



# Microsoft

**AZ-304**

Microsoft Azure Architect Design  
**QUESTION & ANSWERS**

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## QUESTION 1

To meet the authentication requirements of Fabrikam, what should you include in the solution? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Minimum number of Azure AD tenants:

	▼
0	
1	
2	
3	
4	

Minimum number of custom domains to add:

	▼
0	
1	
2	
3	
4	

Minimum number of conditional access policies to create:

	▼
0	
1	
2	
3	
4	

DU

Minimum number of Azure AD tenants:

0
1
2
3
4

Minimum number of custom domains to add:

0
1
2
3
4

Minimum number of conditional access policies to create:

0
1
2
3
4

**Correct Answer:**

## QUESTION 2

Your company deploys an Azure App Service Web App.

During testing the application fails under load. The application cannot handle more than 100 concurrent user sessions.

You enable the Always On feature. You also configure auto-scaling to increase counts from two to 10

based on HTTP queue length.

You need to improve the performance of the application.

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

answer area.

NOTE: Each correct selection is worth one point.

References:

**Scenario**

**Solution**

Store content close to end users.

Azure Redis Cache
Azure Traffic Manager
Azure Content Delivery Network
Azure Application Gateway

Store content close to the application.

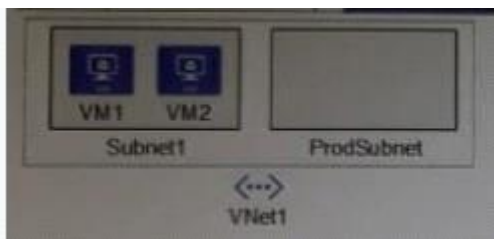
Azure Redis Cache
Azure Traffic Manager
Azure Content Delivery Network
Azure Application Gateway

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

**Correct Answer:**

### QUESTION 3

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 VM1. 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 service. The relevant API Management configuration is shown in the API exhibit. (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.	<input type="radio"/>	<input type="radio"/>
The APIM instance can access real-time data from VM1.	<input type="radio"/>	<input type="radio"/>
A VPN gateway is required for partner access.	<input type="radio"/>	<input type="radio"/>

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

**Correct Answer:**

#### QUESTION 4

You are designing an Azure resource deployment that will use Azure Resource Manager templates.

The

deployment will use Azure Key Vault to store secrets.

You need to recommend a solution to meet the following requirements:

Prevent the IT staff that will perform the deployment from retrieving the secrets directly from Key Vault.

Use the principle of least privilege.

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

NOTE: Each correct selection is worth one point.

- A. Create a Key Vault access policy that allows all get key permissions, get secret permissions, and get certificate permissions.
- B. From Access policies in Key Vault, enable access to the Azure Resource Manager for template deployment.
- C. Create a Key Vault access policy that allows all list key permissions, list secret permissions, and list certificate permissions.
- D. Assign the IT staff a custom role that includes the Microsoft.KeyVault/Vaults/Deploy/Action permission.
- E. Assign the Key Vault Contributor role to the IT staff.

**Correct Answer: B,D**

#### Explanation/Reference:

**B:** To access a key vault during template deployment, set `enabledForTemplateDeployment` on the key vault to `true`.

**D:** The user who deploys the template must have the `Microsoft.KeyVault/vaults/deploy/action` permission for the scope of the resource group and key vault.

Incorrect Answers:

**E:** To grant access to a user to manage key vaults, you assign a predefined key vault Contributor role to the user at a specific scope.

If a user has Contributor permissions to a key vault management plane, the user can grant themselves access to

the data plane by sending a Key Vault access policy. You should tightly control who has Contributor role

access to

your key vaults. Ensure that only authorized persons can access and manage your key vaults, keys, secrets, and certificates.

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/key-vault-parameter>

<https://docs.microsoft.com/en-us/azure/key-vault/general/overview-security>

## QUESTION 5

You are planning to deploy an application named App1 that will run in containers on Azure Kubernetes Service

(AKS) clusters. The AKS clusters will be distributed across four Azure regions.

You need to recommend a storage solution for App1. Updated container images must be replicated automatically

to all the AKS clusters.

Which storage solution should you recommend?

- A. Premium SKU Azure Container Registry
- B. Azure Content Delivery Network (CDN)
- C. geo-redundant storage (GRS) accounts
- D. Azure Cache for Redis

**Correct Answer: A**

### Explanation/Reference:

Enable geo-replication for container images.

Best practice: Store your container images in Azure Container Registry and geo-replicate the registry to each AKS

region.

To deploy and run your applications in AKS, you need a way to store and pull the container images.

Container

Registry integrates with AKS, so it can securely store your container images or Helm charts. Container Registry

supports multi-master geo-replication to automatically replicate your images to Azure regions around the world.

Geo-replication is a feature of Premium SKU container registries.

Note:

When you use Container Registry geo-replication to pull images from the same region, the results are:

Faster: You pull images from high-speed, low-latency network connections within the same Azure region.

More reliable: If a region is unavailable, your AKS cluster pulls the images from an available container registry.

Cheaper: There's no network egress charge between datacenters.

<https://docs.microsoft.com/en-us/azure/aks/operator-best-practices-multi-region>

## QUESTION 6

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

You plan to deploy multiple instances of an Azure web app across several Azure regions. You need to design an access solution for the app. The solution must meet the following replication requirements:

Support rate limiting.

Balance requests between all instances.

Ensure that users can access the app in the event of a regional outage.

Solution: You use Azure Traffic Manager to provide access to the app.

Does this meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

### Explanation/Reference:

Azure Traffic Manager is a DNS-based traffic load balancer. This service allows you to distribute traffic to your public-facing applications across the global Azure regions. Traffic Manager also provides your public endpoints with high availability and quick responsiveness. It does not provide rate limiting.

<https://docs.microsoft.com/en-us/azure/app-service/web-sites-traffic-manager>

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

## QUESTION 7

You have multiple Azure deployments.

You plan to implement Azure Blueprints.

Which artifact types can be added to a blueprint?

- A. Policy assignment Resource group, Role assignment virtual machines, and virtual networks only
- B. Subscriptions, tenants, Resource group, and Key vault only
- C. Subscriptions, tenants, Resource group, and Azure Active Directory only
- D. Azure Resource Manager template (Subscription), Policy assignment Resource group, and Role assignment only

**Correct Answer: D**

### QUESTION 8

You have an Azure Active Directory (Azure AD) tenant named Contoso.com. The tenant contains a group named

Group1. Group1 contains all the administrator user accounts.

You discover several login attempts to the Azure portal from countries administrator users do NOT work.

You need to ensure that all login attempts to the portal from those countries require Azure Multi-Factor Authentication (MFA).

Solution: Implement Azure AD Identity Protection for Group1.

Does this meet the goal?

- A. Yes
- B. No <https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/concept-identity-protectionpolicies> <https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/concept-conditional-accessconditions#sign-in-risk>

**Correct Answer: A**

### QUESTION 9

The developers at your company are building a static web app to support users sending text messages. The app

must meet the following requirements:

- \* Website latency must be consistent for users in different geographical regions.
- \* Users must be able to authenticate by using Twitter and Facebook.
- \* Code must include only HTML, native JavaScript and jQuery.
- \* Costs must be minimized.

Which Azure service should you use to complete the architecture? 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.

The screenshot shows the Azure portal interface for a drag-and-drop question. On the left, a 'Services' pane lists the following services: Azure App Service plan (Basic), Azure Content Delivery Network (CDN), Azure Front Door, Azure Functions, Azure Logic Apps, Azure SQL Database, and Azure virtual machine. On the right, an 'Answer Area' shows a diagram with three boxes: 'Serves website' (containing 'Service'), 'Hosts website' (containing 'Azure Storage'), and 'Sends SMS' (containing 'Service'). Arrows point from 'Hosts website' to 'Serves website' and from 'Hosts website' to 'Sends SMS'. A blue person icon is positioned to the left of the 'Serves website' box.



## Correct Answer:



## Explanation/Reference:

Explanaon:

<https://docs.microsoft.com/en-us/javascript/api/overview/azure/cdn?view=azure-node-latest#overview>

<https://www.codeproject.com/Arcles/1368337/Implementng-SMS-API-using-Azure-Serverless-Func>

## QUESTION 10

You need to recommend a solution for the collection of security logs the middle tier of the payment processing system.

What should you include in the recommendation?

- A. Azure Notification Hubs
  - B. the Azure Diagnostics agent
  - C. Azure Event Hubs
  - D. the Azure Log Analytics agent
- References: <https://docs.microsoft.com/en-us/azure/azuremonitor/platform/diagnostics-extension-overview>

## Correct Answer: D

## QUESTION 11

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

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

Which deployment option should you use?

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

**Correct Answer: D**

**Explanation/Reference:**

Explanation: <https://docs.microsoft.com/en-us/azure/azure-sql/database/service-er-business-critical>

**QUESTION 12**

You need to recommend a disaster recovery solution for the back-end tier of the payment processing system.

What should you include in the recommendation?

- A. Always On Failover Cluster Instances
  - B. active geo-replication
  - C. Azure Site Recovery
  - D. an auto-failover group
- References: <https://docs.microsoft.com/en-us/azure/sql-database/sql-database-autofailover-group>

**Correct Answer: D**

**QUESTION 13**

You are designing a solution for a stateless front-end application named Application I. Application I will be hosted

on two Azure virtual machines named VM1 and VM2.

You plan to load balance connections to VM1 and VM2 from the Internet by using one Azure load balancer.

You need to recommend the minimum number of required public IP addresses.

How many public IP addresses should you recommend using for each resource? To answer, select the appropriate

options in the answer area.

NOTE: Each correct selection is worth one point.

Load balancer:

0
1
2
3

VM1:

0
1
2
3

VM2:

0
1
2
3

Load balancer:

0
1
2
3

VM1:

0
1
2
3

VM2:

0
1
2
3

**Correct Answer:**

## QUESTION 14

You are designing an access policy for the sales department at your company. Occasionally, the developers at the company must stop, start, and restart Azure virtual machines. The development team changes often.

You need to recommend a solution to provide the developers with the required access to the virtual machines.

The solution must meet the following requirements:

Provide permissions only when needed.

Use the principle of least privilege.

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.

Azure Active Directory (Azure ID) license:

▼
Free
Basic
Premium P1
Premium P2

Security feature:

▼
Just in time VM access
A conditional access policy
Privileged Identity Management for the Azure resources

Security feature:

Azure Active Directory (Azure ID) license:

▼
Free
Basic
Premium P1
Premium P2

Security feature:

▼
Just in time VM access
A conditional access policy
Privileged Identity Management for the Azure resources

**Correct Answer:**

## QUESTION 15

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. Create network security groups (NSGs).
- B. Enable quotas.
- C. Strip the Powered-By response header.
- D. Enable rate limiting.

**Correct Answer: D**

## QUESTION 16

You need to recommend a solution for the data store of the historical transaction query system.

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.

Sizing requirements:

	▼
A table that has unlimited capacity	
A table that has a fixed capacity	
Multiple tables that have unlimited capacity	
Multiple tables that have fixed capacity	

Resiliency:

	▼
An additional read region	
An availability set	
An availability zone	

Sizing requirements:

	▼
A table that has unlimited capacity	
A table that has a fixed capacity	
Multiple tables that have unlimited capacity	
Multiple tables that have fixed capacity	

Resiliency:

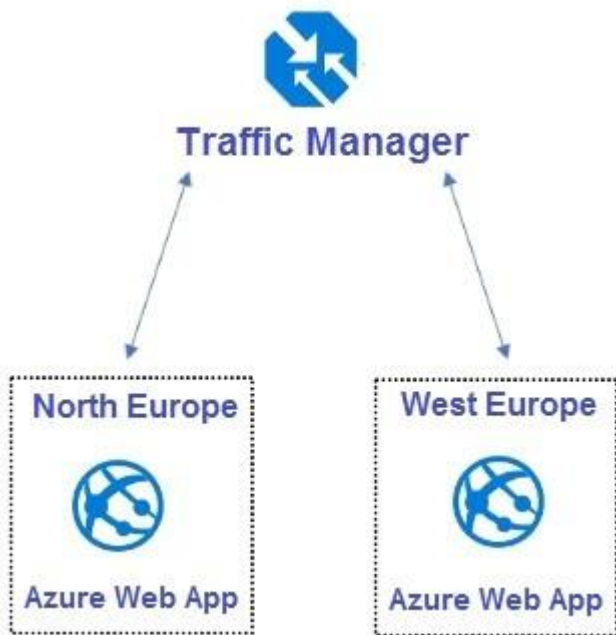
	▼
An additional read region	
An availability set	
An availability zone	

**Correct Answer:**

## QUESTION 17

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

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



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

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

**Correct Answer:**

### Explanation/Reference:

Explanaon:

[hps://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-overview](https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-overview)

[hps://blogs.msdn.microsoft.com/hsirtl/2017/07/03/autoscaling-azure-web-apps/](https://blogs.msdn.microsoft.com/hsirtl/2017/07/03/autoscaling-azure-web-apps/)

### QUESTION 18

Your company has the divisions shown in the following table.

You plan to deploy a custom applicaon to each subscripon. The applicaon will contain the following:

A resource group

An Azure web app

Custom role assignments

An Azure Cosmos DB account

You need to use Azure Blueprints to deploy the application to each subscription.

What is the minimum number of objects required to deploy the application? To answer, select the appropriate

options in the answer area.

NOTE: Each correct selection is worth one point.

Division	Azure subscription	Azure Active Directory (Azure AD) tenant
East	Sub1, Sub2	East.contoso.com
West	Sub3, Sub4	West.contoso.com

Management groups:  ▼

- 1
- 2
- 3
- 4

Blueprint definitions:  ▼

- 1
- 2
- 3
- 4

Blueprint assignments:  ▼

- 1
- 2
- 3
- 4

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Management groups:

1
2
3
4

Blueprint definitions:

1
2
3
4

Blueprint assignments:

1
2
3
4

**Correct Answer:**

### QUESTION 19

You need to recommend a solution for protecting the content of the payment processing system. What should you include in the recommendation?

- A. Transparent Data Encryption (TDE)
- B. Azure Storage Service Encryption
- C. Always Encrypted with randomized encryption
- D. Always Encrypted with deterministic encryption

**Correct Answer: D**

### QUESTION 20

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. automatic tuning
- B. Azure Advisor
- C. Azure Monitor
- D. Query Performance Insight

**Correct Answer: A**



## Explanation/Reference:

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

### QUESTION 21

A company named Contoso Ltd., has a single-domain Active Directory forest named contoso.com. Contoso is preparing to migrate all workloads to Azure. Contoso wants users to use single sign-on (SSO) when they access cloud-based services that integrate with Azure Active Directory (Azure AD). You need to identify any objects in Active Directory that will fail to synchronize to Azure AD due to formatting issues. The solution must minimize costs. What should you include in the solution?

- A. Azure Advisor
- B. Microsoft Office 365 IdFix
- C. Azure AD Connect Health
- D. Password Export Server version 3.1 (PES v3.1) in Active Directory Migration Tool (ADMT) <https://docs.microsoft.com/en-us/troubleshoot/azure/active-directory/objects-dont-sync-ad-sync-tool>

**Correct Answer: B**

### 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 have an Azure Storage account that contains two 1-GB data files named File1 and File2. The data files are set to use the archive access tier. You need to ensure that File1 is accessible immediately when a retrieval request is initiated. Solution: You add a new file share to the storage account. Does this meet the goal?

- A. Yes

B. No

**Correct Answer: B**

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