NO.1 You use Azure Application Insights.

You plan to use continuous export.

You need to store Application Insights data for five years.

Which Azure service should you use?

A. Azure Backup

B. Azure Storage

C. Azure SQL Database

D. Azure Monitor Logs

Answer: B

NO.2 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 Standard

C. Azure SQL Database Managed Instance Business Critical

D. Azure SQL Database Hyperscale

Answer: B

Reference:

https://docs.microsoft.com/en-us/azure/azure-sql/database/service-tier-business-critical

NO.3 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.

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1

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:

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 |

Explanation

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) |

NO.4 You have an app named App1 that uses two on-premises Microsoft SQL Server databases named DB1 and DB2.

You plan to migrate DB1 and DB2 to Azure.

You need to recommend an Azure solution to host DB1 and DB2. The solution must meet the following requirements:

* Support server-side transactions across DB1 and DB2.

* Minimize administrative effort to update the solution.

What should you recommend?

A. two Azure SQL databases on different Azure SQL Database servers

B. two Azure SQL databases in an elastic pool

C. two SQL Server databases on an Azure virtual machine

D. two Azure SQL databases on the same Azure SQL Database managed instance

Answer: C

Explanation

When both the database management system and client are under the same ownership (e.g. when SQL Server is deployed to a virtual machine), transactions are available and the lock duration can be controlled. Reference:

https://docs.particular.net/nservicebus/azure/understanding-transactionality-in-azure

NO.5 You have an Azure SQL database named DB1 that contains multiple tables.

You need to improve the performance of DB1. The solution must minimize administrative effort. What should you use?

A. Azure Advisor

B. automatic tuning

C. Query Performance Insight

D. Azure Monitor

Answer: B

Explanation

Azure SQL Database and Azure SQL Managed Instance automatic tuning provides peak performance and stable workloads through continuous performance tuning based on AI and machine learning. Automatic tuning is a fully managed intelligent performance service that uses built-in intelligence to continuously monitor queries executed on a database, and it automatically improves their performance.

Reference:

https://docs.microsoft.com/en-us/azure/azure-sql/database/automatic-tuning-overview

NO.6 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

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3

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)

Answer: A

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

NO.7 Your company develops a web service that is deployed to at, 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. (Click the Deployment tab).
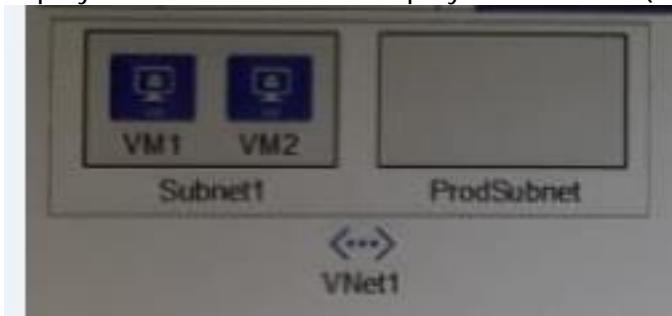
The chief technology officer (CTO) sends you the following email message: "Our developers have deployed the web service to a virtual machine named WL Testing has shown that the API is accessible from VM1 and VM? Our partners must be able to connect to the API over the Internet Partners will me this data in applications that they develop:

You deploy an Azure API Management service. The relevant API Management configuration is shown in the API ambit. (Click the API tab).

For each of the following statements, select. Yes, if the statement is true. Otherwise. select No.
NOTE: Each correct selection is worth one point.

Statements	Yes	No
The API is available to partners over the Internet.	○	○
The APIM instance can access real-time data from VM1.	○	○
A VPN gateway is required for partner access.	○	○

Answer:
Explanation

Statements	Yes	No
The API is available to partners over the Internet	○	○
The APIM instance can access real-time from VM1	○	○
A VPN gateway is required for partner access	○	○

NO.8 You need to recommend a high-availability solution for the middle tier of the payment processing system.
What should you include in the recommendation?
A. availability zones
B. an availability set
C. the Isolated App Server plan
D. the Premium App Service plan
Answer: A

NO.9 Your company wants to use an Azure Active Directory (Azure AD) hybrid identity solution.
You need to ensure that users can authenticate if the internet connection to the on-premises Active Directory is unavailable. The solution must minimize authentication prompts for the users.
What should you include in the solution?
A. an Active Directory Federation Services (AD FS) server
B. password hash synchronization and Azure AD Seamless Single Sign-On (Azure AD Seamless SSO)
C. pass-through authentication and Azure AD Seamless Single Sign-On (Azure AD Seamless SSO)
Answer: B
Explanation
With Password hash synchronization + Seamless SSO the authentication is in the cloud.

Reference:
https://docs.microsoft.com/en-us/azure/active-directory/hybrid/choose-ad-authn

NO.10 You have an on-premises Active Directory forest and an Azure Active Directory (Azure AD) tenant. All Azure AD users are assigned an Azure AD Premium P1 license.
You deploy Azure AD Connect.
Which two features are available in this environment that can reduce operational overhead for your company's help desk? Each correct answer presents part of the solution.
NOTE: Each correct selection is worth one point.
A. Azure AD Privileged Identity Management policies
B. Microsoft Cloud App Security Conditional Access App Control.
C. access reviews
D. password writeback
E. self-service password reset
Answer: D,E

NO.11 You manage a network that includes an on-premises Active Directory Domain Services domain and an Azure Active Directory (Azure AD).
Employees are requires to use different accounts when using on-premises or cloud resources. You must recommend a solution that lets employees sign in to all company resources by using a single account. The solution must implement an identity provider.
You need provide guidance on the different identity providers.
How should you describe each identity provider? To answer, select the appropriate description from each list in the answer area.
NOTE: Each correct selection is worth one point.

Identity provider   **Description**

synchronized identity   ▼

| User management occurs on-premises. Azure AD authenticates employees by using on-premises passwords. |
| User management occurs on-premises. The on-premises domain controller authenticates employee credentials. |
| Both user management and authentication occur in Azure AD. |

federated identity   ▼

| User management occurs on-premises. Azure AD authenticates employees by using on-premises passwords. |
| User management occurs on-premises. The on-premises domain controller authenticates employee credentials. |
| Both user management and authentication occur in Azure AD. |

Answer:
Explanation

Identity provider

Description

synchronized identity

User management occurs on-premises. Azure AD authenticates employees by using on-premises passwords.
User management occurs on-premises. The on-premises domain controller authenticates employee credentials.
Both user management and authentication occur in Azure AD.

federated identity

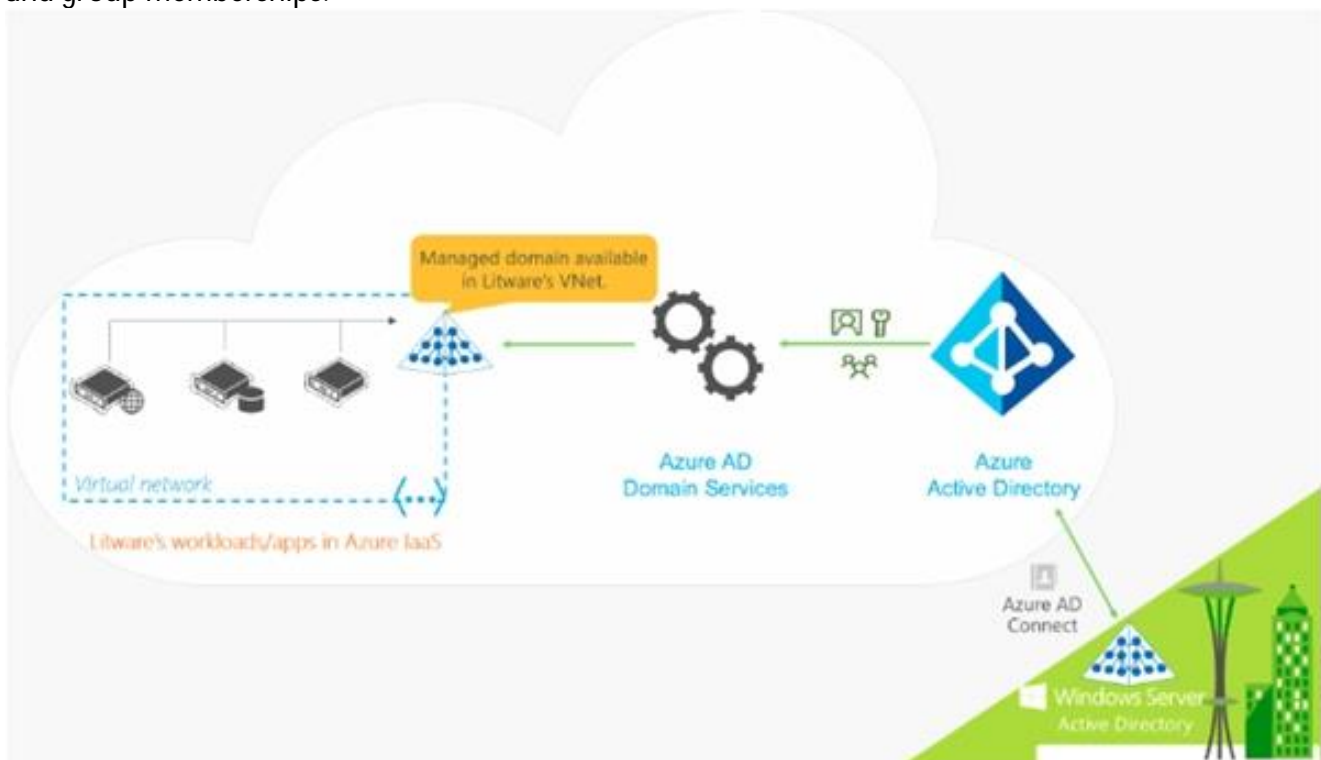| |
|---|
| User management occurs on-premises. Azure AD authenticates employees by using on-premises passwords. |
| User management occurs on-premises. The on-premises domain controller authenticates employee credentials. |
| Both user management and authentication occur in Azure AD. |

Box1: User management occurs on-premises. Azure AD authenticates employees by using on-premises passwords.

Azure AD Domain Services for hybrid organizations

Organizations with a hybrid IT infrastructure consume a mix of cloud resources and on-premises resources.

Such organizations synchronize identity information from their on-premises directory to their Azure AD tenant. As hybrid organizations look to migrate more of their on-premises applications to the cloud, especially legacy directory-aware applications, Azure AD Domain Services can be useful to them.

Example: Litware Corporation has deployed Azure AD Connect, to synchronize identity information from their on-premises directory to their Azure AD tenant. The identity information that is synchronized includes user accounts, their credential hashes for authentication (password hash sync) and group memberships.
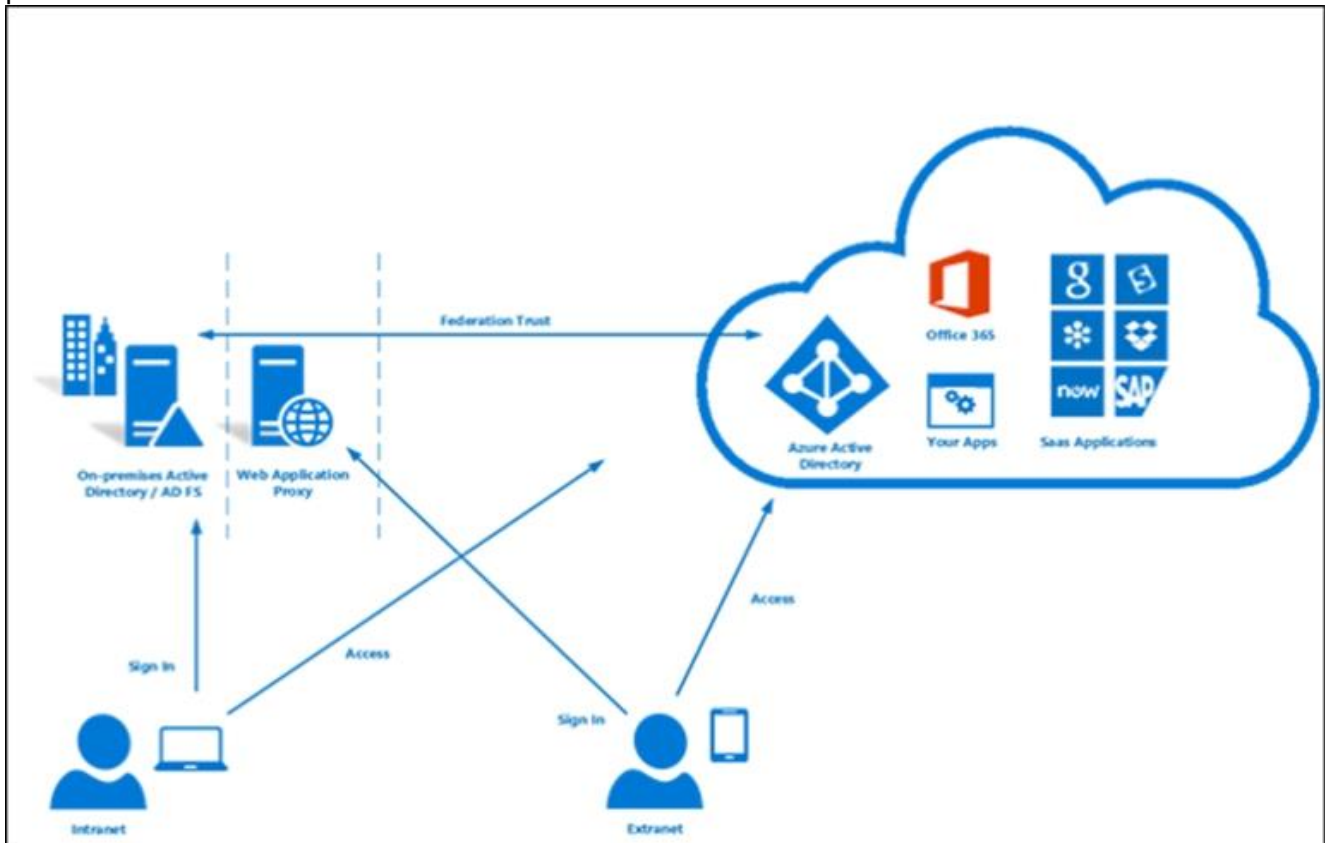

User accounts, group memberships, and credentials from Litware's on-premises directory are

synchronized to Azure AD via Azure AD Connect. These user accounts, group memberships, and credentials are automatically available within the managed domain.

Box 2: User management occurs on-premises. The on-promises domain controller authenticates employee credentials.

You can federate your on-premises environment with Azure AD and use this federation for authentication and authorization. This sign-in method ensures that all user authentication occurs on-premises.

References:
https://docs.microsoft.com/en-us/azure/active-directory-domain-services/active-directory-ds-overview
https://docs.microsoft.com/en-us/azure/active-directory/hybrid/whatis-fed

NO.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 a web app in an Isolated App Service plan.
Does this meet the goal?

A. Yes

B. No

Answer: B

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

NO.13 You plan to deploy an API by using Azure API Management

You need to recommend a solution to protect the API from a distributed denial of service (DDoS) attack.

What should you recommend?

A. Strip the Powered-By response header.

B. Enable quotas.

C. Enable rate limiting.

D. Create network security groups (NSGs).

Answer: C

NO.14 You need to recommend a solution to deploy containers that run an application. The application has two tiers.

Each tier is implemented as a separate Docker Linux-based image. The solution must meet the following requirements:

* The front-end tier must be accessible by using a public IP address on port 80.

* The backend tier must be accessible by using port 8080 from the front-end tier only.

* Both containers must be able to access the same Azure file share.

* If a container fails, the application must restart automatically.

* Costs must be minimized.

What should you recommend using to host the application?

A. Azure Service Fabric

B. Azure Kubernetes Service (AKS)

C. Azure Container instances

D. Azure Container registries

Answer: C

Explanation

Azure Container Instances enables a layered approach to orchestration, providing all of the scheduling and management capabilities required to run a single container, while allowing orchestrator platforms to manage multi-container tasks on top of it.

Because the underlying infrastructure for container instances is managed by Azure, an orchestrator platform does not need to concern itself with finding an appropriate host machine on which to run a single container.

Azure Container Instances can schedule both Windows and Linux containers with the same API.

Orchestration of container instances exclusively

Because they start quickly and bill by the second, an environment based exclusively on Azure Container Instances offers the fastest way to get started and to deal with highly variable workloads.

Reference:

https://docs.microsoft.com/en-us/azure/container-instances/container-instances-overview

https://docs.microsoft.com/en-us/azure/container-instances/container-instances-orchestrator-relationship

NO.15 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

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9

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.

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:

Explanation

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

NO.16 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. a SendGrid account with advanced reporting

C. an action group

D. Azure AD Connect Health

Answer: D

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

NO.17 You have an existing implementation of Microsoft SQL Server Integration Services (SSIS) packages stored in an SSISDB catalog on your on-premises network. The on-premises network does not have hybrid connectivity to Azure by using Site-to-Site VPN or ExpressRoute.

You want to migrate the packages to Azure Data Factory.

You need to recommend a solution that facilitates the migration while minimizing changes to the existing packages. The solution must minimize costs.

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

NOTE: Each correct selection is worth one point.

Store the SSISDB catalog by using:

Azure SQL Database
Azure Synapse Analytics
SQL Server on an Azure virtual machine
SQL Server on an on-premises computer

Implement a runtime engine for package execution by using:

Self-hosted integration runtime only
Azure-SQL Server Integration Services Integration Runtime (IR) only
Azure-SQL Server Integration Services Integration Runtime and self-hosted integration runtime

Answer:

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

Explanation

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Store the SSISDB catalog by using:

Azure SQL Database
Azure Synapse Analytics
SQL Server on an Azure virtual machine
SQL Server on an on-premises computer

Implement a runtime engine for package execution by using:

Self-hosted integration runtime only
Azure-SQL Server Integration Services Integration Runtime (IR) only
Azure-SQL Server Integration Services Integration Runtime and self-hosted integration runtime

Box 1: Azure SQL database

You can't create the SSISDB Catalog database on Azure SQL Database at this time independently of creating the Azure-SSIS Integration Runtime in Azure Data Factory. The Azure-SSIS IR is the runtime environment that runs SSIS packages on Azure.

Box 2: Azure-SQL Server Integration Service Integration Runtime and self-hosted integration runtime

The Integration Runtime (IR) is the compute infrastructure used by Azure Data Factory to provide data integration capabilities across different network environments. Azure-SSIS Integration Runtime (IR) in Azure Data Factory (ADF) supports running SSIS packages.

Self-hosted integration runtime can be used for data movement in this scenario.

Reference:

https://docs.microsoft.com/en-us/azure/data-factory/create-azure-integration-runtime

https://docs.microsoft.com/en-us/sql/integration-services/lift-shift/ssis-azure-connect-to-catalog-database

NO.18 You need to recommend a compute solution for the middle tier of the payment processing system.

What should you include in the recommendation?

A. Azure Kubernetes Service (AKS)

B. App Service Environments (ASEs)

C. availability sets

D. virtual machine scale sets

Answer: D