication is a feature that lets you



to create a continuously synchronized readable secondary database for a primary database. The readable secondary database may be in the same Azure region as the primary, or, more commonly, in a different region. This kind of readable secondary databases are also known as geo-secondaries, or geo-replicas. Azure SQL Database and SQL Managed Instance enable you to dynamically add more resources to your database with minimal downtime. Box 2: Hyperscale Incorrect Answers:

SQL Server on Azure VM: geo-replication not supported.

Azure Synapse Analytics is not optimized for online transaction processing (OLTP).

Azure SQL Managed Instance max database size is up to currently available instance size (depending on the number of vCores). Max instance storage size (reserved) - 2 TB for 4 vCores - 8 TB for 8 vCores - 16 TB for other sizes

Reference: <https://docs.microsoft.com/en-us/azure/azure-sql/database/active-geo-replication-overview> <https://medium.com/awesome-azure/azure-difference-between-azure-sql-database-and-sql-server-on-vm-comparison-azuresql-vs-sql-server-vm-cf02578a1188>

**QUESTION 26**

**HOTSPOT**

You have an Azure subscription that contains the SQL servers on Azure shown in the following table.

Name	Resource group	Location
SQLsvr1	RG1	East US
SQLsvr2	RG2	West US

The subscription contains the storage accounts shown in the following table.

Name	Resource group	Location	Account kind
storage1	RG1	East US	StorageV2 (general purposev2)
storage2	RG2	Central US	BlobStorage

You create the Azure SQL databases shown in the following table.

Name	Resource group	Server	Pricing tier
SQLdb1	RG1	SQLsvr1	Standard
SQLdb2	RG1	SQLsvr1	Standard
SQLdb3	RG2	SQLsvr2	Premium

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:**

Statements	Yes	No
When you enable auditing for SQLdb1, you can store the audit information to storage1.	<input type="radio"/>	<input type="radio"/>
When you enable auditing for SQLdb2, you can store the audit information to storage2.	<input type="radio"/>	<input type="radio"/>
When you enable auditing for SQLdb3, you can store the audit information to storage2.	<input type="radio"/>	<input type="radio"/>

**Answer Area:**

Statements	Yes	No
When you enable auditing for SQLdb1, you can store the audit information to storage1.	<input checked="" type="radio"/>	<input type="radio"/>
When you enable auditing for SQLdb2, you can store the audit information to storage2.	<input type="radio"/>	<input checked="" type="radio"/>
When you enable auditing for SQLdb3, you can store the audit information to storage2.	<input checked="" type="radio"/>	<input type="radio"/>

**Section:**

**Explanation:**

Box 1: Yes

Be sure that the destination is in the same region as your database and server.

Box 2: Yes

Box 3: Yes

Blob Storage is always standard but SQL database premium supports audit logs.

Reference: <https://docs.microsoft.com/en-us/azure/sql-database/sql-database-auditing>

**QUESTION 27**

**HOTSPOT**

You plan to deploy the backup policy shown in the following exhibit.

The screenshot shows the configuration for 'Policy 1' with the following settings:

- Backup schedule:** Frequency: Daily, Time: 6:00 PM, Timezone: (UTC) Coordinated Universal Time.
- Instant Restore:** Retain instant recovery snapshot(s) for: 3 Day(s).
- Retention range:**
  - Retention of daily backup point. At: 6:00 PM, For: 90 Day(s).
  - Retention of weekly backup point. On: Sunday, At: 6:00 PM, For: 26 Week(s).
  - Retention of monthly backup point. On: First, Day: Sunday, At: 6:00 PM, For: 36 Month(s).
  - Retention of yearly backup point.
- Not Configured:** Week Based (selected), Day Based.



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

Virtual machines that are backed up by using the policy can be recovered for up to a maximum of [answer choice]:

	▼
90 days	
26 weeks	
36 months	
45 months	

The minimum recovery point objective (RPO) for virtual machines that are backed up by using the policy is [answer choice]:

	▼
1 hour	
1 day	
1 week	
1 month	
1 year	

Answer Area:

Answer Area

Virtual machines that are backed up by using the policy can be recovered for up to a maximum of [answer choice]:

	▼
90 days	
26 weeks	
36 months	
45 months	

The minimum recovery point objective (RPO) for virtual machines that are backed up by using the policy is [answer choice]:

	▼
1 hour	
1 day	
1 week	
1 month	
1 year	



Section:

Explanation:

QUESTION 28

HOTSPOT

You plan to create an Azure Storage account that will host file shares. The shares will be accessed from on-premises applications that are transaction-intensive. You need to recommend a solution to minimize latency when accessing the file shares. The solution must provide the highest-level of resiliency for the selected storage tier. What should you include in the recommendation? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Storage tier:

	▼
Hot	
Premium	
Transaction optimized	

Redundancy:

	▼
Geo-redundant storage (GRS)	
Zone-redundant storage (ZRS)	
Locally-redundant storage (LRS)	

Answer Area:

Answer Area

Storage tier:

	▼
Hot	
Premium	
Transaction optimized	

Redundancy:

	▼
Geo-redundant storage (GRS)	
Zone-redundant storage (ZRS)	
Locally-redundant storage (LRS)	

Section:

Explanation:

Box 1: Premium



Premium: Premium file shares are backed by solid-state drives (SSDs) and provide consistent high performance and low latency, within single-digit milliseconds for most IO operations, for IO-intensive workloads. Incorrect Answers:

Hot: Hot file shares offer storage optimized for general purpose file sharing scenarios such as team shares. Hot file shares are offered on the standard storage hardware backed by HDDs. Transaction optimized: Transaction optimized file shares enable transaction heavy workloads that don't need the latency offered by premium file shares. Transaction optimized file shares are offered on the standard storage hardware backed by hard disk drives (HDDs). Transaction optimized has historically been called "standard", however this refers to the storage media type rather than the tier itself (the hot and cool are also "standard" tiers, because they are on standard storage hardware).

Box 2: Zone-redundant storage (ZRS):

Premium Azure file shares only support LRS and ZRS.

Zone-redundant storage (ZRS): With ZRS, three copies of each file stored, however these copies are physically isolated in three distinct storage clusters in different Azure availability zones.

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

### QUESTION 29

#### HOTSPOT

You have an Azure subscription named Subscription1 that is linked to a hybrid Azure Active Directory (Azure AD) tenant.

You have an on-premises datacenter that does NOT have a VPN connection to Subscription1. The datacenter contains a computer named Server1 that has Microsoft SQL Server 2016 installed. Server is prevented from accessing the internet.

An Azure logic app resource named LogicApp1 requires write access to a database on Server1.

You need to recommend a solution to provide LogicApp1 with the ability to access Server1.

What should you recommend deploying on-premises and in Azure? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

#### Hot Area:

##### Answer Area

On-premises:

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Azure:

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

#### Answer Area:

## Answer Area

On-premises:

	▼
A Web Application Proxy for Windows Server	
An Azure AD Application Proxy connector	
An On-premises data gateway	
Hybrid Connection Manager	

Azure:

	▼
A connection gateway resource	
An Azure Application Gateway	
An Azure Event Grid domain	
An enterprise application	

### Section:

### Explanation:

Box 1: An on-premises data gateway

For logic apps in global, multi-tenant Azure that connect to on-premises SQL Server, you need to have the on-premises data gateway installed on a local computer and a data gateway resource that's already created in Azure.

Box 2: A connection gateway resource

Reference: <https://docs.microsoft.com/en-us/azure/connectors/connectors-create-api-sqlazure>

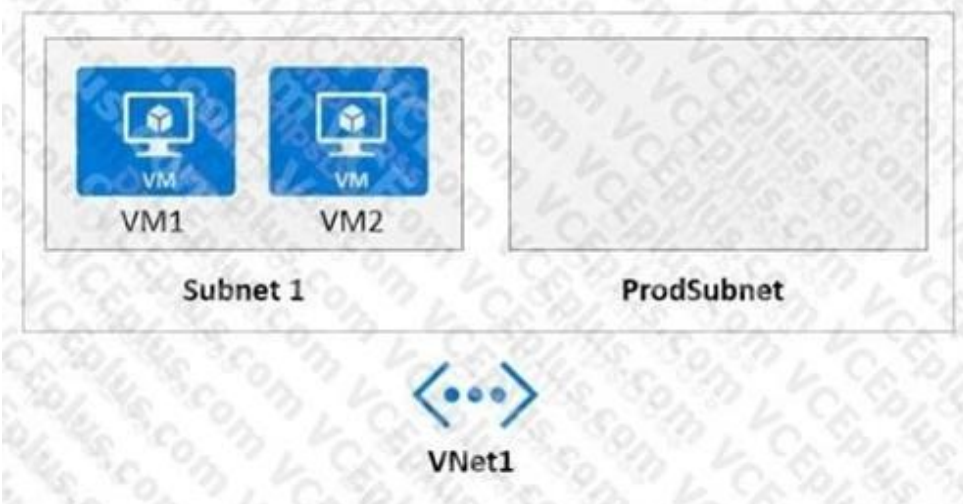


### QUESTION 30

#### HOTSPOT

Your company develops a web service that is deployed to an Azure virtual machine named VM1. The web service allows an API to access real-time data from VM1.

The current virtual machine deployment is shown in the Deployment exhibit.



The chief technology officer (CTO) sends you the following email message: "Our developers have deployed the web service to a virtual machine named VM1. Testing has shown that the API is accessible from VM1 and VM2. Our partners must be able to connect to the API over the Internet. Partners will use this data in applications that they develop." You deploy an Azure API Management (APIM) service. The relevant API Management configuration is shown in the API exhibit.

<b>Virtual network</b>	<input type="radio"/> Off <input checked="" type="radio"/> External <input type="radio"/> Internal	
<b>Location</b>	<b>Virtual network</b>	<b>Subnet</b>
West Europe	VNet1	ProdSubnet

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:

Statements	Yes	No
The API is available to partners over the internet.	<input type="radio"/>	<input type="radio"/>
The APIM instance can access real-time data from VM1.	<input type="radio"/>	<input type="radio"/>
A VPN gateway is required for partner access.	<input type="radio"/>	<input type="radio"/>

Answer Area:

Statements	Yes	No
The API is available to partners over the internet.	<input checked="" type="radio"/>	<input type="radio"/>
The APIM instance can access real-time data from VM1.	<input checked="" type="radio"/>	<input type="radio"/>
A VPN gateway is required for partner access.	<input type="radio"/>	<input checked="" type="radio"/>

Section:

Explanation:

**QUESTION 31**

DRAG DROP

A company has an existing web application that runs on virtual machines (VMs) in Azure.

You need to ensure that the application is protected from SQL injection attempts and uses a layer-7 load balancer. The solution must minimize disruption to the code for the existing web application. What should you recommend? To answer, drag the appropriate values to the correct items. 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	Answer Area	
	Item	Value
Web Application Firewall (WAF)		
Azure Application Gateway	Azure service	
Azure Load Balancer	Feature	
Azure Traffic Manager		
SSL offloading		
URL-based content routing		

Correct Answer:

Values	Answer Area	
	Item	Value
	Azure service	Azure Application Gateway
Azure Load Balancer	Feature	Web Application Firewall (WAF)
Azure Traffic Manager		
SSL offloading		
URL-based content routing		

Section:

Explanation:

Box 1: Azure Application Gateway

Azure Application Gateway provides an application delivery controller (ADC) as a service. It offers various layer 7 load-balancing capabilities for your applications. Box 2: Web Application Firewall (WAF)

Application Gateway web application firewall (WAF) protects web applications from common vulnerabilities and exploits. This is done through rules that are defined based on the OWASP core rule sets 3.0 or 2.2.9.

There are rules that detects SQL injection attacks.

Reference:

<https://docs.microsoft.com/en-us/azure/application-gateway/application-gateway-faq>

<https://docs.microsoft.com/en-us/azure/application-gateway/waf-overview>

### QUESTION 32

HOTSPOT

You are designing an Azure App Service web app.

You plan to deploy the web app to the North Europe Azure region and the West Europe Azure region.

You need to recommend a solution for the web app. The solution must meet the following requirements:

Users must always access the web app from the North Europe region, unless the region fails. The web app must be available to users if an Azure region is unavailable. Deployment costs must be minimized. What should you



include in the recommendation? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Request routing method:

	▼
A Traffic Manager profile	
Azure Application Gateway	
Azure Load Balancer	

Request routing configuration:

	▼
Cookie-based session affinity	
Performance traffic routing	
Priority traffic routing	
Weighted traffic routing	

Answer Area:

Answer Area

Request routing method:

	▼
A Traffic Manager profile	
Azure Application Gateway	
Azure Load Balancer	

Request routing configuration:

	▼
Cookie-based session affinity	
Performance traffic routing	
Priority traffic routing	
Weighted traffic routing	

Section:

Explanation:

QUESTION 33

HOTSPOT

You are planning an Azure Storage solution for sensitive data. The data will be accessed daily. The data set is less than 10 GB. You need to recommend a storage solution that meets the following requirements:

- All the data written to storage must be retained for five years.
- Once the data is written, the data can only be read. Modifications and deletion must be prevented.
- After five years, the data can be deleted, but never modified.
- Data access charges must be minimized

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

NOTE: Each correct selection is worth one point.

**Hot Area:**

Storage account type:

- General purpose v2 with Archive access tier for blobs
- General purpose v2 with Cool access tier for blobs
- General purpose v2 with Hot access tier for blobs

Configuration to prevent modifications and deletions:

- Container access level
- Container access policy
- Storage account resource lock

**Answer Area:**

Storage account type:

- General purpose v2 with Archive access tier for blobs
- General purpose v2 with Cool access tier for blobs
- General purpose v2 with Hot access tier for blobs

Configuration to prevent modifications and deletions:

- Container access level
- Container access policy
- Storage account resource lock

**Section:**

**Explanation:**

Box 1: General purpose v2 with Archive access tier for blobs

Archive - Optimized for storing data that is rarely accessed and stored for at least 180 days with flexible latency requirements, on the order of hours. Cool - Optimized for storing data that is infrequently accessed and stored for at least 30 days.

Hot - Optimized for storing data that is accessed frequently.

Box 2: Storage account resource lock

As an administrator, you can lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. The lock overrides any permissions the user



might have. Note: You can set the lock level to CanNotDelete or ReadOnly. In the portal, the locks are called Delete and Read-only respectively. CanNotDelete means authorized users can still read and modify a resource, but they can't delete the resource. ReadOnly means authorized users can read a resource, but they can't delete or update the resource.

Applying this lock is similar to restricting all authorized users to the permissions granted by the Reader role.

Reference:

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

### QUESTION 34

#### HOTSPOT

You have an Azure subscription that contains a virtual network named VNET1 and 10 virtual machines. The virtual machines are connected to VNET1. You need to design a solution to manage the virtual machines from the internet. The solution must meet the following requirements:

- Incoming connections to the virtual machines must be authenticated by using Azure Multi-Factor Authentication (MFA) before network connectivity is allowed.
- Incoming connections must use TLS and connect to TCP port 443.
- The solution must support RDP and SSH.

What should you include in the solution? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

#### Hot Area:

**Answer Area**

To provide access to virtual machines on VNET1, use:

<input type="checkbox"/>	Azure Bastion
<input type="checkbox"/>	Just-in-time (JIT) VM access
<input type="checkbox"/>	Azure Web Application Firewall (WAF) in Azure Front Door

To enforce Azure MFA, use:

<input type="checkbox"/>	An Azure Identity Governance access package
<input type="checkbox"/>	A Conditional Access policy that has the Cloud apps assignment set to Azure Windows VM Sign-In
<input type="checkbox"/>	A Conditional Access policy that has the Cloud apps assignment set to Microsoft Azure Management

#### Answer Area:

**Answer Area**

To provide access to virtual machines on VNET1, use:

<input type="checkbox"/>	Azure Bastion
<input checked="" type="checkbox"/>	Just-in-time (JIT) VM access
<input type="checkbox"/>	Azure Web Application Firewall (WAF) in Azure Front Door

To enforce Azure MFA, use:

<input checked="" type="checkbox"/>	An Azure Identity Governance access package
<input type="checkbox"/>	A Conditional Access policy that has the Cloud apps assignment set to Azure Windows VM Sign-In
<input type="checkbox"/>	A Conditional Access policy that has the Cloud apps assignment set to Microsoft Azure Management

#### Section:

#### Explanation:

### QUESTION 35

#### HOTSPOT

A company plans to implement an HTTP-based API to support a web app. The web app allows customers to check the status of their orders. The API must meet the following requirements:

Implement Azure Functions

Provide public read-only operations

Do not allow write operations

You need to recommend configuration options.

What should you recommend? To answer, configure the appropriate options in the dialog box in the answer area. NOTE: Each correct selection is worth one point.

#### Hot Area:

Topic	Value
Allowed authentication methods	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #ccc; padding: 2px; text-align: right;">▼</div> <div style="padding: 2px;">All methods</div> <div style="padding: 2px;">GET only</div> <div style="padding: 2px;">GET and POST only</div> <div style="padding: 2px;">GET, POST, and OPTIONS only</div> </div>
Authorization level	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #ccc; padding: 2px; text-align: right;">▼</div> <div style="padding: 2px;">Function</div> <div style="padding: 2px;">Anonymous</div> <div style="padding: 2px;">Admin</div> </div>

Answer Area:

Topic	Value
Allowed authentication methods	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #ccc; padding: 2px; text-align: right;">▼</div> <div style="padding: 2px; background-color: #e0ffe0;">All methods</div> <div style="padding: 2px; background-color: #e0ffe0;">GET only</div> <div style="padding: 2px;">GET and POST only</div> <div style="padding: 2px;">GET, POST, and OPTIONS only</div> </div>
Authorization level	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #ccc; padding: 2px; text-align: right;">▼</div> <div style="padding: 2px;">Function</div> <div style="padding: 2px; background-color: #e0ffe0;">Anonymous</div> <div style="padding: 2px;">Admin</div> </div>



Section:

Explanation:

Allowed authentication methods: GET only

Authorization level: Anonymous

The option is Allow Anonymous requests. This option turns on authentication and authorization in App Service, but defers authorization decisions to your application code. For authenticated requests, App Service also passes along authentication information in the HTTP headers.

This option provides more flexibility in handling anonymous requests.

Reference:

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

### QUESTION 36

DRAG DROP

You plan to import data from your on-premises environment to Azure. The data is shown in the following table.

On-premises source	Azure target
A Microsoft SQL Server 2012 database	An Azure SQL database
A table in a Microsoft SQL Server 2014 database	An Azure Cosmos DB account that uses the SQL API

What should you recommend using to migrate the data? To answer, drag the appropriate tools to the correct data sources-Each tool 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:

**Tools**

- AzCopy
- Azure Cosmos DB Data Migration Tool
- Data Management Gateway
- Data Migration Assistant

**Answer Area**

From the SQL Server 2012 database:

From the table in the SQL Server 2014 database:

**Correct Answer:**

**Tools**

- AzCopy
- 
- Data Management Gateway
- 

**Answer Area**

From the SQL Server 2012 database:

From the table in the SQL Server 2014 database:

**Section:**

**Explanation:**

<https://docs.microsoft.com/en-us/azure/dms/tutorial-sql-server-to-azure-sql>

<https://docs.microsoft.com/en-us/azure/cosmos-db/import-data>



**QUESTION 37**

DRAG DROP

You have an on-premises network that uses an IP address space of 172.16.0.0/16. You plan to deploy 25 virtual machines to a new Azure subscription. You identify the following technical requirements:

- All Azure virtual machines must be placed on the same subnet named Subnet1.
- All the Azure virtual machines must be able to communicate with all on-premises servers.
- The servers must be able to communicate between the on-premises network and Azure by using a site-to-site VPN. You need to recommend a subnet design that meets the technical requirements.

What should you include in the recommendation? To answer, drag the appropriate network addresses to the correct subnets. Each network address 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:**

**Network Addresses**

- 172.16.0.0/16
- 172.16.1.0/27
- 192.168.0.0/24
- 192.168.1.0/27

**Answer Area**

Subnet1:

Gateway subnet:

**Correct Answer:**

Network Addresses	Answer Area
172.16.0.0/16	Subnet1: 192.168.0.0/24
172.16.1.0/27	Gateway subnet: 192.168.1.0/27

**Section:**

**Explanation:**

### QUESTION 38

HOTSPOT

You have an Azure web app named App1 and an Azure key vault named KV1.

App1 stores database connection strings in KV1.

App1 performs the following types of requests to KV1:

Get

List

Wrap

Delete

Unwrap

Backup

Decrypt

Encrypt

You are evaluating the continuity of service for App1.

You need to identify the following if the Azure region that hosts KV1 becomes unavailable:

To where will KV1 fail over?

During the failover, which request type will be unavailable?

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

NOTE: Each correct selection is worth one point.

**Hot Area:**

Vdumps

To where will KV1 fail over?

- A server in the same Availability Set
- A server in the same fault domain
- A server in the same paired region
- A virtual machine in a scale set

During the failover, which request type will be unavailable?

- Backup
- Decrypt
- Delete
- Encrypt
- Get
- List
- Unwrap
- Wrap

Answer Area:

To where will KV1 fail over?

- A server in the same Availability Set
- A server in the same fault domain
- A server in the same paired region
- A virtual machine in a scale set

During the failover, which request type will be unavailable?

- Backup
- Decrypt
- Delete
- Encrypt
- Get
- List
- Unwrap
- Wrap

 **vdumps**

**Section:**

**Explanation:**

Box 1: A server in the same paired region

The contents of your key vault are replicated within the region and to a secondary region at least 150 miles away, but within the same geography to maintain high durability of your keys and secrets. Box 2: Delete  
During failover, your key vault is in read-only mode. Requests that are supported in this mode are:

List certificates

Get certificates

List secrets

Get secrets

List keys

Get (properties of) keys

Encrypt

Decrypt

Wrap

Unwrap

Verify

Sign

Backup

Reference:

<https://docs.microsoft.com/en-us/azure/key-vault/general/disaster-recovery-guidance>

**QUESTION 39**

**HOTSPOT**

You have an on-premises file server that stores 2 TB of data files.

You plan to move the data files to Azure Blob Storage in the West Europe Azure region. You need to recommend a storage account type to store the data files and a replication solution for the storage account. The solution must meet the following requirements:

- Be available if a single Azure datacenter fails.
- Support storage tiers.
- Minimize cost.

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

NOTE: Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Storage Account type:	<input type="checkbox"/> Premium block blobs <input type="checkbox"/> Standard general-purpose v1 <input type="checkbox"/> Standard general-purpose v2
Redundancy:	<input type="checkbox"/> Geo-redundant storage (GRS) <input type="checkbox"/> Zone-redundant storage (ZRS) <input type="checkbox"/> Locally-redundant storage (LRS) <input type="checkbox"/> Read-access geo-redundant storage (RA-GRS)

**Answer Area:**



**Answer Area**

Storage Account type:

Premium block blobs
Standard general-purpose v1
Standard general-purpose v2

Redundancy:

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

**Section:**

**Explanation:**

Account Type: StorageV2

Replication solution: Zone-redundant storage (ZRS)

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

<https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy#supported-azurestorage-services> <https://docs.microsoft.com/en-us/azure/storage/common/storage-account-overview#types-of-storage-accounts> Data must be available if a single Azure datacenter fails. It means the storage account must support ZRS replication. Also, solution should support storage tiers. Only General-purpose V2 supports ZRS and storage tiers.

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

**QUESTION 40**

**HOTSPOT**

Your company has two on-premises sites in New York and Los Angeles and Azure virtual networks in the East US Azure region and the West US Azure region. Each on-premises site has Azure ExpressRoute circuits to both regions. You need to recommend a solution that meets the following requirements:

Outbound traffic to the Internet from workloads hosted on the virtual networks must be routed through the closest available on-premises site. If an on-premises site fails, traffic from the workloads on the virtual networks to the Internet must reroute automatically to the other site. What should you include in the recommendation? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

**Hot Area:**

Routing from the virtual networks to the on-premises locations must be configured by using:

Azure default routes
Border Gateway Protocol (BGP)
User-defined routes

The automatic routing configuration following a failover must be handled by using:

Border Gateway Protocol (BGP)
Hot Standby Routing Protocol (HSRP)
Virtual Router Redundancy Protocol (VRRP)

**Answer Area:**

Routing from the virtual networks to the on-premises locations must be configured by using:

- Azure default routes
- Border Gateway Protocol (BGP)**
- User-defined routes

The automatic routing configuration following a failover must be handled by using:

- Border Gateway Protocol (BGP)**
- Hot Standby Routing Protocol (HSRP)
- Virtual Router Redundancy Protocol (VRRP)

**Section:**

**Explanation:**

An on-premises network gateway can exchange routes with an Azure virtual network gateway using the border gateway protocol (BGP). Using BGP with an Azure virtual network gateway is dependent on the type you selected when you created the gateway. If the type you selected were: ExpressRoute:

You must use BGP to advertise on-premises routes to the Microsoft Edge router. You cannot create user-defined routes to force traffic to the ExpressRoute virtual network gateway if you deploy a virtual network gateway deployed as type:

ExpressRoute. You can use user-defined routes for forcing traffic from the Express Route to, for example, a Network Virtual Appliance. <https://docs.microsoft.com/ja-jp/azure/expressroute/designing-for-disaster-recovery-withQuestions&Answers> PDF P-91expressroute-privatepeering <https://docs.microsoft.com/en-us/azure/expressroute/expressroute-optimize-routing#suboptimalrouting-from-customer-to-microsoft>

**QUESTION 41**

**HOTSPOT**

You deploy several Azure SQL Database instances.

You plan to configure the Diagnostics settings on the databases 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:

The amount of time that SQLInsights data will be stored in blob storage is [answer choice].

	▼
30 days	
90 days	
730 days	
indefinite	

The maximum amount of time that SQLInsights data can be stored in Azure Log Analytics is [answer choice].

	▼
30 days	
90 days	
730 days	
indefinite	

Answer Area:

The amount of time that SQLInsights data will be stored in blob storage is [answer choice].

	▼
30 days	
90 days	
730 days	
indefinite	

The maximum amount of time that SQLInsights data can be stored in Azure Log Analytics is [answer choice].

	▼
30 days	
90 days	
730 days	
indefinite	

Section:

Explanation:

In the exhibit, the SQLInsights data is configured to be stored in Azure Log Analytics for 90 days. However, the question is asking for the "maximum" amount of time that the data can be stored which is 730 days.

QUESTION 42

HOTSPOT

You have an Azure App Service web app that uses a system-assigned managed identity.

You need to recommend a solution to store their settings of the web app as secrets in an Azure key vault. The solution must meet the following requirements:

- Minimize changes to the app code,
- Use the principle of least privilege.

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

Hot Area:

Answer Area

Key Vault integration method:

Key Vault references in Application settings
Key Vault references in Appsettings.json
Key Vault references in Web.config
Key Vault SDK

Key Vault permissions for the managed identity:

Keys: Get
Keys: List and Get
Secrets: Get
Secrets: List and Get

Answer Area:

Answer Area

Key Vault integration method:

Key Vault references in Application settings
Key Vault references in Appsettings.json
Key Vault references in Web.config
Key Vault SDK

Key Vault permissions for the managed identity:

Keys: Get
Keys: List and Get
Secrets: Get
Secrets: List and Get

Section:

Explanation:

QUESTION 43

HOTSPOT

You configure OAuth2 authorization in API Management as shown in the following exhibit.

Vdumps

**Add OAuth2 service**  
API Management service

Display name \*

Unique name used to reference this authorization server on t...

Id \*

Description

Authorization server description

Client registration page URL \*

https://contoso.com/register

Authorization grant types

Authorization code

Implicit

Resource owner password

Client credentials

Authorization endpoint URL \*

https://login.microsoftonline.com/contosoonmicrosoft.com...

Support state parameter

Authorization request method

GET

POST

Token endpoint URL \*

Token endpoint is used by clients to obtain access tokens in ...

Create

The logo for Vdumps, featuring a stylized orange 'V' followed by the word 'dumps' in a grey, sans-serif font.

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:**

The selected authorization grant type is for [answer choice].

- Background services
- Headless device authentication
- Web applications

To enable custom data in the grant flow, select [answer choice].

- Client credentials
- Resource owner password
- Support state parameter

**Answer Area:**

The selected authorization grant type is for [answer choice].

- Background services
- Headless device authentication
- Web applications

To enable custom data in the grant flow, select [answer choice].

- Client credentials
- Resource owner password
- Support state parameter

**Section:**

**Explanation:**

Box 1: Web applications

The Authorization Code Grant Type is used by both web apps and native apps to get an access token after a user authorizes an app. Note: The Authorization Code grant type is used by confidential and public clients to exchange an authorization code for an access token. After the user returns to the client via the redirect URL, the application will get the authorization code from the URL and use it to request an access token. Incorrect

Answers:

Not Headless device authentication:

A headless system is a computer that operates without a monitor, graphical user interface (GUI) or peripheral devices, such as keyboard and mouse. Headless computers are usually embedded systems in various devices or servers in multi-server data center environments. Industrial machines, automobiles, medical equipment, cameras, household appliances, airplanes, vending machines and toys are among the myriad possible hosts of embedded systems.

Box 2: Client Credentials

How to include additional client data

In case you need to store additional details about a client that don't fit into the standard parameter set the custom data parameter comes to help:

POST /c2id/clients HTTP/1.1

Host: demo.c2id.com

Content-Type: application/json

Authorization: Bearer ztucZS1ZyFKgh0tUEruUtiSTXhnexmd6

```
{
  "redirect_uris" : [ "https://myapp.example.com/callback" ],
  "data" : { "reg_type" : "3rd-party",
  "approved" : true,
  "author_id" : 792440 }
}
```

The data parameter permits arbitrary content packaged in a JSON object. To set it you will need the master registration token or a one-time access token with a client-reg:data scope. Incorrect Answers:

Authorization protocols provide a state parameter that allows you to restore the previous state of your application. The state parameter preserves some state object set by the client in the Authorization request and makes it available to the

client in the response.

Reference:

<https://developer.okta.com/blog/2018/04/10/oauth-authorization-code-grant-type>

<https://connect2id.com/products/server/docs/guides/client-registration>

#### QUESTION 44

HOTSPOT

You plan to develop a new app that will store business critical data. The app must meet the following requirements:

Prevent new data from being modified for one year.

Minimize read latency.

Maximize data resiliency.

You need to recommend a storage solution for the app.

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

Hot Area:

Azure Storage account kind:

StorageV2
BlobStorage
BlockBlobStorage

Replication:

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

Answer Area:

Azure Storage account kind:

StorageV2
BlobStorage
BlockBlobStorage

Replication:

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

Section:

Explanation:

Reference:

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

<https://docs.microsoft.com/en-us/azure/storage/common/storageredundancy?toc=/azure/storage/blobs/toc.json>

#### QUESTION 45

**HOTSPOT**

You have the Free edition of a hybrid Azure Active Directory (Azure AD) tenant. The tenant uses password hash synchronization. You need to recommend a solution to meet the following requirements:  
Prevent Active Directory domain user accounts from being locked out as the result of brute force attacks targeting Azure AD user accounts. Block legacy authentication attempts to Azure AD integrated apps.  
Minimize costs.

What should you recommend for each requirement? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

**Hot Area:**

To protect against brute force attacks:

- Azure AD Password Protection
- Conditional access policies
- Pass-through authentication
- Smart lockout

To block legacy authentication attempts:

- Azure AD Application Proxy
- Azure AD Password Protection
- Conditional access policies
- Enable Security defaults

**Answer Area:**

To protect against brute force attacks:

- Azure AD Password Protection
- Conditional access policies
- Pass-through authentication
- Smart lockout

To block legacy authentication attempts:

- Azure AD Application Proxy
- Azure AD Password Protection
- Conditional access policies
- Enable Security defaults

**Section:**

**Explanation:**

Box 1: Smart lockout



Smart lockout helps lock out bad actors that try to guess your users' passwords or use brute-force methods to get in. Smart lockout can recognize sign-ins that come from valid users and treat them differently than ones of attackers and other unknown sources. Attackers get locked out, while your users continue to access their accounts and be productive. Box 2: Conditional access policies

If your environment is ready to block legacy authentication to improve your tenant's protection, you can accomplish this goal with Conditional Access. How can you prevent apps using legacy authentication from accessing your tenant's resources? The recommendation is to just block them with a Conditional Access policy. If necessary, you allow only certain users and specific network locations to use apps that are based on legacy authentication.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/authentication/howto-password-smartlockout>

<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/block-legacyauthentication>

#### QUESTION 46

HOTSPOT

You need to implement the Azure RBAC role assignment. The solution must meet the authentication and authorization requirements. How many assignment should you configure for the Network Contributor role for Role1? To answer, select appropriate in the answer area.

Hot Area:



Answer Area:



Section:

Explanation:



#### QUESTION 47

DRAG DROP

You have an on-premises network that uses an IP address space of 172.16.0.0/16. You plan to deploy 25 virtual machines to a new Azure subscription. You identify the following technical requirements.

All Azure virtual machines must be placed on the same subnet, subnet1.

All the Azure virtual machines must be able to communicate with all on-premises servers.

The servers must be able to communicate between the on-premises network and Azure by using a site-to-site VPN. You need to recommend a subnet design that meets the technical requirements.

What should you include in the recommendation? To answer, drag the appropriate network addresses to the correct subnet. Each network address 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:



**Network Addresses**

- 172.16.0.0/16
- 172.16.1.0/28
- 192.168.0.0/24
- 192.168.1.0/28

**Answer Area**

Subnet1: Network address

Gateway subnet: Network address

Correct Answer:

**Network Addresses**

- 172.16.0.0/16
- 172.16.1.0/28

**Answer Area**

Subnet1: 192.168.0.0/24

Gateway subnet: 192.168.1.0/28



Section:

Explanation:

**QUESTION 48**

DRAG DROP

Your company identifies the following business continuity and disaster recovery objectives for virtual machines that host sales, finance, and reporting application in the company's on-premises data center. •The finance application requires that data be retained for seven years. In the event of a disaster, the application must be able to run from Azure. The recovery in objective (RTO) is 10 minutes,

- The reporting application must be able to recover point in-time data at a daily granularity. The RTO is eight hours.
- The sales application must be able to fail over to second on-premises data center.

You need to recommend which Azure services meet the business continuity and disaster recovery objectives. The solution must minimize costs. What should you recommend for each application? To answer, drag the appropriate services to the correct application. Each service may be used once. More than once not at an You may need to drag the spin bar between panes or scroll to view content.

Select and Place:

**Actions**

- Azure Backup only
- Azure Site Recovery only
- Azure Site Recovery and Azure Backup

**Answer Area**

Sales: Service or Services

Finance: Service or Services

Reporting: Service or Services

Correct Answer:

Actions	Answer Area
	Sales: Azure Site Recovery only
	Finance: Azure Site Recovery and Azure Backup
	Reporting: Azure Backup only

Section:

Explanation:

- 1) Sales: Azure Site Recovery only
- 2) Finance: Azure Site Recovery and Azure Backup
- 3) Reporting: Azure Backup only

### QUESTION 49

HOTSPOT

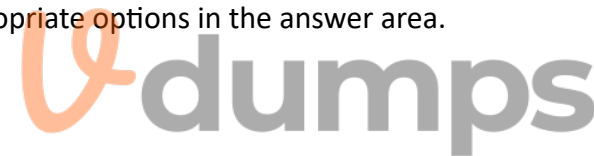
Your company deploys an Azure App Service Web App.

During testing the application fails under load. The application cannot handle more than 100 concurrent user sessions. You enable the Always On feature. You also configure auto-scaling to increase counts from two to 10 based on HTTP queue length.

You need to improve the performance of the application.

Which solution should you use for each application scenario? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.



Hot Area:

Scenario	Solution
Store content close to end users.	<ul style="list-style-type: none"><li>Azure Redis Cache</li><li>Azure Traffic Manager</li><li>Azure Content Delivery Network</li><li>Azure Application Gateway</li></ul>
Store content close to the application.	<ul style="list-style-type: none"><li>Azure Redis Cache</li><li>Azure Traffic Manager</li><li>Azure Content Delivery Network</li><li>Azure Application Gateway</li></ul>

Answer Area:

Scenario	Solution
Store content close to end users.	<ul style="list-style-type: none"> <li>Azure Redis Cache</li> <li>Azure Traffic Manager</li> <li style="background-color: #e0ffe0;">Azure Content Delivery Network</li> <li>Azure Application Gateway</li> </ul>
Store content close to the application.	<ul style="list-style-type: none"> <li style="background-color: #e0ffe0;">Azure Redis Cache</li> <li>Azure Traffic Manager</li> <li>Azure Content Delivery Network</li> <li>Azure Application Gateway</li> </ul>

**Section:**

**Explanation:**

Box 1: Content Delivery Network

A content delivery network (CDN) is a distributed network of servers that can efficiently deliver web content to users. CDNs store cached content on edge servers in point-of-presence (POP) locations that are close to end users, to minimize latency.

Azure Content Delivery Network (CDN) offers developers a global solution for rapidly delivering highbandwidth content to users by caching their content at strategically placed physical nodes across the world. Azure CDN can also accelerate dynamic content, which cannot be cached, by leveraging various network optimizations using CDN POPs. For example, route optimization to bypass Border Gateway Protocol (BGP). Box 2: Azure Redis Cache  
 Azure Cache for Redis is based on the popular software Redis. It is typically used as a cache to improve the performance and scalability of systems that rely heavily on backend data-stores. Performance is improved by temporarily copying frequently accessed data to fast storage located close to the application. With Azure Cache for Redis, this fast storage is located in-memory with Azure Cache for Redis instead of being loaded from disk by a database.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-cache-for-redis/cache-overview>

**QUESTION 50**

**HOTSPOT**

You have an on-premises file server that stores 2 TB of data files.

You plan to move the data files to Azure Blob storage in the Central Europe region.

You need to recommend a storage account type to store the data files and a replication solution for the storage account. The solution must meet the following requirements:

Be available if a single Azure datacenter fails.

Support storage tiers.

Minimize cost.

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

**Hot Area:**

Account type:

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

Replication solution:

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

Answer Area:

Account type:

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

Replication solution:

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

Section:

Explanation:

Account Type: StorageV2

Replication solution: Zone-redundant storage (ZRS)

QUESTION 51

DRAG DROP

You are designing a virtual machine that will run Microsoft SQL Server and will contain two data disks. The first data disk will store log files, and the second data disk will store data. Both disks are P40 managed disks. You need to recommend a caching policy for each disk. The policy must provide the best overall performance for the virtual machine. Which caching policy should you recommend for each disk? To answer, drag the appropriate policies to the correct disks. Each policy 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:

**Policies**

- None
- ReadOnly
- ReadWrite

**Answer Area**

Log: Policy

Data: Policy

Correct Answer:

**Policies**

- 
- 
- ReadWrite

**Answer Area**

Log: None

Data: ReadOnly

Section:

Explanation:

Reference:

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



**QUESTION 52**

DRAG DROP

You are planning an Azure solution that will host production databases for a high-performance application. The solution will include the following components:

Two virtual machines that will run Microsoft SQL Server 2016, will be deployed to different data centers in the same Azure region, and will be part of an Always On availability group. SQL Server data that will be backed up by using the Automated Backup feature of the SQL Server IaaS Agent Extension (SQLIaaSExtension) You identify the storage priorities for various data types as shown in the following table.

Data type	Storage priority
Operating system	Speed and availability
Databases and logs	Speed and availability
Backups	Lowest cost

Which storage type should you recommend for each data type? To answer, drag the appropriate storage types to the correct data types. Each storage type 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:

### Storage Types

- A geo-redundant storage (GRS) account
- A locally-redundant storage (LRS) account
- A premium managed disk
- A standard managed disk

### Answer Area

Operating system:

Databases and logs:

Backups:

Correct Answer:

### Storage Types

- A geo-redundant storage (GRS) account
- A locally-redundant storage (LRS) account
- A premium managed disk
- A standard managed disk

### Answer Area

Operating system:

Databases and logs:

Backups:

Section:

Explanation:

### QUESTION 53

HOTSPOT

You plan to create an Azure environment that will contain a root management group and 10 child management groups. Each child management group will contain five Azure subscriptions. You plan to have between 10 and 30 resource groups in each subscription.

You need to design an Azure governance solution. The solution must meet the following requirements:

- Use Azure Blueprints to control governance across all the subscriptions and resource groups.
- Ensure that Blueprints-based configurations are consistent across all the subscriptions and resource groups.
- Minimize the number of blueprint definitions and assignments.

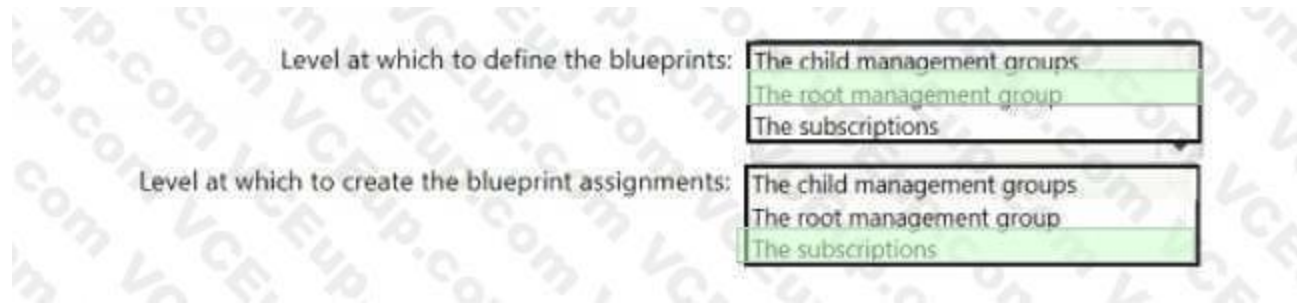
What should you include in the solution? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Hot Area:

Level at which to define the blueprints:

Level at which to create the blueprint assignments:

Answer Area:



**Section:**

**Explanation:**

Reference: <https://docs.microsoft.com/en-us/azure/governance/blueprints/create-blueprint-portal> Assign a blueprint After a blueprint has been published, it can be assigned to a subscription. Assign the blueprint that you created to one of the subscriptions under your management group hierarchy.

If the blueprint is saved to a subscription, it can only be assigned to that subscription

**QUESTION 54**

**HOTSPOT**

You have five .NET Core applications that run on 10 Azure virtual machines in the same subscription. You need to recommend a solution to ensure that the applications can authenticate by using the same Azure Active Directory (Azure AD) identity. The solution must meet the following requirements:

Ensure that the applications can authenticate only when running on the 10 virtual machines.

Minimize administrative effort.

What should you include in the recommendation? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

**Hot Area:**

To provision the Azure AD identity:

- Create a system-assigned Managed Service Identity
- Create a user-assigned Managed Service Identity
- Register each application in Azure AD

To authenticate request a token by using:

- An Azure AD v1.0 endpoint
- An Azure AD v2.0 endpoint
- An Azure Instance Metadata Service Identity
- OAuth2 endpoint

**Answer Area:**

To provision the Azure AD identity:

- Create a system-assigned Managed Service Identity
- Create a user-assigned Managed Service Identity
- Register each application in Azure AD

To authenticate request a token by using:

- An Azure AD v1.0 endpoint
- An Azure AD v2.0 endpoint
- An Azure Instance Metadata Service Identity
- OAuth2 endpoint



**Section:**

**Explanation:**

**QUESTION 55**

**HOTSPOT**

You plan to deploy a network-intensive application to several Azure virtual machines.

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

Minimizes the use of the virtual machine processors to transfer data

Minimizes network latency

Which virtual machine size and feature should you use? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

**Hot Area:**

Virtual machine size:

Compute optimized Standard_F8s
General purpose Standard_B8ms
High performance compute Standard_H16r
Memory optimized Standard_E16s_v3

Feature:

Receive side scaling (RSS)
Remote Direct Memory Access (RDMA)
Single root I/O virtualization (SR-IOV)
Virtual Machine Multi-Queue (VMMQ)

**Answer Area:**

Virtual machine size:

Compute optimized Standard_F8s
General purpose Standard_B8ms
High performance compute Standard_H16r
Memory optimized Standard_E16s_v3

Feature:

Receive side scaling (RSS)
Remote Direct Memory Access (RDMA)
Single root I/O virtualization (SR-IOV)
Virtual Machine Multi-Queue (VMMQ)

**Section:**

**Explanation:**

**Reference:**

<https://docs.microsoft.com/en-us/azure/virtual-machines/windows/sizes-hpc#h-series>

#### QUESTION 56

Your company has an Azure Web App that runs via the Premium App Service Plan. A development team will be using the Azure Web App. You have to configure the Azure Web app so that it can fulfil the below requirements. Provide the ability to switch the web app from the current version to a newer version Provide developers with the ability to test newer versions of the application before the switch to the newer version occurs Ensure that the application version can be rolled back Minimize downtime Which of the following can be used for this requirement?

- A. Create a new App Service Plan
- B. Make use of deployment slots
- C. Map a custom domain
- D. Backup the Azure Web App

**Correct Answer: B**

**Section:**

#### QUESTION 57

You have to deploy an Azure SQL database named db1 for your company. The databases must meet the following security requirements When IT help desk supervisors query a database table named customers, they must be able to see the full number of each credit card When IT help desk operators query a database table named customers, they must only see the last four digits of each credit card number A column named Credit Card rating in the customers table must never appear in plain text in the database system. Only client applications must be able to decrypt the information that is stored in this column Which of the following can be implemented for the Credit Card rating column security requirement?

- A. Always Encrypted
- B. Azure Advanced Threat Protection
- C. Transparent Data Encryption
- D. Dynamic Data Masking

**Correct Answer: A**

**Section:**

**Explanation:**

<https://docs.microsoft.com/en-us/sql/relational-databases/security/encryption/always-encrypteddatabase-engine?view=sql-server-ver15>

#### QUESTION 58

You have an Azure Active Directory (Azure AD) tenant that syncs with an on-premises Active Directory domain. Your company has a line-of-business (LOB) application that was developed internally. You need to implement. SAML single sign-on (SSO) and enforce multi-factor authentication (MFA) when users attempt to access the application from an unknown location. Which two features should you include in the solution? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Azure AD enterprise applications
- B. Azure AD Identity Protection
- C. Azure Application Gateway
- D. Conditional Access policies
- E. Azure AD Privileged Identity Management (PIM)

**Correct Answer: A, D**

**Section:**

#### QUESTION 59

You are designing an Azure governance solution.

All Azure resources must be easily identifiable based on the following operational information environment, owner, department and cost center You need 10 ensure that you can use the operational information when you



generate reports for the Azure resources.  
What should you include in the solution?

- A. Azure Active Directory (Azure AD) administrative units
- B. an Azure data catalog that uses the Azure REST API as a data source
- C. an Azure policy that enforces tagging rules
- D. an Azure management group that uses parent groups to create a hierarchy

**Correct Answer: C**

**Section:**

**Explanation:**

You use Azure Policy to enforce tagging rules and conventions. By creating a policy, you avoid the scenario of resources being deployed to your subscription that don't have the expected tags for your organization. Instead of manually applying tags or searching for resources that aren't compliant, you create a policy that automatically applies the needed tags during deployment. Note: Organizing cloud-based resources is a crucial task for IT, unless you only have simple deployments. Use naming and tagging standards to organize your resources for these reasons:

Resource management: Your IT teams will need to quickly locate resources associated with specific workloads, environments, ownership groups, or other important information. Organizing resources is critical to assigning organizational roles and access permissions for resource management.

Reference:

<https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/decision-guides/resourcetagging>

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/tag-policies>

#### QUESTION 60

You plan to automate the deployment of resources to Azure subscriptions.

What is a difference between using Azure Blueprints and Azure Resource Manager (ARM) templates?

- A. ARM templates remain connected to the deployed resources.
- B. Only ARM templates can contain policy definitions.
- C. Blueprints remain connected to the deployed resources.
- D. Only Blueprints can contain policy definitions.

**Correct Answer: C**

**Section:**

**Explanation:**

With Azure Blueprints, the relationship between the blueprint definition (what should be deployed) and the blueprint assignment (what was deployed) is preserved. This connection supports improved tracking and auditing of deployments. Azure Blueprints can also upgrade several subscriptions at once that are governed by the same blueprint.

Reference:

<https://docs.microsoft.com/en-us/answers/questions/26851/how-is-azure-blue-prints-differentfrom-resource-m.html>

#### QUESTION 61

A company named Contoso, Ltd. has an Azure Active Directory (Azure AD) tenant that is integrated with Microsoft Office 365 and an Azure subscription. Contoso has an on-premises identity infrastructure. The infrastructure includes servers that run Active Directory Domain Services (AD DS), and Azure AD Connect. Contoso has a partnership with a company named Fabrikam, Inc. Fabrikam has an Active Directory forest and an Office 365 tenant. Fabrikam has the same on-premises identity infrastructure as Contoso. A team of 10 developers from Fabrikam will work on an Azure solution that will be hosted in the Azure subscription of Contoso. The developers must be added to the Contributor role for a resource in the Contoso subscription. You need to recommend a solution to ensure that Contoso can assign the role to the 10 Fabrikam developers. The solution must ensure that the Fabrikam developers use their existing credentials to access resources. What should you recommend?

- A. Configure a forest trust between the on-premises Active Directory forests of Contoso and Fabrikam.
- B. Configure an organization relationship between the Office 365 tenants of Fabrikam and Contoso.
- C. In the Azure AD tenant of Contoso, use MIM to create guest accounts for the Fabrikam developers.
- D. Configure an AD FS relying party trust between the fabrikam and Contoso AD FS infrastructures.

**Correct Answer: A**

**Section:**

**Explanation:**

Trust configurations - Configure trust from managed forests(s) or domain(s) to the administrative forest A one-way trust is required from production environment to the admin forest. Selective authentication should be used to restrict accounts in the admin forest to only logging on to the appropriate production hosts.

Reference:

<https://docs.microsoft.com/en-us/windows-server/identity/securing-privileged-access/securingprivileged-access-reference-material>

#### QUESTION 62

You are designing a microservices architecture that will support a web application.

The solution must meet the following requirements:

Allow independent upgrades to each microservice

Deploy the solution on-premises and to Azure

Set policies for performing automatic repairs to the microservices

Support low-latency and hyper-scale operations

You need to recommend a technology.

What should you recommend?

- A. Azure Service Fabric
- B. Azure Container Service
- C. Azure Container Instance
- D. Azure Virtual Machine Scale Set

**Correct Answer: A**

**Section:**

**Explanation:**

<https://docs.microsoft.com/en-us/azure/service-fabric/service-fabric-overview>



#### QUESTION 63

You plan to deploy an Azure App Service web app that will have multiple instances across multiple Azure regions. You need to recommend a load balancing service for the planned deployment. The solution must meet the following requirements:

Maintain access to the app in the event of a regional outage.

Support Azure Web Application Firewall (WAF).

Support cookie-based affinity.

Support URL routing.

What should you include in the recommendation?

- A. Azure Front Door
- B. Azure Load Balancer
- C. Azure Traffic Manager
- D. Azure Application Gateway

**Correct Answer: A**

**Section:**

**Explanation:**

Azure Traffic Manager performs the global load balancing of web traffic across Azure regions, which have a regional load balancer based on Azure Application Gateway. This combination gets you the benefits of Traffic Manager many routing rules and Application Gateway's capabilities such as WAF, TLS termination, path-based routing, cookie-based session affinity among others.

Reference:

<https://docs.microsoft.com/en-us/azure/application-gateway/features>

#### QUESTION 64

The developers at your company are building a containerized Python Django app.

You need to recommend platform to host the app. The solution must meet the following requirements:

Support autoscaling.

Support continuous deployment from an Azure Container Registry.

Provide built-in functionality to authenticate app users by using Azure Active Directory (Azure AD). Which platform should you include in the recommendation?

- A. Azure Container instances
- B. an Azure App Service instance that uses containers
- C. Azure Kubernetes Service (AKS)

**Correct Answer: C**

**Section:**

**Explanation:**

To keep up with application demands in Azure Kubernetes Service (AKS), you may need to adjust the number of nodes that run your workloads. The cluster autoscaler component can watch for pods in your cluster that can't be scheduled because of resource constraints. When issues are detected, the number of nodes in a node pool is increased to meet the application demand. Azure Container Registry is a private registry for hosting container images. It integrates well with orchestrators like Azure Container Service, including Docker Swarm, DC/OS, and the new Azure Kubernetes service. Moreover, ACR provides capabilities such as Azure Active Directory-based authentication, webhook support, and delete operations.

Reference:

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

<https://medium.com/velotio-perspectives/continuous-deployment-with-azure-kubernetes-serviceazurecontainerregistry-jenkins-ca337940151b>

#### QUESTION 65

You have an on-premises network to which you deploy a virtual appliance.

You plan to deploy several Azure virtual machines and connect the on-premises network to Azure by using a Site-to-Site connection.

All network traffic that will be directed from the Azure virtual machines to a specific subnet must flow through the virtual appliance.

You need to recommend solutions to manage network traffic.

Which two options should you recommend? Each correct answer presents a complete solution.

- A. Configure Azure Traffic Manager.
- B. Implement an Azure virtual network.
- C. Implement Azure ExpressRoute.
- D. Configure a routing table.

**Correct Answer: C, D**

**Section:**

**Explanation:**

Connectivity can be from an any-to-any (IP VPN) network, a point-to-point Ethernet network, or a virtual cross-connection through a connectivity provider at a co-location facility. ExpressRoute connections do not go over the public Internet. This allows ExpressRoute connections to offer more reliability, faster speeds, lower latencies, and higher security than typical connections over the Internet.

Reference:

<https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-forced-tunneling-rm>

<https://docs.microsoft.com/en-us/azure/expressroute/expressroute-introduction>

#### QUESTION 66

You are designing a message application that will run on an on-premises Ubuntu virtual machine.

The application will use Azure Storage queues.

You need to recommend a processing solution for the application to interact with the storage queues. The solution must meet the following requirements:

Create and delete queues daily.

Be scheduled by using a CRON job.

Upload messages every five minutes.

What should developers use to interact with the queues?

- A. Azure CLI
- B. AzCopy
- C. Azure Data Factory
- D. .NET Core

**Correct Answer: D**

**Section:**

**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/azure/storage/queues/storage-tutorial-queues>

#### QUESTION 67

You need to design a highly available Azure SQL database that meets the following requirements:

- \* Failover between replicas of the database must occur without any data loss.
- \* The database must remain available in the event of a zone outage.
- \* Costs must be minimized.

Which deployment option should you use?

- A. Azure SQL Database Business Critical
- B. Azure SQL Database Managed Instance Business Critical
- C. Azure SQL Database Serverless
- D. Azure SQL Database Premium

**Correct Answer: D**

**Section:**

**Explanation:**

#### QUESTION 68

You plan to store data in Azure Blob storage for many years. The stored data will be accessed rarely. You need to ensure that the data in Blob storage is always available for immediate access. The solution must minimize storage costs. Which storage tier should you use?

- A. Cool
- B. Archive
- C. Hot

**Correct Answer: A**

**Section:**

**Explanation:**

Azure cool tier is equivalent to the Amazon S3 Infrequent Access (S3-IA) storage in AWS that provides a low cost high performance storage for infrequently access data. Note: Azure's cool storage tier, also known as Azure cool Blob storage, is for infrequently-accessed data that needs to be stored for a minimum of 30 days. Typical use cases include backing up data before tiering to archival systems, legal data, media files, system audit information, datasets used for big data analysis and more.

The storage cost for this Azure cold storage tier is lower than that of hot storage tier. Since it is expected that the data stored in this tier will be accessed less frequently, the data access charges are high when compared to hot tier. There are no additional changes required in your applications as these tiers can be accessed using APIs in the same manner that you access Azure storage.

Reference:



<https://cloud.netapp.com/blog/low-cost-storage-options-on-azure>

#### QUESTION 69

You use Azure virtual machines to run a custom application that uses an Azure SQL database on the back end. The IT apartment at your company recently enabled forced tunneling, Since the configuration change, developers have noticed degraded performance when they access the database You need to recommend a solution to minimize latency when accessing the database. The solution must minimize costs What should you include in the recommendation?

- A. Azure SQL Database Managed instance
- B. Azure virtual machines that run Microsoft SQL Server servers
- C. Always On availability groups
- D. virtual network (VNET) service endpoint

**Correct Answer: D**

**Section:**

**Explanation:**

<https://docs.microsoft.com/en-us/azure/virtual-network/virtual-network-service-endpointsoverview>

#### QUESTION 70

Your network contains an on-premises Active Directory forest.

You discover that when users change jobs within your company, the membership of the user groups are not being updated. As a result, the users can access resources that are no longer relevant to their job. You plan to integrate Active Directory and Azure Active Directory (Azure AD) by using Azure AD Connect. You need to recommend a solution to ensure that group owners are emailed monthly about the group memberships they manage. What should you include in the recommendation?

- A. conditional access policies
- B. Tenant Restrictions
- C. Azure AD access reviews
- D. Azure AD Identity Protection

**Correct Answer: C**

**Section:**

**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/governance/access-reviews-overview>

#### QUESTION 71

You deploy two instances of an Azure web app. One instance is in the East US Azure region and the other instance is in the West US Azure region. The web app uses Azure Blob storage to deliver large files to end users. You need to recommend a solution for delivering the files to the users. The solution must meet the following requirements:

Ensure that the users receive files from the same region as the web app that they access.

Ensure that the files only need to be updated once.

Minimize costs.

What should you include in the recommendation?

- A. Azure File Sync
- B. Distributed File System (DFS)
- C. read-access geo-redundant storage (RA-GRS)
- D. geo-redundant storage (GRS)

**Correct Answer: C**



**Section:**

**QUESTION 72**

Your company develops Azure applications.

You need to recommend a solution for the deployment of Azure subscriptions. The solution must meet the following requirements:

What should you include in the recommendation?

- A. Provision resource groups.
- B. Support deployments across all Azure regions.
- C. Create custom role-based access control (RBAC) roles.
- D. Provide consistent virtual machine and virtual network configurations.

**Correct Answer: D**

**Section:**

**Explanation:**

Resource groups: You can scope your deployment to a resource group. You use an Azure Resource Manager template (ARM template) for the deployment.

Regions: If you have a template spec in one region and want to move it to new region, you can export the template spec and redeploy it.

RBAC: Azure role-based access control (Azure RBAC) is the authorization system you use to manage access to Azure resources. To grant access, you assign roles to users, groups, service principals, or managed identities at a particular scope. In addition to using Azure PowerShell or the Azure CLI, you can assign roles using Azure Resource Manager templates. Templates can be helpful if you need to deploy resources consistently and repeatedly. You can setup Virtual machines and virtual network configurations in an Azure Resource Manager template.

Reference:

<https://docs.microsoft.com/en-us/azure/governance/blueprints/overview>

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/microsoftresources-move-regions> <https://docs.microsoft.com/en-us/azure/role-based-access-control/role-assignments-template>

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



**QUESTION 73**

A company needs a datastore created in Azure for an application. Below are the key requirements for the data store. Ability to store JSON based items

Ability to use SQL like queries on the datastore

Ability to provide low latency access to data items

Which of the following would you consider as the data store?

- A. Azure BLOB storage
- B. Azure CosmosDB
- C. Azure HDInsight
- D. Azure Redis

**Correct Answer: B**

**Section:**

**QUESTION 74**

You have to design a Data Engineering solution for your company. The company currently has an Azure subscription. They also have application data hosted in a database on a Microsoft SQL Server hosted in their on-premises data center server. They want to implement the following requirements Transfer transactional data from the on-premises SQL server onto a data warehouse in Azure. Data needs to be transferred every day in the night as a scheduled job A managed Spark cluster needs to be in place for data engineers to perform analysis on the data stored in the SQL data warehouse. Here the data engineers should have the ability to develop notebooks in Scale, R and Python. They also need to have a data lake store in place for the ingestion of data from multiple data sources Which of the following would the use for hosting the data warehouse in Azure?

- A. Azure Data Factory
- B. Azure Databricks



- C. Azure Data Lake Gen2 Storage accounts
- D. Azure Synapse Analytics

**Correct Answer: D**

**Section:**

#### QUESTION 75

Your company currently has an application that is hosted on their on-premises environment. The application currently connects to two databases in the on-premises environment. The databases are named whizlabdb1 and whizlabdb2. You have to move the databases onto Azure. The databases have to support server-side transactions across both of the databases. Solution: You decide to deploy the databases to an Azure SQL database-managed instance. Would this fulfill the requirement?

- A. Yes
- B. No

**Correct Answer: A**

**Section:**

#### QUESTION 76

Your company has an on-premises Hyper-V cluster that contains 20 virtual machines. Some of the virtual machines are based on Windows and some in Linux. You have to migrate the virtual machines onto Azure. You have to recommend a solution that would be used to replicate the disks of the virtual machines to Azure. The solution needs to ensure that the virtual machines remain available when the migration of the disks is in progress. You decide to create an Azure storage account and then run AzCopy. Would this fulfill the requirement?

- A. Yes
- B. No

**Correct Answer: B**

**Section:**

#### QUESTION 77

You have an Azure virtual machine named VM1 that runs Windows Server 2019 and contains 500 GB of data files. You are designing a solution that will use Azure Data Factory to transform the data files, and then load the files to Azure Data Lake Storage. What should you deploy on VM1 to support the design?

- A. the self-hosted integration runtime
- B. the Azure Pipelines agent
- C. the On-premises data gateway
- D. the Azure File Sync agent

**Correct Answer: A**

**Section:**

#### QUESTION 78

You plan to deploy multiple instances of an Azure web app across several Azure regions.

You need to design an access solution for the app. The solution must meet the following replication requirements;

- Support rate limiting.
- Balance requests between all instances.
- Ensure that users can access the app in the event of a regional outage.

Solution: You use Azure Traffic Manager to provide access to the app. Does this meet the goal?



- A. Yes
- B. No

**Correct Answer: B**

**Section:**

#### QUESTION 79

You plan to deploy multiple instances of an Azure web app across several Azure regions.

You need to design an access solution for the app. The solution must meet the following replication requirements:

- Support rate limiting
- Balance requests between all instances.
- Ensure that users can access the app in the event of a regional outage

Solution: You use Azure Load Balancer to provide access to the app.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section:**

#### QUESTION 80

You are developing a sales application that will contain several Azure cloud services and handle different components of a transaction. Different cloud services will process customer orders, billing, payment inventory, and shipping. You need to recommend a solution to enable the cloud services to asynchronously communicate transaction information by using XML messages. What should you include in the recommendation?

- A. Azure Data Lake
- B. Azure Notification Hubs
- C. Azure Queue Storage
- D. Azure Service Fabric

**Correct Answer: C**

**Section:**

#### QUESTION 81

You need to design a highly available Azure SQL database that meets the following requirements:

- \* Failover between replicas of the database must occur without any data loss.
- \* The database must remain available in the event of a zone outage.
- \* Costs must be minimized.

Which deployment option should you use?

- A. Azure SQL Database Premium
- B. Azure SQL Database Hyperscale
- C. Azure SQL Database Basic
- D. Azure SQL Managed Instance Business Critical

**Correct Answer: D**

**Section:**

**QUESTION 82**

You need to design a highly available Azure SQL database that meets the following requirements:

Failover between replicas of the database must occur without any data loss.

The database must remain available in the event of a zone outage.

Costs must be minimized

Which deployment option should you use?

- A. Azure SQL Database Standard
- B. Azure SQL Database Serverless
- C. Azure SQL Managed Instance General Purpose
- D. Azure SQL Database Premium

**Correct Answer: C**

**Section:**

**QUESTION 83**

You have an on-premises Microsoft SQL server named SQL1 that hosts 50 databases.

You plan to migrate SQL 1 to Azure SQL Managed Instance.

You need to perform an offline migration of SQL 1. The solution must minimize administrative effort. What should you include in the solution?

- A. SQL Server Migration Assistant (SSMA)
- B. Azure Migrate
- C. Data Migration Assistant (DMA)
- D. Azure Database Migration Service

**Correct Answer: D**

**Section:**

**Explanation:**

This Azure service supports migration in the offline mode for applications that can afford downtime during the migration process. Unlike the continuous migration in online mode, offline mode migration runs a one-time restore of a full database backup from the source to the target

<https://learn.microsoft.com/en-us/azure/azure-sql/migration-guides/managed-instance/sql-server-to-managed-instance-overview?view=azuresql#compare-migration-options>

**QUESTION 84**

HOTSPOT

You have an app that generates 50,000 events daily.

You plan to Stream the events to an Azure event hub and use Event Hubs Capture to implement cold path processing Of the events Output Of Event Hubs Capture will be consumed by a reporting system. You need to identify which type of Azure storage must be provisioned to support Event Hubs Capture, and which inbound data format the reporting system must support. What should you identify? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Hot Area:**



Storage type:   
Azure Data Lake Storage Gen2  
Premium block blobs  
Premium file shares

Data format:   
Apache Parquet  
Avro  
JSON

**Answer Area:**

Storage type:   
Azure Data Lake Storage Gen2  
Premium block blobs  
Premium file shares

Data format:   
Apache Parquet  
Avro  
JSON



**Section:**

**Explanation:**

**QUESTION 85**

**HOTSPOT**

You have an on-premises network.

You have an Azure subscription.

You plan to centralize the collection and analytics of Azure and on-premises resources by using Log Analytics.

You are evaluating the cost implications of using the Basic log data plan versus the Analytics log data plan.

What will increase costs by using the Basic log data plan, and what will reduce costs by using the Basic log data plan? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Hot Area:**

Answer Area

Increase costs: Ingestion  
Alerts  
Ingestion  
Log queries

Reduce costs: Alerts  
Alerts  
Ingestion  
Log queries

Answer Area:

Answer Area

Increase costs: Ingestion  
Alerts  
Ingestion  
Log queries

Reduce costs: Alerts  
Alerts  
Ingestion  
Log queries

Section:

Explanation:

#### QUESTION 86

You have a Microsoft Entra tenant named contoso.com.

You have a partner organization that has a Microsoft Entra tenant named fabrikam.com.

You plan to provide the users in fabrikam.com with access to the resources in contoso.com by using access packages.

You need to ensure that contoso.com users assigned the Access package assignment manager role can only assign access packages to the fabrikam.com users.

What should you do first in the Microsoft Entra admin center?

- A. From the Entitlement management settings in Identity Governance, create a new connected organization.
- B. From the Cross-tenant access settings in External Identities, create a new organization.
- C. From the Cross-tenant synchronization settings, create a new configuration.
- D. From the All identity providers settings in External Identities, create a new SAML/WS Fed IdP identity provider.

**Correct Answer: A**

Section:

#### QUESTION 87

HOTSPOT

You plan to deploy multiple containerized microservice-based apps to Azure Kubernetes Service (AKS).

You need to recommend a solution that implements the following functions:

- \* State management
- \* Pub/sub messaging
- \* Traffic routing and splitting

The solution must minimize administrative effort.

What should you include in the recommendation for each function? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

State management:

Pub/sub messaging:

Traffic routing and splitting:

Answer Area:

Answer Area

State management:

Pub/sub messaging:

Traffic routing and splitting:

Section:

Explanation:

**QUESTION 88**

You have an Azure subscription that contains 100 virtual machines in the North Europe Azure region.

You replicate the virtual machines to the West Europe region by using Azure Site Recovery.

You plan to perform disaster recovery testing once a month. The testing will be performed during an eight-hour period, during which the virtual machines will be accessed, and their functionality validated. The virtual machines will be shut down when testing is not being performed.

You need to estimate the costs of the Site Recovery solution per month. Which costs should the estimate include?

- A. the virtual machine compute costs for only eight hours, the virtual machine storage costs for the entire month, and the Site Recovery license costs per protected virtual machine for the entire month
- B. the virtual machine compute costs for the entire month, the virtual machine storage costs for all the hours each month, and the Site Recovery license costs per protected virtual machine for the entire month
- C. the virtual machine compute costs for only eight hours, the virtual machine storage costs for only eight hours, and the Site Recovery license costs per protected virtual machine for only eight hours
- D. the virtual machine compute costs for only eight hours, the virtual machine storage costs for only eight hours, and the Site Recovery license costs per protected virtual machine for the entire month

**Correct Answer: A**

**Section:**

**QUESTION 89**

Your company has IT, security, and finance departments.

You need to implement a new Azure deployment that will include multiple Azure subscriptions and management groups. The solution must meet the following requirements:

- \* Ensure that all policies are assigned at the management group level.
- \* Ensure that all the finance department resources have specific encryption policies applied.
- \* Ensure that only users in the IT department can create virtual machines in any Azure region.
- \* Ensure that users in the finance department can create virtual machines in only the East US Azure region.

What is the minimum number of management groups you can create for the planned deployment?

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

**Correct Answer: B**

**Section:**

