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Time Limit: 120 min

Exam Code: AZ-305
Exam Name: Designing Microsoft Azure Infrastructure Solutions
Certification Provider: Microsoft
Corresponding Certification: Microsoft Certified: Azure Solutions Architect Expert
Website: https://VCEup.com/
Free Exam: https://vceup.com/exam-az-305/

Case Study 01

QUESTION 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.
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Existing Environment: Technical Environment
The on-premises network contains a single Active Directory domain named contoso.com. Contoso has a single Azure subscription.
Existing Environment: Business Partnerships
Contoso has a business partnership with Fabrikam, Inc. Fabrikam users access some Contoso applications over the internet by using Azure Active Directory (Azure AD) guest accounts. Requirements: Planned Changes
Contoso plans to deploy two applications named App1 and App2 to Azure.
Requirements: App1
App1 will be a Python web app hosted in Azure App Service that requires a Linux runtime. Users from Contoso and Fabrikam will access App1.
App1 will access several services that require third-party credentials and access strings. The credentials and access strings are stored in Azure Key Vault.
App1 will have six instances: three in the East US Azure region and three in the West Europe Azure region.
App1 has the following data requirements:

- Each instance will write data to a data store in the same availability zone as the instance.
- Data written by any App1 instance must be visible to all App1 instances.

App1 will only be accessible from the internet. App1 has the following connection requirements:

A.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
You need to recommend a solution that meets the data requirements for App1.
What should you recommend deploying to each availability zone that contains an instance of App1?

A. an Azure Cosmos DB that uses multi-region writes
B. an Azure Data Lake store that uses geo-zone-redundant storage (GZRS)
C. an Azure SQL database that uses active geo-replication
D. an Azure Storage account that uses geo-zone-redundant storage (GZRS)

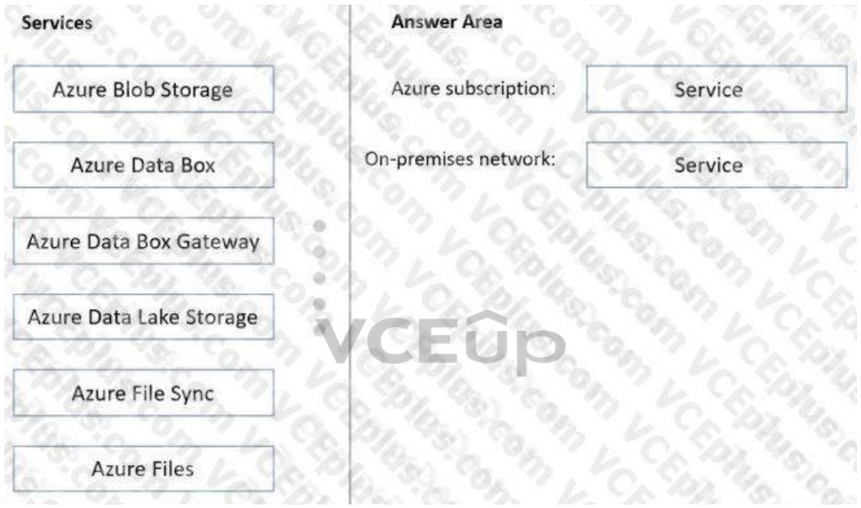
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Scenario: App1 has the following data requirements:
Each instance will write data to a data store in the same availability zone as the instance. Data written by any App1 instance must be visible to all App1 instances.

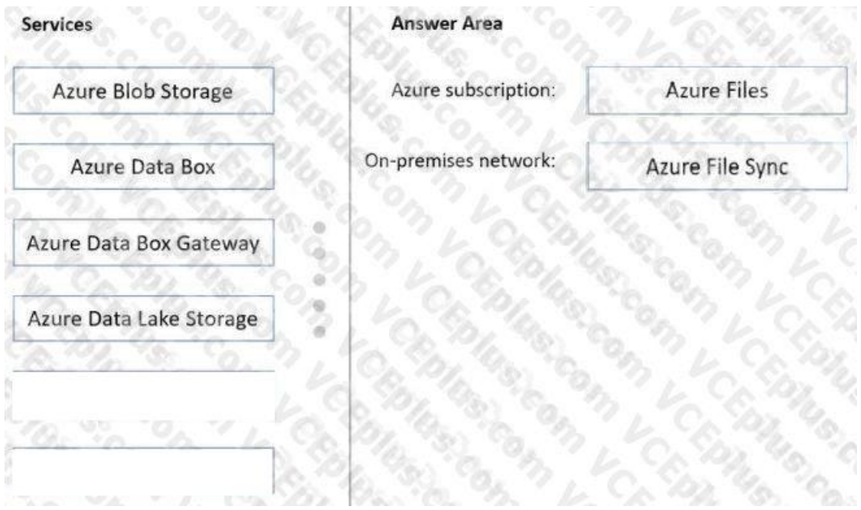
Azure Cosmos DB: Each partition across all the regions is replicated. Each region contains all the data partitions of an Azure Cosmos container and can serve reads as well as serve writes when multiregion writes is enabled.
Incorrect Answers:
B, D: GZRS protects against failures. Geo-redundant storage (with GRS or GZRS) replicates your data to another physical location in the secondary region to protect against regional outages. However, that data is available to be read only if the customer or Microsoft initiates a failover from the primary to secondary region.
C: Active geo-replication is designed as a business continuity solution that lets you perform quick disaster recovery of individual databases in case of a regional disaster or a large scale outage. Once georeplication is set up, you can initiate a geo-failover to a geo-secondary in a different Azure region. The geo-failover is initiated programmatically by the application or manually by the user.
Reference:
https://docs.microsoft.com/en-us/azure/cosmos-db/high-availability

QUESTION 3
DRAG DROP
You need to recommend a solution that meets the file storage requirements for App2.
What should you deploy to the Azure subscription and the on-premises network? To answer, drag the appropriate services to the correct locations. Each service 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:

Select and Place:



Correct Answer:



Section: (none)

Explanation

Explanation/Reference:
Box 1: Azure Files
Scenario: App2 has the following file storage requirements:
Save files to an Azure Storage account.
Replicate files to an on-premises location.
Ensure that on-premises clients can read the files over the LAN by using the SMB protocol.
Box 2: Azure File Sync
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 can use any protocol that's available on Windows Server to access your data locally, including SMB, NFS, and FTPS. You can have as many caches as you need across the world.
Reference: https://docs.microsoft.com/en-us/azure/storage/file-sync/file-sync-deployment-guide

Case Study 02

QUESTION 1
Case Study
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Overview
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.
Existing Environment: 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.
Existing Environment: 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 HyperV.
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.
Existing Environment: Problem Statements
The use of WebApp1 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, including virtual machines that rely on Active Directory for authentication.
As one of its first projects, the company plans to establish a hybrid identity model, facilitating an upcoming Microsoft 365 deployment.
All R&D operations will remain on-premises.
Fabrikam plans to migrate the production and test instances of WebApp1 to Azure.
Requirements: Technical Requirements
Fabrikam identifies the following technical requirements:
- Website content must be easily updated from a single point.
- User input must be minimized when provisioning new web 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 the Standard pricing tier of Azure App Service.
- An email distribution group named IT Support must be notified of any issues relating to the directory synchronization
- services.
- In the event that a link fails between Azure and the on-premises network, ensure that the virtual machines hosted in Azure
- can authenticate to Active Directory.
- 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. Requirements: 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

- requirements. Requirements: 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 (MFA). The testing of
- WebApp1 updates must not be visible to anyone outside the company.

A.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
What should you include in the identity management strategy to support the planned changes?

A. Deploy domain controllers for corp.fabrikam.com to virtual networks in Azure.
B. Move all the domain controllers from 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: A
Section: (none)
Explanation

Explanation/Reference:
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 3
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:

Correct Answer:

Section: (none)
Explanation

Explanation/Reference:

Case Study 03

QUESTION 1
Case Study
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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. 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.

Network Environment
Litware has ExpressRoute connectivity to Azure.
Planned Changes and Requirements
Litware plans to implement the following changes:
Migrate DB1 and DB2 to Azure.
Migrate App1 to Azure virtual machines.
Migrate the external storage used by App1 to Azure Storage.
Deploy the Azure virtual machines that will host App1 to Azure dedicated hosts.
Authentication and Authorization Requirements
Litware identifies the following authentication and authorization requirements:
Only users that manage the production environment by using the Azure portal must connect from a hybrid Azure ADjoined device and authenticate by using Azure Multi-Factor Authentication (MFA). The Network Contributor built-in RBAC role must be used to grant permissions to the network administrators for 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. RBAC roles must be applied at the highest level possible.
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.
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.
Business Requirements
Litware identifies the following business requirements:
Minimize administrative effort. Minimize costs.

A.

Correct Answer:
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
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. Microsoft peering for an ExpressRoute circuit
B. Azure public peering for an ExpressRoute circuit
C. a service endpoint that has a service endpoint policy
D. a private endpoint

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
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.
Incorrect Answers:
A: Microsoft peering provides access to Azure public services via public endpoints with public IP addresses, which should not be allowed.
B: Azure public peering has been deprecated.
C: By default, Service Endpoints are enabled on subnets configured in Azure virtual networks. Endpoints can't be used for traffic from your premises to Azure services.
Reference: https://docs.microsoft.com/en-us/azure/expressroute/expressroute-circuit-peerings

QUESTION 3
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?

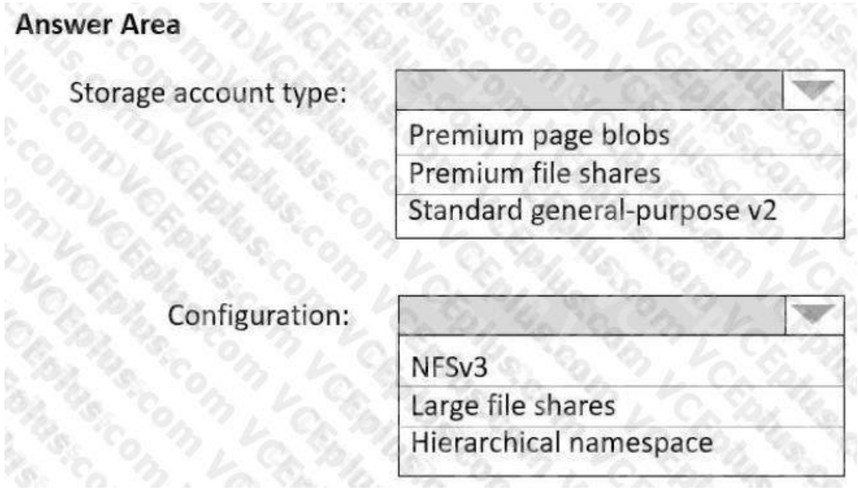
A. 1
B. 2
C. 5
D. 10
E. 15

Correct Answer: A
Section: (none)
Explanation

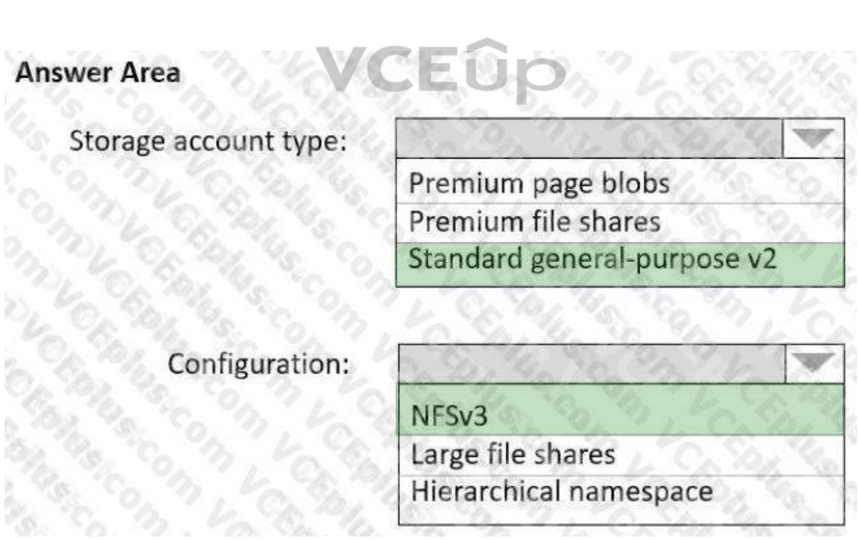
Explanation/Reference:
Explanation:
Scenario: The Network Contributor built-in RBAC role must be used to grant permissions to the network administrators for all the virtual networks in all the Azure subscriptions. RBAC roles must be applied at the highest level possible.
Topic 4, Mixed Questions

QUESTION 4
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:

Hot Area:



Correct Answer:



Section: (none)
Explanation

Explanation/Reference:

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

Mix Questions

QUESTION 1
After you migrate App1 to Azure, you need to enforce the data modification requirements to meet the security and compliance requirements.
What should you do?

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
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 2
You need to recommend a solution to meet the database retention requirements.
What should you recommend?

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
You have an Azure subscription that contains a custom application named Application1. Application1 was developed by an external company named Fabrikam, Ltd. Developers at Fabrikam were assigned role-based access control (RBAC) permissions to the Application1 components. All users are licensed for the Microsoft 365 E5 plan.
You need to recommend a solution to verify whether the Fabrikam developers still require permissions to Application1. The solution must meet the following requirements:
To the manager of the developers, send a monthly email message that lists the access permissions to Application1. If the manager does not verify an access permission, automatically revoke that permission. Minimize development effort.
What should you recommend?

A. In Azure Active Directory (Azure AD), create an access review of Application1.
B. Create an Azure Automation runbook that runs the Get-AzRoleAssignment cmdlet.
C. In Azure Active Directory (Azure AD) Privileged Identity Management, create a custom role assignment for the Application1 resources.
D. Create an Azure Automation runbook that runs the Get-AzureADUserAppRoleAssignment cmdlet.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Reference: https://docs.microsoft.com/en-us/azure/active-directory/governance/manage-user-access-with-access-reviews

QUESTION 4
You have an Azure subscription. The subscription has a blob container that contains multiple blobs.
Ten users in the finance department of your company plan to access the blobs during the month of April.

You need to recommend a solution to enable access to the blobs during the month of April only.
Which security solution should you include in the recommendation?

A. shared access signatures (SAS)
B. Conditional Access policies
C. certificates
D. access keys

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Shared Access Signatures (SAS) allows for limited-time fine grained access control to resources. So you can generate URL, specify duration (for month of April) and disseminate URL to 10 team members. On May 1, the SAS token is automatically invalidated, denying team members continued access.
Reference: https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview

QUESTION 5
You have an Azure Active Directory (Azure AD) tenant that syncs with an on-premises Active Directory domain.
You have an internal web app named WebApp1 that is hosted on-premises. WebApp1 uses Integrated Windows authentication.
Some users work remotely and do NOT have VPN access to the on-premises network.
You need to provide the remote users with single sign-on (SSO) access to WebApp1.
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 Application Proxy
B. Azure AD Privileged Identity Management (PIM)
C. Conditional Access policies
D. Azure Arc
E. Azure AD enterprise applications
F. Azure Application Gateway

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
Explanation:
A: Application Proxy is a feature of Azure AD that enables users to access on-premises web applications from a remote client. Application Proxy includes both the Application Proxy service which runs in the cloud, and the Application Proxy connector which runs on an on-premises server. You can configure single sign-on to an Application Proxy application.
C: Microsoft recommends using Application Proxy with pre-authentication and Conditional Access policies for remote access from the internet. An approach to provide Conditional Access for intranet use is to modernize applications so they can directly authenticate with AAD.
Reference:
https://docs.microsoft.com/en-us/azure/active-directory/app-proxy/application-proxy-config-sso-how-to
https://docs.microsoft.com/en-us/azure/active-directory/app-proxy/application-proxy-deployment-plan

QUESTION 6
You have an Azure Active Directory (Azure AD) tenant named contoso.com that has a security group named Group1.
Group1 is configured for assigned membership. Group1 has 50 members, including 20 guest users.
You need to recommend a solution for evaluating the membership of Group1. The solution must meet the following requirements:
The evaluation must be repeated automatically every three months.
Every member must be able to report whether they need to be in Group1.
Users who report that they do not need to be in Group1 must be removed from Group1 automatically.
Users who do not report whether they need to be in Group1 must be removed from Group1 automatically.
What should you include in the recommendation?

A. Implement Azure AD Identity Protection.
B. Change the Membership type of Group1 to Dynamic User.
C. Create an access review.

D. Implement Azure AD Privileged Identity Management (PIM).

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Have reviews recur periodically: You can set up recurring access reviews of users at set frequencies such as weekly, monthly, quarterly or annually, and the reviewers will be notified at the start of each review. Reviewers can approve or deny access with a friendly interface and with the help of smart recommendations.
Reference: https://docs.microsoft.com/en-us/azure/active-directory/governance/access-reviews-overview#learn-aboutaccess-reviews

QUESTION 7
Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.
After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.
Your company deploys several virtual machines on-premises and to Azure. ExpressRoute is being deployed and configured for on-premises to Azure connectivity.
Several virtual machines exhibit network connectivity issues.
You need to analyze the network traffic to identify whether packets are being allowed or denied to the virtual machines.
Solution: Use Azure Traffic Analytics in Azure Network Watcher to analyze the network traffic.
Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Instead use Azure Network Watcher IP Flow Verify, which allows you to detect traffic filtering issues at a VM level.
Note: IP flow verify checks if a packet is allowed or denied to or from a virtual machine. The information consists of direction, protocol, local IP, remote IP, local port, and remote port. If the packet is denied by a security group, the name of the rule that denied the packet is returned. While any source or destination IP can be chosen, IP flow verify helps administrators quickly diagnose connectivity issues from or to the internet and from or to the on-premises environment.
Reference: https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-ip-flow-verify-overview

QUESTION 8
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Several virtual machines exhibit network connectivity issues.
You need to analyze the network traffic to identify whether packets are being allowed or denied to the virtual machines.
Solution: Use Azure Advisor to analyze the network traffic.
Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Instead use Azure Network Watcher IP Flow Verify, which allows you to detect traffic filtering issues at a VM level.
Note: IP flow verify checks if a packet is allowed or denied to or from a virtual machine. The information consists of direction, protocol, local IP, remote IP, local port, and remote port. If the packet is denied by a security group, the name of the rule that denied the packet is returned. While any source or destination IP can be chosen, IP flow verify helps administrators quickly diagnose connectivity issues from or to the internet and from or to the on-premises environment.
Reference: https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-ip-flow-verify-overview

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Several virtual machines exhibit network connectivity issues.
You need to analyze the network traffic to identify whether packets are being allowed or denied to the virtual machines.
Solution: Use Azure Network Watcher to run IP flow verify to analyze the network traffic.
Does this meet the goal?

A. Yes
B. No

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Azure Network Watcher IP Flow Verify allows you to detect traffic filtering issues at a VM level.
IP flow verify checks if a packet is allowed or denied to or from a virtual machine. The information consists of direction, protocol, local IP, remote IP, local port, and remote port. If the packet is denied by a security group, the name of the rule that denied the packet is returned. While any source or destination IP can be chosen, IP flow verify helps administrators quickly diagnose connectivity issues from or to the internet and from or to the on-premises environment.
Reference:
https://docs.microsoft.com/en-us/azure/network-watcher/network-watcher-ip-flow-verify-overview

QUESTION 10
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. Azure Active Directory (Azure AD) administrative units
B. Azure Active Directory (Azure AD) tenants
C. subscriptions
D. compute resources
E. resource groups
F. management groups

Correct Answer: ACF
Section: (none)
Explanation

Explanation/Reference:
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 11
You need to recommend a solution to generate a monthly report of all the new Azure Resource Manager (ARM) resource deployments in your Azure subscription.
What should you include in the recommendation?

A. Azure Activity Log
B. Azure Advisor
C. Azure Analysis Services
D. Azure Monitor action groups

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
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

QUESTION 12
You have 100 servers that run Windows Server 2012 R2 and host Microsoft SQL Server 2014 instances. The instances host databases that have the following characteristics:
Stored procedures are implemented by using CLR.
The largest database is currently 3 TB. None of the databases will ever exceed 4 TB.
You plan to move all the data from SQL Server to Azure.
You need to recommend a service to host the databases. The solution must meet the following requirements:
Whenever possible, minimize management overhead for the migrated databases.
Ensure that users can authenticate by using Azure Active Directory (Azure AD) credentials. Minimize the number of database changes required to facilitate the migration.
What should you include in the recommendation?

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
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.
Reference: https://docs.microsoft.com/en-us/azure/sql-database/sql-database-managed-instance

QUESTION 13
You have an Azure subscription that contains an Azure Blob Storage account named store1.
You have an on-premises file server named Server1 that runs Windows Server 2016. Server1 stores 500 GB of company files.
You need to store a copy of the company files from Server1 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 Logic Apps integration account
B. an Azure Import/Export job
C. Azure Data Factory
D. an Azure Analysis services On-premises data gateway
E. an Azure Batch account

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Reference: https://docs.microsoft.com/en-us/azure/data-factory/introduction

QUESTION 14
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 Data Factory pipeline

B. multiple storage account queues
C. one Azure Service Bus queue
D. one Azure Service Bus topic

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
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-topics-subscriptions

QUESTION 15
You are designing an application that will be hosted in Azure.
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: (none)
Explanation

Explanation/Reference:
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 16
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 solution must meet a Service Level Agreement (SLA) of 99.99% uptime.
The compute resources allocated to the databases must scale dynamically.
The solution must have reserved capacity. Compute charges must be minimized.
What should you include in the recommendation?

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The compute and storage redundancy is built in for business critical databases and elastic pools, with a SLA of 99.99%.
Reserved capacity provides you with the flexibility to temporarily move your hot databases in and out of elastic pools (within the same region and performance tier) as part of your normal operations without losing the reserved capacity

benefit.
Reference: https://azure.microsoft.com/en-us/blog/understanding-and-leveraging-azure-sql-database-sla/

QUESTION 17
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: CD
Section: (none)
Explanation

Explanation/Reference:
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 18
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: (none)
Explanation

Explanation/Reference:
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 19
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: (none)
Explanation

Explanation/Reference:
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.
Incorrect Answers:
B: Too slow.
C: Always On availability group RPO: Because replication to the secondary replica is asynchronous, there's some data loss.
Reference: https://docs.microsoft.com/en-us/azure/site-recovery/site-recovery-sql

QUESTION 20
Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.
After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.
You 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 an Azure Traffic Manager profile.
Does this meet the goal?

A. Yes
B. No

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
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.

QUESTION 21
Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.
After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.
You 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 deploy an Azure Application Gateway.
Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
App Gateway will balance the traffic between VMs deployed in the same region. Create an Azure Traffic Manager profile instead.

QUESTION 22
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 an Azure virtual machine scale set that uses autoscaling.
Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: (none)
Explanation

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

QUESTION 23
You plan to move a web app named App1 from an on-premises datacenter 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 datacenter becomes unavailable. Costs must be minimized.
What should you include in the recommendation?

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
You have an Azure subscription that contains a Basic Azure virtual WAN named VirtualWAN1 and the virtual hubs shown in the following table.

Name	Location
Hub1	US East
Hub2	US West

You have an ExpressRoute circuit in the US East Azure 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. Enable the ExpressRoute premium add-on.

D. Create a hub virtual network in US East.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
A basic Azure virtual WAN does not support express route. You have to upgrade to standard.
Reference: https://docs.microsoft.com/en-us/azure/virtual-wan/virtual-wan-about

QUESTION 25
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 Event Grid
B. Azure Logic Apps and Azure Functions
C. Azure Pipelines and Azure Service Fabric
D. Azure Functions and Azure Batch

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
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.
Reference: https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-azure-functions

QUESTION 26
Your company has the infrastructure shown in the following table.

Location	Resource
Azure	• Azure subscription named Subscription1 • 20 Azure web apps
On-premises datacenter	• Active Directory domain • Server running Azure AD Connect • Linux computer named Server1

The on-premises Active Directory domain syncs with Azure Active Directory (Azure AD).
Server1 runs an application named App1 that uses LDAP queries to verify user identities in the on-premises 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 App1 continues to function after the migration. The solution must meet the security policy.
What should you include in the recommendation?

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

Correct Answer: D

Section: (none)
Explanation

Explanation/Reference:
Explanation:
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.
Reference: https://docs.microsoft.com/en-us/azure/active-directory-domain-services/overview

QUESTION 27
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 Consumption plan
B. Azure Functions in the Premium plan
C. Azure Functions in the Consumption plan
D. Azure Logic Apps in the integrated service environment

Correct Answer: C
Section: (none)
Explanation

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

QUESTION 28
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 shared 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 Windows Server Backup
B. Azure blob containers and Azure File Sync
C. a Recovery Services vault and Azure Backup
D. an Azure file share and Azure File Sync

Correct Answer: D
Section: (none)
Explanation

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

QUESTION 29
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 App Gateway with Azure Web Application Firewall (WAF)
B. Azure API Management Standard tier with a service endpoint
C. Azure Front Door with Azure Web Application Firewall (WAF)
D. Azure API Management Premium tier with virtual network connection

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
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 30
You have a .NET web service named Service1 that has the following requirements:
Must read and write temporary files to the local file system. Must write to the 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: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
You have the Azure resources shown in the following table.

Name	Type	Location
US-Central-Firewall-policy	Azure Firewall policy	Central US
US-East-Firewall-policy	Azure Firewall policy	East US
EU-Firewall-policy	Azure Firewall policy	West Europe
USEastfirewall	Azure Firewall	Central US
USWestfirewall	Azure Firewall	East US
EUFirewall	Azure Firewall	West Europe

You need to deploy a new Azure Firewall policy that will contain mandatory rules for all Azure Firewall deployments. The new policy will be configured as a parent policy for the existing policies.
What is the minimum number of additional Azure Firewall policies you should create?

A. 0
B. 1
C. 2
D. 3

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Firewall policies work across regions and subscriptions.
Place all your global configurations in the parent policy.
Note: Policies can be created in a hierarchy. You can create a parent/global policy that will contain configurations and rules that will apply to all/a number of firewall instances. Then you create a child policy that inherits from the parent; note that rules changes in the parent instantly appear in the child. The child is associated with a firewall and applies configurations/rules from the parent policy and the child policy instantly to the firewall.

Reference: https://aidanfinn.com/?p=22006

QUESTION 32
Your company has an app named App1 that uses data from the on-premises Microsoft SQL Server databases shown in the following table.

NAME	SIZE
DB1	400 GB
DB2	250 GB
DB3	300 GB
DB4	50 GB

App1 and the data are used on the first day of the month only. The data is not expected to grow more than 3% each year.
The company is rewriting App1 as an Azure web app and plans to migrate all the data to Azure.
You need to migrate the data to Azure SQL Database. The solution must minimize costs.
Which service tier should you use?

A. vCore-based General Purpose
B. DTU-based Standard
C. vCore-based Business Critical
D. DTU-based Basic

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
DTU-based Standard supports databases up to 1 TB in size.
Incorrect Answers:
A, C: vCore-based service tiers are more costly than DTU-based service tiers.
D: DTU-based Basic only supports a maximum database size of 2 GB.
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/service-tiers-dtu

QUESTION 33
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 Service Fabric
B. Azure Data Lake
C. Azure Service Bus
D. Azure Traffic Manager

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Asynchronous messaging options in Azure include Azure Service Bus, Event Grid, and Event Hubs.
Reference:
https://docs.microsoft.com/en-us/azure/architecture/guide/technology-choices/messaging

QUESTION 34

Your company has 300 virtual machines hosted in a VMware environment. The virtual machines vary in size and have various utilization levels.
You plan to move all the virtual machines to Azure.
You need to recommend how many and what size Azure virtual machines will be required to move the current workloads to Azure. The solution must minimize administrative effort.
What should you use to make the recommendation?

A. Azure Pricing calculator
B. Azure Advisor
C. Azure Migrate
D. Azure Cost Management

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Reference: https://docs.microsoft.com/en-us/azure/migrate/migrate-appliance https://docs.microsoft.com/enus/learn/modules/design-your-migration-to-azure/2-plan-your-azure-migration

QUESTION 35
You plan provision a High Performance Computing (HPC) cluster in Azure that will use a third-party scheduler.
You need to recommend a solution to provision and manage the HPC cluster node.
What should you include in the recommendation?

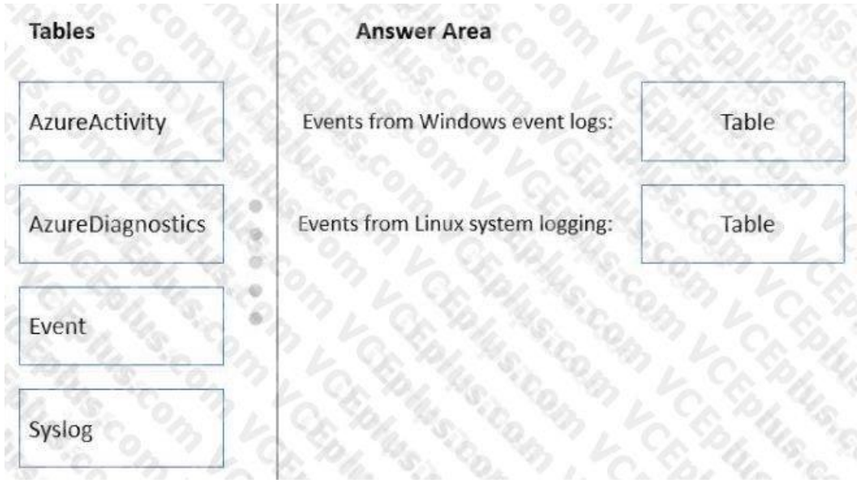
A. Azure Automation
B. Azure CycleCloud
C. Azure Purview
D. Azure Lighthouse

Correct Answer: B
Section: (none)
Explanation

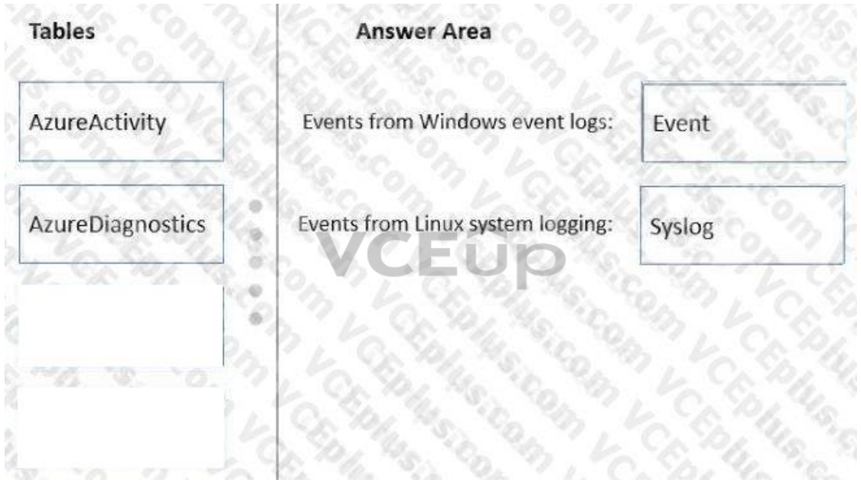
Explanation/Reference:
Explanation:
You can dynamically provision Azure HPC clusters with Azure CycleCloud. Azure CycleCloud is the simplest way to manage HPC workloads.
Note: Azure CycleCloud is an enterprise-friendly tool for orchestrating and managing High Performance Computing (HPC) environments on Azure. With CycleCloud, users can provision infrastructure for HPC systems, deploy familiar HPC schedulers, and automatically scale the infrastructure to run jobs efficiently at any scale. Through CycleCloud, users can create different types of file systems and mount them to the compute cluster nodes to support HPC workloads.
Reference:
https://docs.microsoft.com/en-us/azure/cyclecloud/overview

QUESTION 36
DRAG DROP
You have an Azure subscription. The subscription contains Azure virtual machines that run Windows Server 2016 and Linux.
You need to use Azure Monitor to design an alerting strategy for security-related events.
Which Azure Monitor Logs tables should you query? To answer, drag the appropriate tables to the correct log types. Each table 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:



Correct Answer:

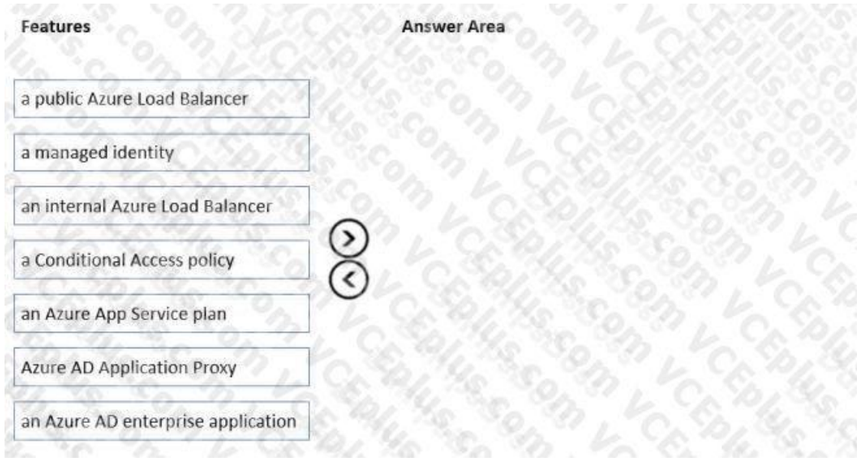


Section: (none)
Explanation

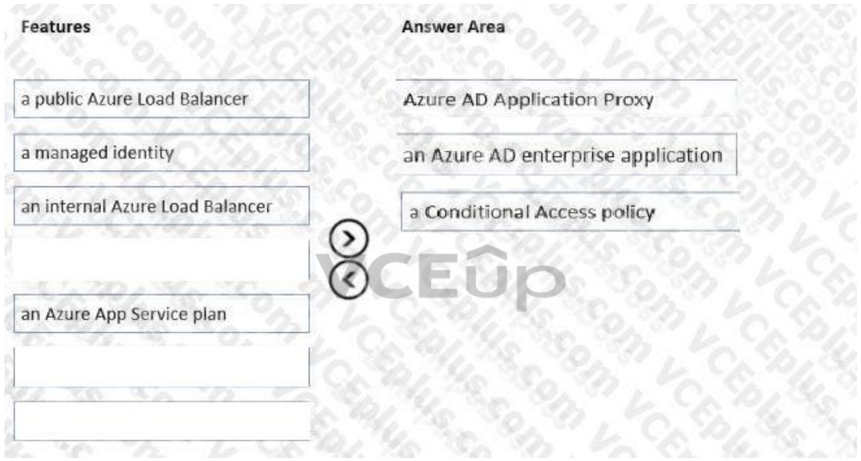
Explanation/Reference:
Reference:
https://docs.microsoft.com/en-us/azure/azure-monitor/platform/data-sources-windows-events https://docs.microsoft.com/enus/azure/azure-monitor/agents/data-sources-syslog

QUESTION 37
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:



Correct Answer:

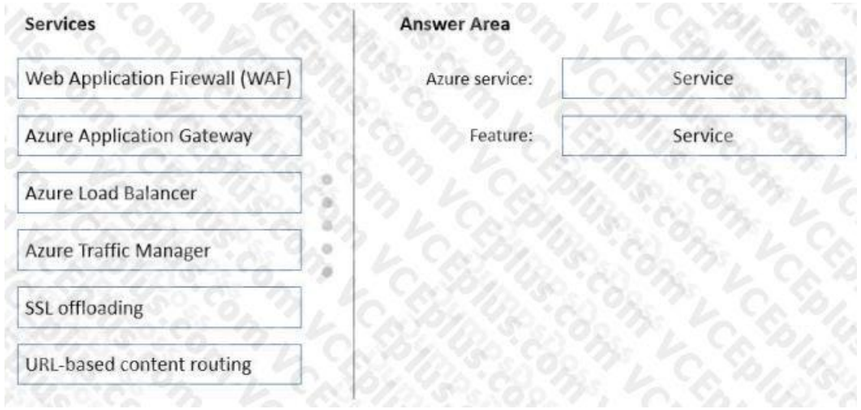


Section: (none)
Explanation

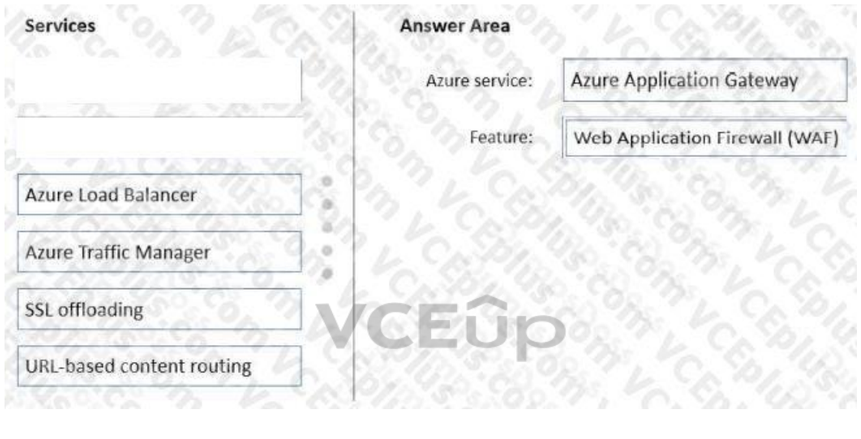
Explanation/Reference:

QUESTION 38
DRAG DROP
Your company has an existing web app that runs on Azure virtual machines.
You need to ensure that the app is protected from SQL injection attempts and uses a layer-7 load balancer. The solution must minimize disruptions to the code of the app.
What should you recommend? To answer, drag the appropriate services to the correct targets. Each service 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:



Correct Answer:

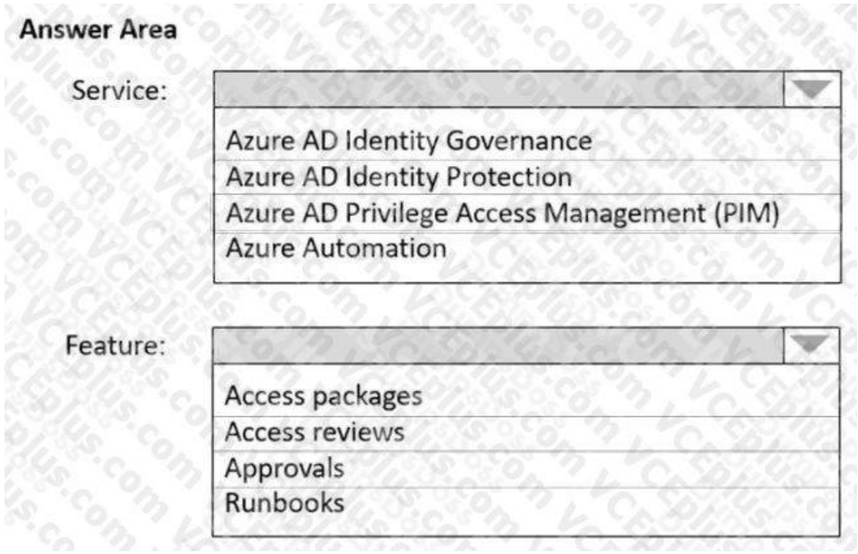


Section: (none)
Explanation

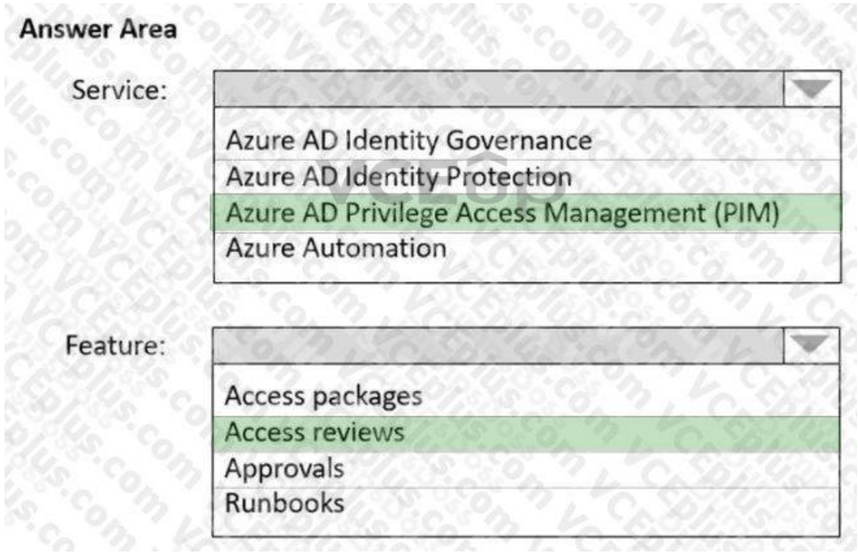
Explanation/Reference:
Box 1: Azure Application Gateway
The Azure Application Gateway Web Application Firewall (WAF) provides protection for web applications. These protections are provided by the Open Web Application Security Project (OWASP) Core Rule Set (CRS).
Box 2: Web Application Firewall (WAF)
Reference: https://docs.microsoft.com/en-us/azure/web-application-firewall/ag/application-gateway-customize-waf-rulesportal

QUESTION 39
HOTSPOT
What should you implement to meet the identity requirements? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:



Correct Answer:



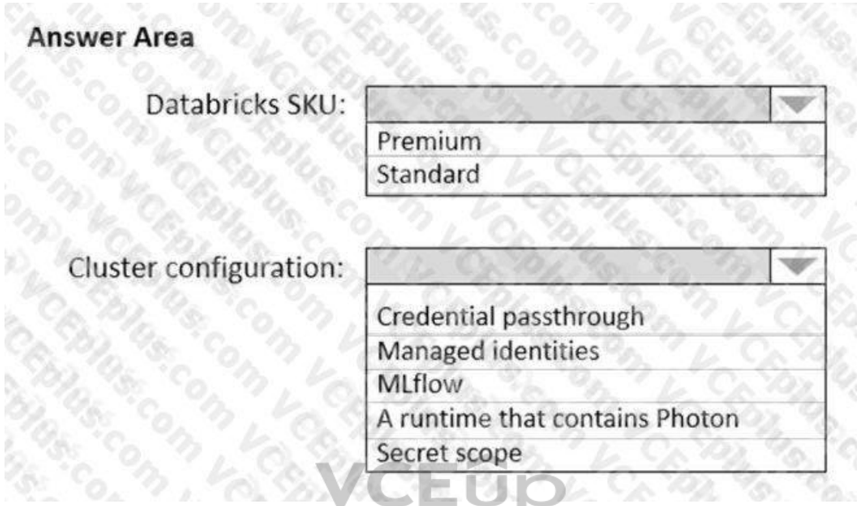
Section: (none)
Explanation

Explanation/Reference:
Requirements: Identity Requirements
Contoso identifies the following requirements for managing Fabrikam access to resources:
Every month, an account manager at Fabrikam must review which Fabrikam users have access permissions to App1.
Accounts that no longer need permissions must be removed as guests. The solution must minimize development effort.
Box 1: The Azure AD Privileged Identity Management (PIM) When should you use access reviews?
Too many users in privileged roles: It's a good idea to check how many users have administrative access, how many of them are Global Administrators, and if there are any invited guests or partners that have not been removed after being assigned to do an administrative task. You can recertify the role assignment users in Azure AD roles such as Global Administrators, or Azure resources roles such as User Access Administrator in the Azure AD Privileged Identity Management (PIM) experience.
Box 2: Access reviews
Azure Active Directory (Azure AD) access reviews enable organizations to efficiently manage group memberships, access to enterprise applications, and role assignments. User's access can be reviewed on a regular basis to make sure only the right people have continued access.

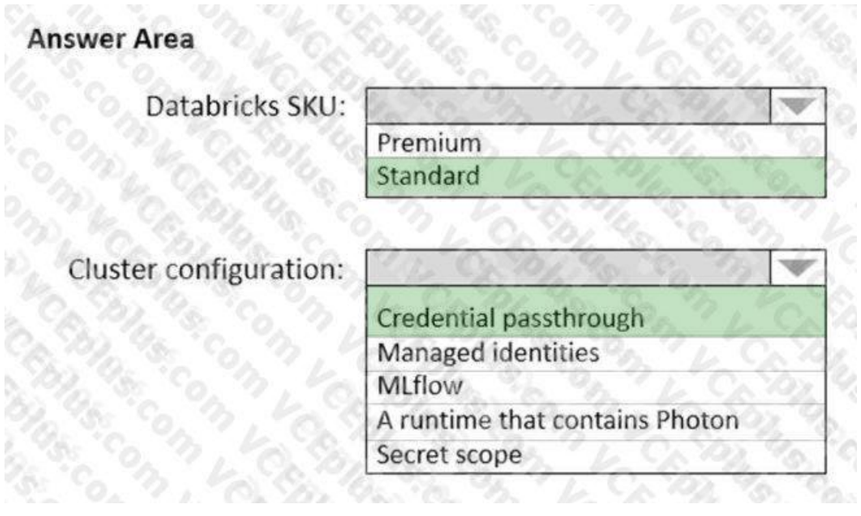
Reference: https://docs.microsoft.com/en-us/azure/active-directory/governance/access-reviews-overview

QUESTION 40
HOTSPOT
You plan to deploy Azure Databricks to support a machine learning application. Data engineers will mount an Azure Data Lake Storage account to the Databricks file system. Permissions to folders are granted directly to the data engineers.
You need to recommend a design for the planned Databrick deployment. The solution must meet the following requirements:
Ensure that the data engineers can only access folders to which they have permissions. Minimize development effort.
Minimize costs.
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:



Correct Answer:



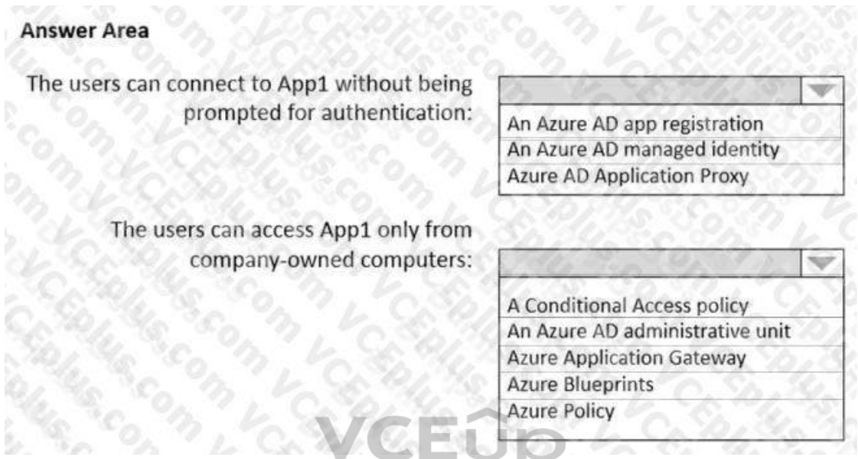
Section: (none)
Explanation

Explanation/Reference:
Box 1: Standard
Choose Standard to minimize costs.
Box 2: Credential passthrough

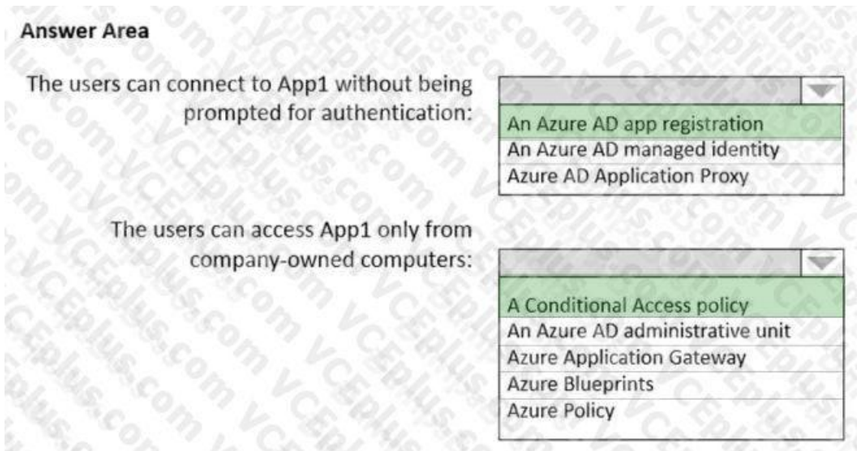
Athenticate automatically to Azure Data Lake Storage Gen1 (ADLS Gen1) and Azure Data Lake Storage Gen2 (ADLS Gen2) from Azure Databricks clusters using the same Azure Active Directory (Azure AD) identity that you use to log into Azure Databricks. When you enable Azure Data Lake Storage credential passthrough for your cluster, commands that you run on that cluster can read and write data in Azure Data Lake Storage without requiring you to configure service principal credentials for access to storage.
Reference: https://docs.microsoft.com/en-us/azure/databricks/security/credential-passthrough/adls-passthrough

QUESTION 41
HOTSPOT
You plan to deploy an Azure web app named App1 that will use Azure Active Directory (Azure AD) authentication.
App1 will be accessed from the internet by the users at your company. All the users have computers that run Windows 10 and are joined to Azure AD.
You need to recommend a solution to ensure that the users can connect to App1 without being prompted for authentication and can access App1 only from company-owned computers.
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:



Correct Answer:



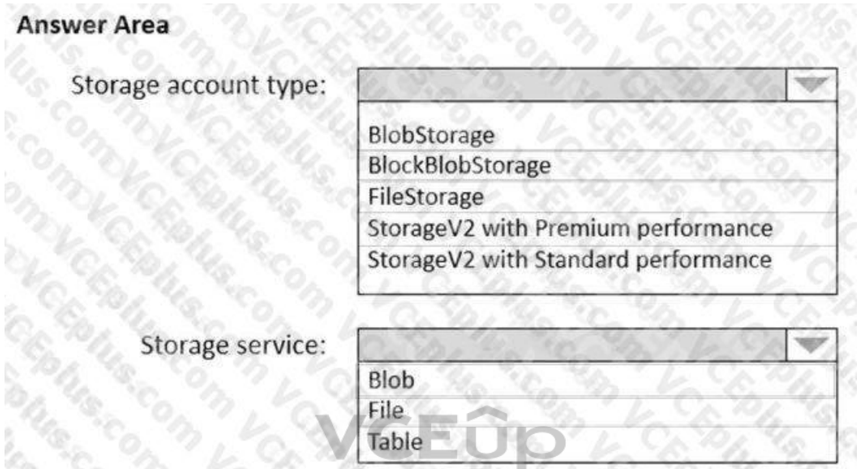
Section: (none)
Explanation

Explanation/Reference:
Box 1: An Azure AD app registration
Azure active directory (AD) provides cloud based directory and identity management services.You can use azure AD to manage users of your application and authenticate access to your applications using azure active directory.
You register your application with Azure active directory tenant.
Box 2: A conditional access policy
Conditional Access policies at their simplest are if-then statements, if a user wants to access a resource, then they must complete an action.

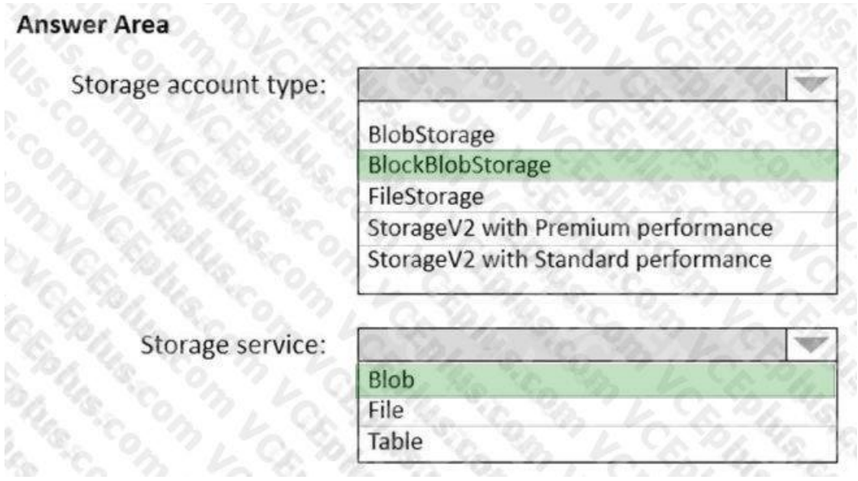
By using Conditional Access policies, you can apply the right access controls when needed to keep your organization secure and stay out of your user's way when not needed.
Reference:
https://codingcanvas.com/using-azure-active-directory-authentication-in-your-web-application/ https://docs.microsoft.com/enus/azure/active-directory/conditional-access/overview

QUESTION 42
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:



Correct Answer:



Section: (none)
Explanation

Explanation/Reference:
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 43
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.

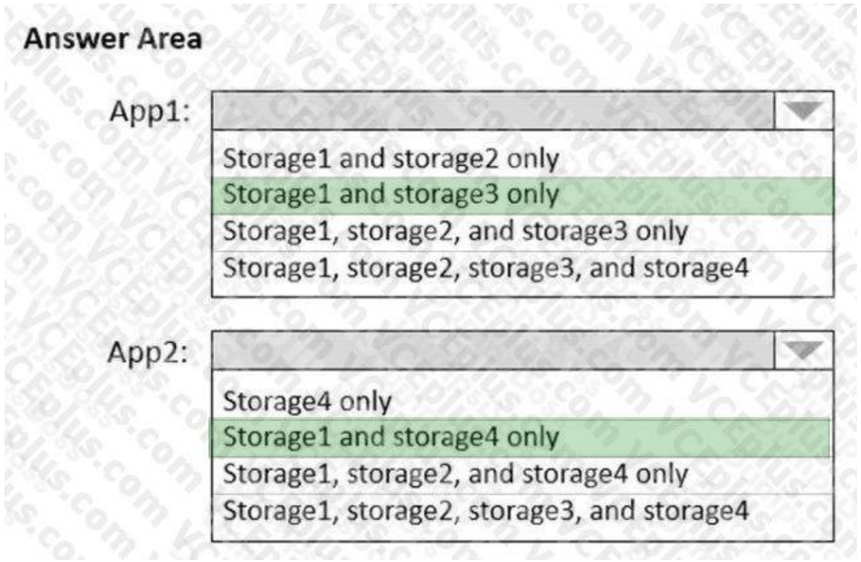
Hot Area:

Answer Area

App1:
- 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

Correct Answer:

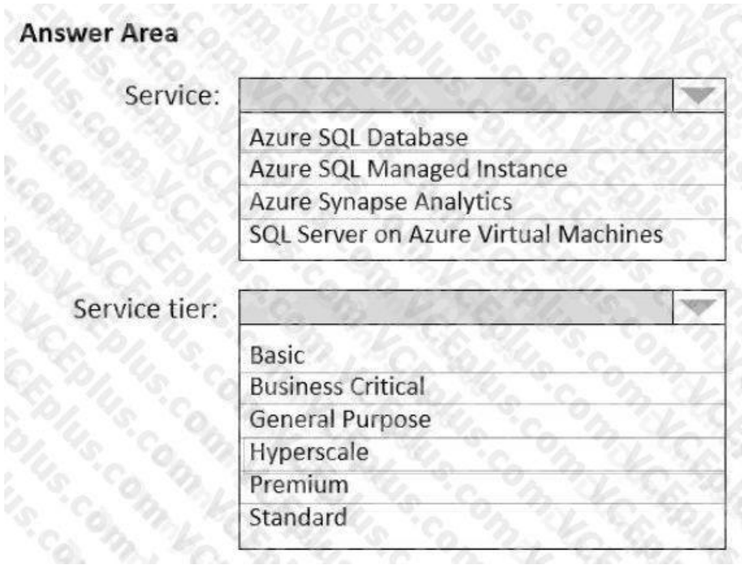


Section: (none)
Explanation

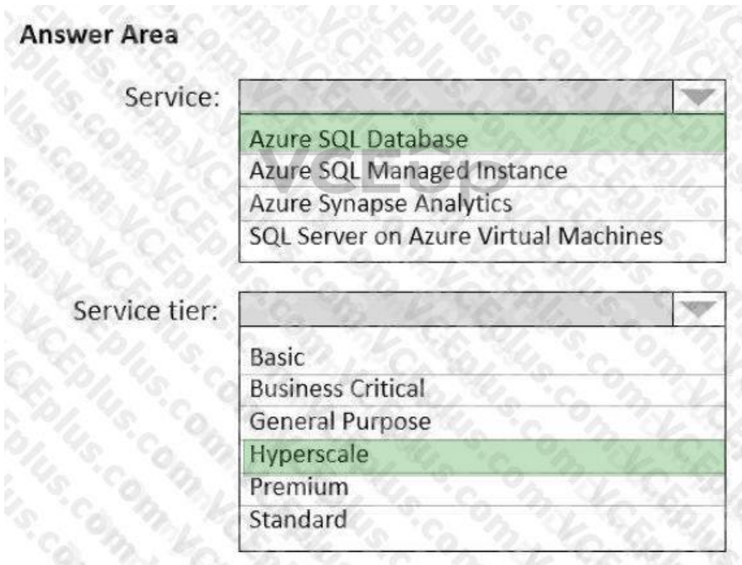
Explanation/Reference:
Box 1: Storage1 and storage3 only
Azure Blob Storage lifecycle management offers a rich, rule-based policy for GPv2 and blob storage accounts. Storage 2 does not support access tiers.
Box 2: Storage1 and storage4 only
FileStorage storage accounts allow you to deploy Azure file 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 44
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:



Correct Answer:



Section: (none)
Explanation

Explanation/Reference:
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 45
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.

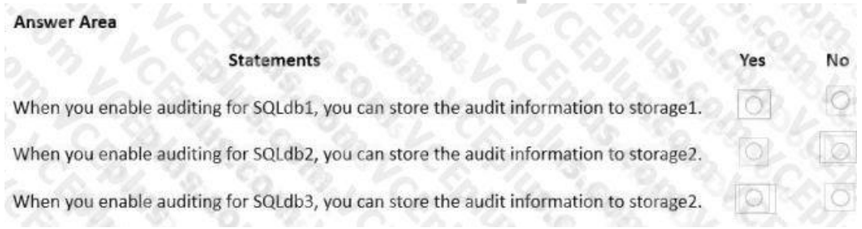
Name	Resource group	Location	Account kind
storage1	RG1	East US	StorageV2 (general purposev2)
storage2	RG2	Central US	BlobStorage

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

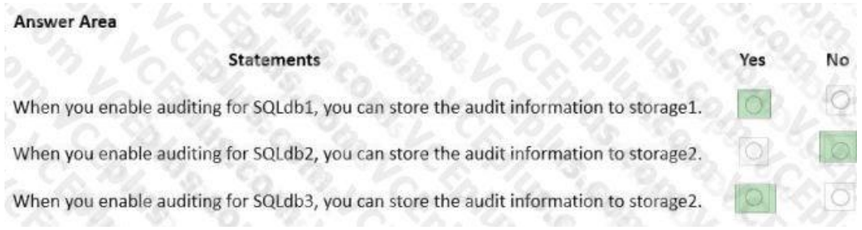
Name	Resource group	Server	Pricing tier
SQLdb1	RG1	SQLsvr1	Standard
SQLdb2	RG1	SQLsvr1	Standard
SQLdb3	RG2	SQLsvr2	Premium

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:



Correct Answer:



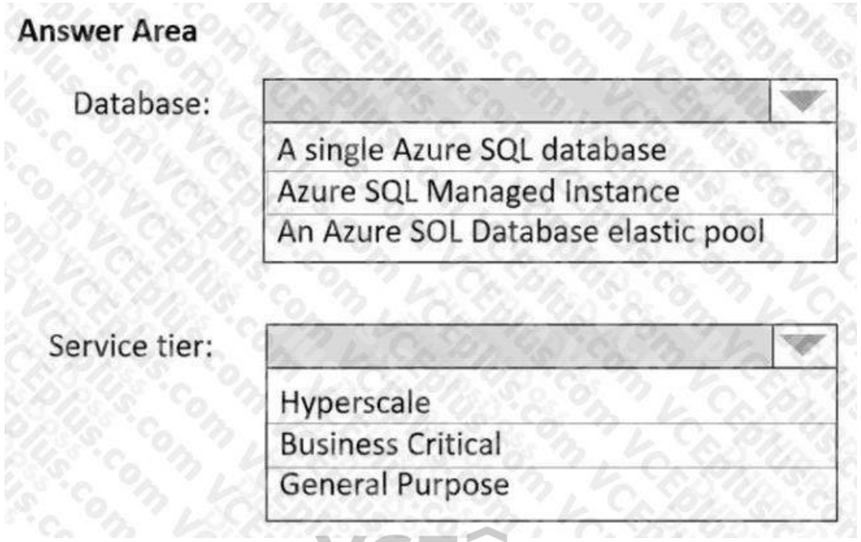
Section: (none)
Explanation

Explanation/Reference:
Box 1: Yes
Be sure that the destination is in the same region as your database and server.
Box 2: No
Since the regions are not the same.

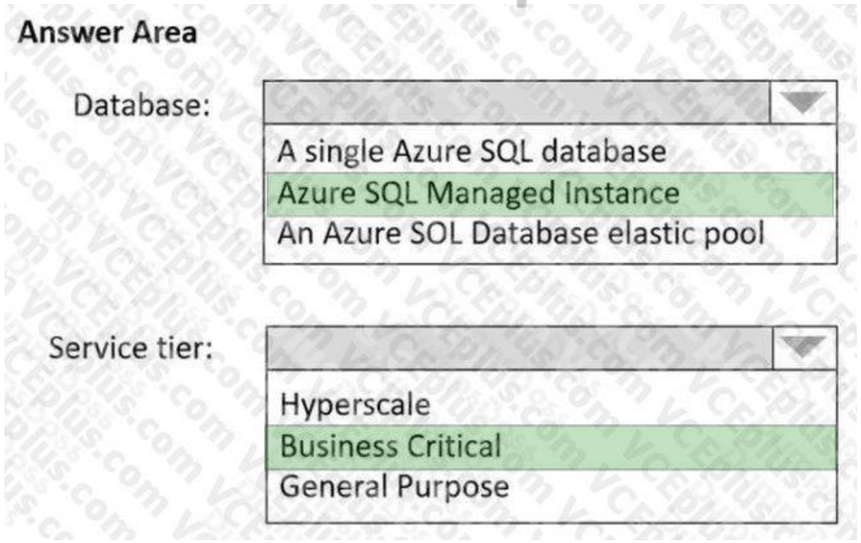
Box 3: Yes
Blob Storage is always standard but SQL database premium supports audit logs.
Reference: https://docs.microsoft.com/en-us/azure/sql-database/sql-database-auditing

QUESTION 46
HOTSPOT
How should the migrated databases DB1 and DB2 be implemented in Azure?

Hot Area:



Correct Answer:



Section: (none)
Explanation

Explanation/Reference:
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

QUESTION 47
HOTSPOT
You plan to deploy the backup policy shown in the following exhibit.

Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the graphic.
NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

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

Correct Answer:

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]**:

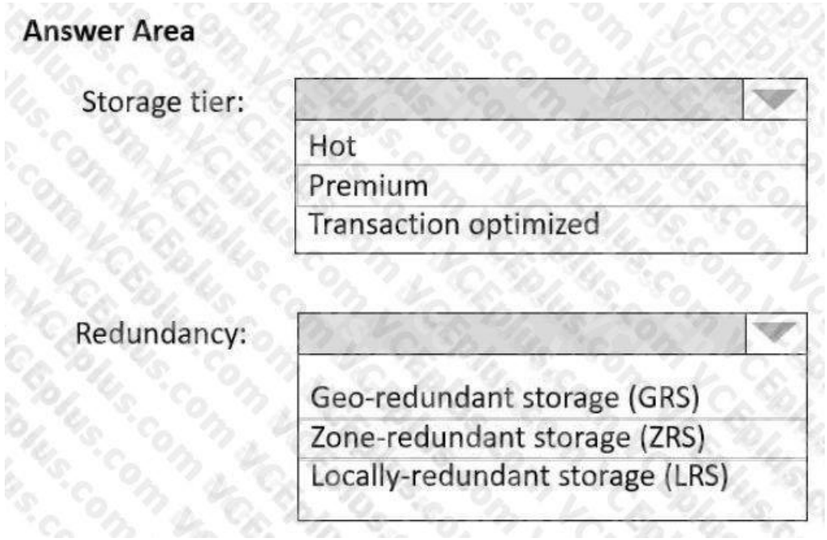
- 1 hour
- 1 day
- 1 week
- 1 month
- 1 year

Section: (none)
Explanation

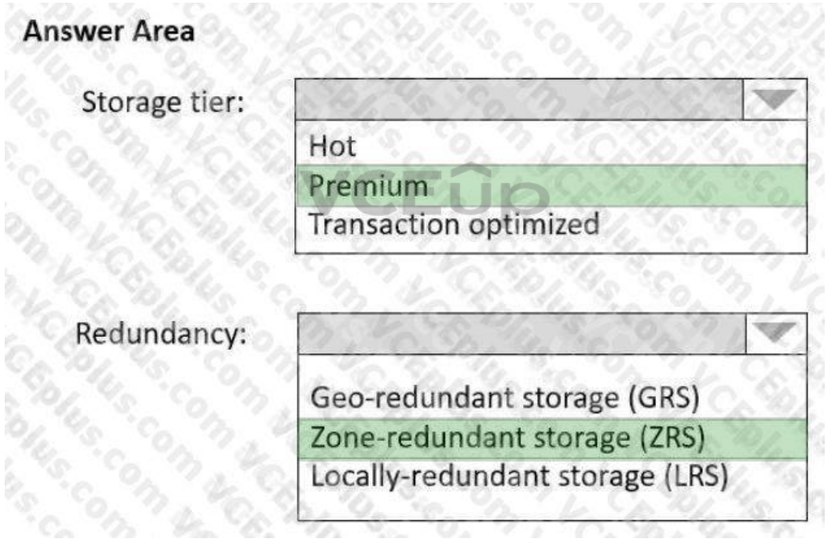
Explanation/Reference:

QUESTION 48
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:



Correct Answer:

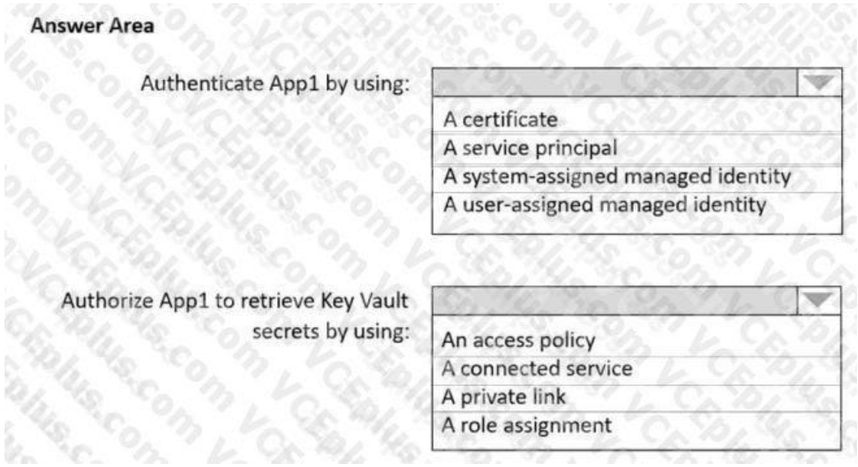


Section: (none)
Explanation

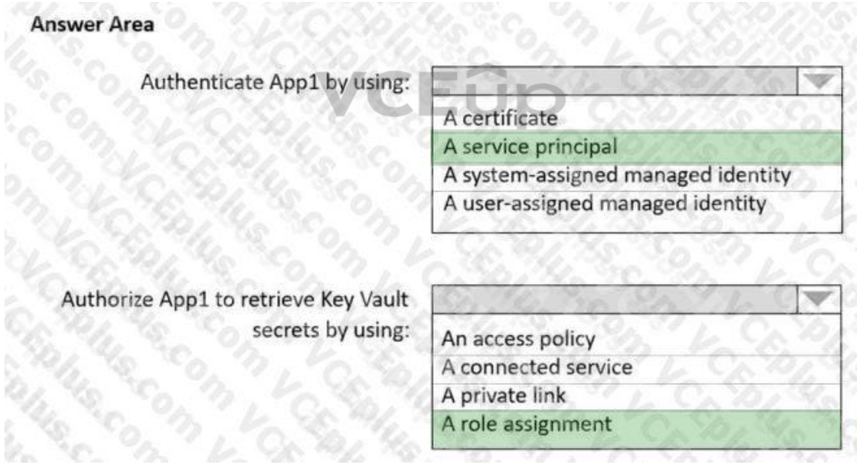
Explanation/Reference:
Box 1: Premium
Premium: Premium file shares are backed by solid-state drives (SSDs) and provide consistent high performance and low latency, within single-digit milliseconds for most IO operations, for IO-intensive workloads.
Incorrect Answers:
Hot: Hot file shares offer storage 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 49
HOTSPOT
You need to recommend a solution to ensure that App1 can access the third-party credentials and access strings. The solution must meet the security 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:



Correct Answer:



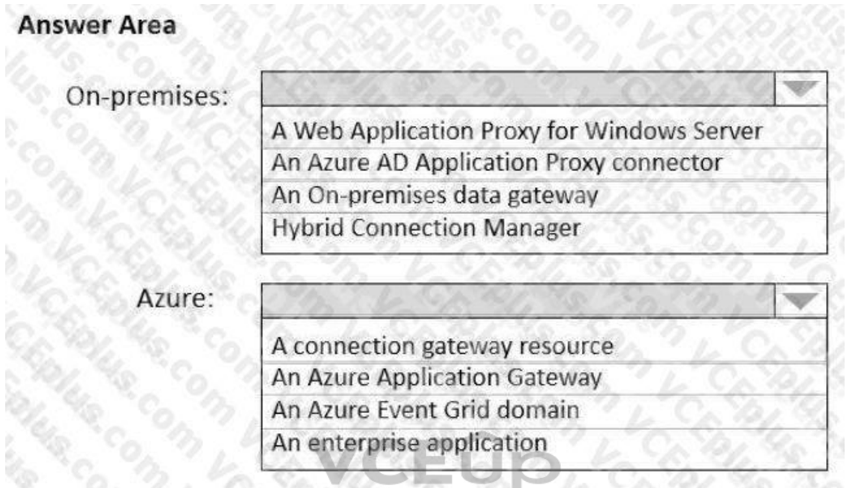
Section: (none)
Explanation

Explanation/Reference:
Scenario: Security Requirement
All secrets used by Azure services must be stored in Azure Key Vault.
Services that require credentials must have the credentials tied to the service instance. The credentials must NOT be shared between services.
Box 1: A service principal
A service principal is a type of security principal that identifies an application or service, which is to say, a piece of code rather than a user or group. A service principal's object ID is known as its client ID and acts like its username. The service principal's client secret acts like its password.
Note: Authentication with Key Vault works in conjunction with Azure Active Directory (Azure AD), which is responsible for authenticating the identity of any given security principal.
A security principal is an object that represents a user, group, service, or application that's requesting access to Azure resources. Azure assigns a unique object ID to every security principal.
Box 2: A role assignment
You can provide access to Key Vault keys, certificates, and secrets with an Azure role-based access control.
Reference:

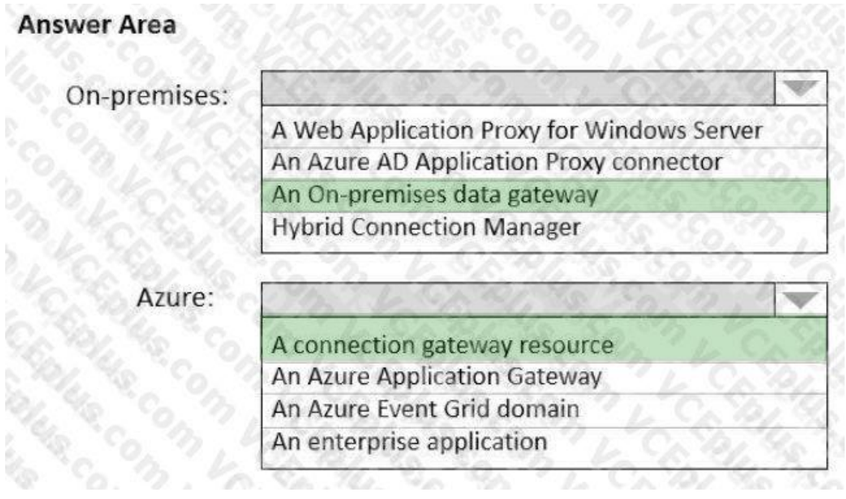
https://docs.microsoft.com/en-us/azure/key-vault/general/authentication

QUESTION 50
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:



Correct Answer:

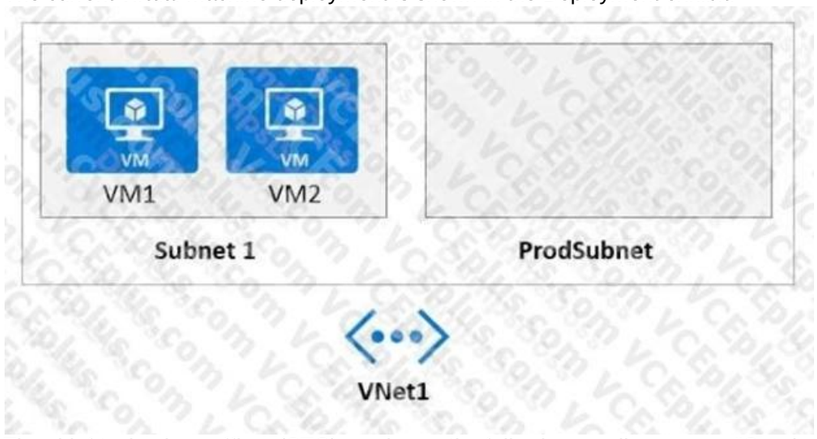


Section: (none)
Explanation

Explanation/Reference:
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 51
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.

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:

Correct Answer:

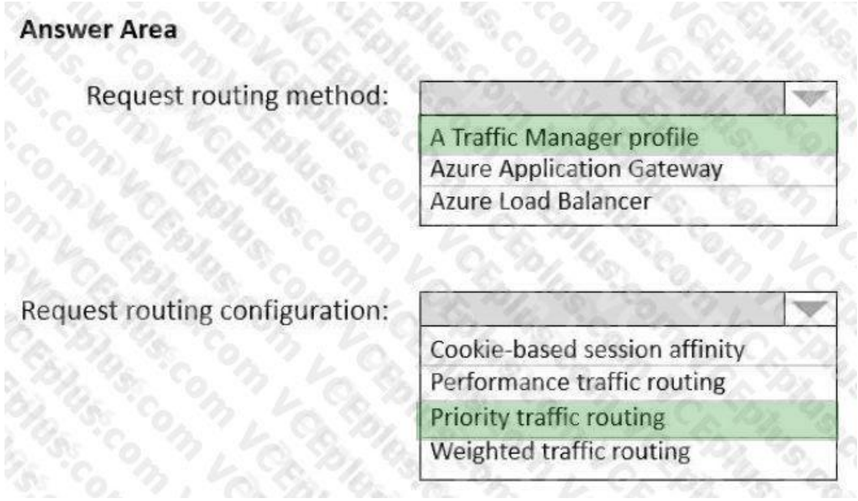
Section: (none)
Explanation

Explanation/Reference:

QUESTION 52
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:

Correct Answer:



Section: (none)
Explanation

Explanation/Reference: