

 Custom View Settings

Question #67

Topic 4

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 Hyperscale
- B. Azure SQL Database Premium
- C. Azure SQL Database Basic
- D. Azure SQL Database Standard

Correct Answer: B*Community vote distribution*

B (88%)

13%

 **mVic**  1 year, 3 months ago**Selected Answer: B**

Premium should be the answer.

Whenever zone-redundancy (availability within the same region) is required you can only choose:

- General Purpose
- Premium
- Business Critical

See:

<https://learn.microsoft.com/en-GB/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>
upvoted 17 times **ServerBrain**  1 year, 3 months ago

Actually About 23 questions added today..

upvoted 6 times

 **[Removed]** 1 year, 3 months ago

Some look like they are duplicates

upvoted 3 times

👤 steel72 Most Recent 1 year, 1 month ago

Selected Answer: B

Correct answer is "Azure SQL Database Premium".

Basic and Standard do not support zone-redundancy:

<https://learn.microsoft.com/en-GB/azure/azure-sql/database/high-availability-sla>

upvoted 3 times

👤 zellck 1 year, 2 months ago

Same as Question 16.

<https://www.examtopics.com/discussions/microsoft/view/79423-exam-az-305-topic-2-question-16-discussion>

upvoted 1 times

👤 zellck 1 year, 2 months ago

Selected Answer: B

B is the answer.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview?view=azuresql#service-tiers>

The Premium service tier is designed for OLTP applications with high transaction rates and low latency I/O requirements. It offers the highest resilience to failures by using several isolated replicas.

upvoted 1 times

👤 VBK8579 1 year, 2 months ago

Selected Answer: B

B. Azure SQL Database Premium

upvoted 1 times

👤 OPT_001122 1 year, 3 months ago

Selected Answer: B

B. Azure SQL Database Premium

upvoted 1 times

👤 janvandermerwer 1 year, 3 months ago

Selected Answer: B

Premium for failover without data loss.

upvoted 1 times

👤 yeanlingmedal71 1 year, 3 months ago

Selected Answer: B

Azure SQL Database Premium tier supports multiple redundant replicas for each database that are automatically provisioned in the same datacenter within a region. This design leverages the SQL Server AlwaysON technology and provides resilience to server failures with 99.99% availability SLA and RPO=0.

With the introduction of Azure Availability Zones, we are happy to announce that SQL Database now offers built-in support of Availability Zone's Premium service tier.

<https://azure.microsoft.com/en-us/blog/azure-sql-database-now-offers-zone-redundant-premium-databases-and-elastic-pools/>

Zone-redundant configuration is not available in SQL Managed Instance. In SQL Database this feature is only available when the Gen5 hardware is selected.

<https://docs.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

upvoted 3 times

 **uacanillo** 1 year, 3 months ago

The deployment option that should be used to meet the requirements of a highly available Azure SQL database with minimal data loss and minimal cost is option D, Azure SQL Database Standard. This option provides active-passive failover capabilities and also allows for read-access to secondary replicas, which can help minimize costs. Additionally, it also provides zone-redundant databases, so in case of zone outage, the database will remain available.

upvoted 1 times

 **diego84** 1 year, 3 months ago

check this

Basic, Standard, and General Purpose service tier locally redundant availability.

However, General Purpose service tier zone redundant availability

<https://learn.microsoft.com/en-GB/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

upvoted 1 times

 **mscbslt** 1 year, 3 months ago

Selected Answer: D

Azure SQL database standard as we have to minimize costs:

Question #68

Topic 4

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 Bus
- B. Azure Data Lake
- C. Azure Traffic Manager
- D. Azure Blob Storage

Correct Answer: A

Community vote distribution

A (100%)

 **lombri** 1 year ago

Selected Answer: A

Azure Service Bus

because it is a messaging service that supports asynchronous communication between different components of an application.

It enables the exchange of messages using different protocols and message patterns, including XML messages.

It also supports features such as pub/sub messaging, message batching, and message ordering.

upvoted 2 times

 **zellck** 1 year, 2 months ago

Same as Question 82.

<https://www.examtopics.com/discussions/microsoft/view/99749-exam-az-305-topic-4-question-82-discussion>

upvoted 1 times

 **zellck** 1 year, 2 months ago

Selected Answer: A

A is the answer.

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview>

Azure Service Bus is a fully managed enterprise message broker with message queues and publish-subscribe topics (in a namespace). Service Bus is used to decouple applications and services from each other, providing the following benefits:

- Load-balancing work across competing workers
- Safely routing and transferring data and control across service and application boundaries
- Coordinating transactional work that requires a high-degree of reliability

upvoted 2 times

 **RouterWifi443** 1 year, 2 months ago

Selected Answer: A

Azure Service Bus

upvoted 1 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: A

Azure Service Bus

upvoted 1 times

 **VBK8579** 1 year, 3 months ago

Selected Answer: A

A is correct

upvoted 1 times

 **ZakySama** 1 year, 3 months ago

Selected Answer: A

Correct (Azure Service Bus or Azure Queue Storage)

upvoted 3 times

 **maku067** 1 year, 3 months ago

Question #69

Topic 4

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 Basic
- B. Azure SQL Managed Instance General Purpose

- C. Azure SQL Database Business Critical
- D. Azure SQL Managed Instance Business Critical

Correct Answer: C

Community vote distribution

C (76%)	B (22%)	2%
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 **zellick**  1 year, 2 months ago

Selected Answer: C

C is the answer.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview?view=azuresql#service-tiers>
The Business Critical service tier is designed for OLTP applications with high transaction rates and low latency I/O requirements. It offers the highest resilience to failures by using several isolated replicas.

upvoted 9 times

 **rishisoft1**  1 month, 2 weeks ago

C is the answer because Managed Instance SQL General Purpose is cheaper option but still zone redundancy is under preview. Here is Micro Document says "Zone redundancy for General Purpose service tier is currently in preview. "

upvoted 1 times

 **rumino** 1 month, 4 weeks ago

Selected Answer: B

SQL MI General Purpose is cheaper than SQL DB Business Critical
failover without data loss is guaranteed
DB remains available at zone outage, only performance can be degraded until the cache will fill

upvoted 2 times

 **rumino** 1 month, 4 weeks ago

<https://learn.microsoft.com/en-us/azure/azure-sql/managed-instance/high-availability-sla?view=azuresql-mi&preserve-view=true>
upvoted 2 times

 **SDewan** 2 months, 1 week ago

Selected Answer: C

For high availability/no data loss related question, the answer is either Business Critical (for vcore based) or Premium (for DTU based)
upvoted 1 times

 **OrangeSG** 6 months, 1 week ago

Selected Answer: C

B is wrong because Azure SQL Managed Instance General Purpose does not support Zone redundancy.

Reference

Migrate SQL Managed Instance to availability zone support

<https://learn.microsoft.com/en-us/azure/reliability/migrate-sql-managed-instance>

Prerequisites

To migrate to availability-zone support:

- Your instance must be running under Business Critical tier with the November 2022 feature wave update.
- Confirm that your instance is located in a supported region.
- Your instances must be running on standard-series (Gen5) hardware.

upvoted 3 times

 **Jools** 9 months ago

Selected Answer: C

C is the answer. Storage in the general purpose tier is LRS which is not resiliant in case of zone outage <https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql-db&viewFallbackFrom=azuresql-mi&tabs=azure-powershell>

upvoted 2 times

NotMeAnyWay 9 months, 3 weeks ago

Selected Answer: C

The best deployment option that meets all the requirements would be:

C. Azure SQL Database Business Critical

The Business Critical service tier is designed for applications that require low-latency responses and high transaction rates, and need the highest degree of resilience to failures. It supports multiple read-only replicas, and failover between replicas of the database occurs without any data loss. It is also designed to maintain availability in the event of a zone outage.

While Azure SQL Managed Instance Business Critical also provides high availability and zero data loss, it generally costs more than Azure SQL Database Business Critical. Therefore, to minimize costs as per your requirement, Azure SQL Database Business Critical would be a better choice.

Azure SQL Database Basic and Azure SQL Managed Instance General Purpose do not offer the same level of high availability and data resilience as the Business Critical options.

upvoted 2 times

lombri 1 year ago

Selected Answer: B

Option B (Azure SQL Managed Instance General Purpose)

best meets the stated requirements, as it supports automatic failover between replicas and ensures availability even in the event of a zone outage, at a lower cost than Option C, and D.

upvoted 2 times

lombri 1 year ago

D. Azure SQL Managed Instance Business Critical.

This option is designed for high availability and disaster recovery, with multiple replicas across different availability zones to ensure minimum data loss and downtime.

The Business Critical service tier

offers the highest resilience to failures and is specifically designed for OLTP applications with high transaction rates and low latency I/O requirements.

Option C, Azure SQL Database Business Critical, only offers replication within the same region and does not provide zone redundancy.

upvoted 1 times

alexander_panfilenok 10 months, 2 weeks ago

Azure SQL Database Business Critical does provide Zone Redundancy: <https://learn.microsoft.com/en-GB/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

upvoted 2 times

zellick 1 year, 2 months ago

Same as Question 84.

<https://www.examtopics.com/discussions/microsoft/view/99751-exam-az-305-topic-4-question-84-discussion>

upvoted 3 times

pkkalra 1 year, 2 months ago

Selected Answer: C

C. Azure SQL Database Business Critical

upvoted 3 times

_fvt 1 year, 2 months ago

Selected Answer: C

"Zone-redundant configuration is currently in preview for SQL Managed Instance, and only available for the Business Critical service tier." (<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>)

So any Managed Instance option should yet not be an acceptable answer.

upvoted 3 times

_fvt 1 year, 2 months ago

Also Azure SQL Database Basic doesn't offer zone redundant availability so it can only be answer C: "Azure SQL Database Business Critical"

upvoted 1 times

 **Lu5ck** 1 year, 2 months ago

Selected Answer: C

Hi guys,

Managed Instance General Purpose zone redundant feature is not available world wide yet therefore I don't think is a "safe" answer.

Therefore, it come down to C and D. Azure SQL Database Business Critical should be cheaper than Managed. I mean, managed is called managed for a reason even if you don't know the actual available specs. Upon googling, you will learn that Azure SQL Database Business Critical provide lower specs aka cheaper options than Managed.

upvoted 4 times

 **jingasloth** 1 year, 3 months ago

ChatGPT says C - Azure SQL Database Business Critical

upvoted 4 times

 **ITboy8** 1 year, 2 months ago

well, respect the chatGPT then. I will go with C

upvoted 1 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: B

B. Azure SQL Managed Instance General Purpose

upvoted 1 times

 **OPT_001122** 1 year, 3 months ago

this seems not to be the correct ans,

Same question73 has a different ans and it is highly voted

A. Azure SQL Database Business Critical

upvoted 1 times

 **Tralala182** 1 year, 3 months ago

Chatgpt answer is D

upvoted 2 times

 **tfulanchan** 1 year, 3 months ago

Selected Answer: C

Zone-redundant configuration is currently in preview for SQL Managed Instance, and only available for the Business Critical service tier.
<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell#general-purpose-service-tier-zone-redundant-availability>

upvoted 3 times

 **VBK8579** 1 year, 3 months ago

Selected Answer: C

Question #70

Topic 4

You have an Azure subscription.

You need to deploy an Azure Kubernetes Service (AKS) solution that will use Windows Server 2019 nodes. The solution must meet the following requirements:

- Minimize the time it takes to provision compute resources during scale-out operations.
- Support autoscaling of Windows Server containers.

Which scaling option should you recommend?

- A. horizontal pod autoscaler
- B. Virtual nodes
- C. Kubernetes version 1.20.2 or newer
- D. cluster autoscaler

Correct Answer: D

Community vote distribution

D (100%)

✉️  **maku067** Highly Voted 1 year, 3 months ago

Selected Answer: D

For me D.
cluster autoscaler - For Windows
virtual nodes - For Linux
upvoted 42 times

✉️  **ZakySama** 1 year, 3 months ago

Correct... Thank you
upvoted 2 times

✉️  **OPT_001122** 1 year, 3 months ago

good description to clear confusion
upvoted 4 times

✉️  **RouterWifi443** Most Recent 5 months, 1 week ago

Selected Answer: D

Given answer is correct
upvoted 1 times

✉️  **zellck** 1 year, 2 months ago

Selected Answer: D

D is the answer.

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

To keep up with application demands in Azure Kubernetes Service (AKS), you may need to adjust the number of nodes that run your workload. The cluster autoscaler component can watch for pods in your cluster that can't be scheduled because of resource constraints. When issues are detected, the number of nodes in a node pool is increased to meet the application demand. Nodes are also regularly checked for a lack of running pods, with the number of nodes then decreased as needed. This ability to automatically scale up or down the number of nodes in your AKS cluster lets you run an efficient, cost-effective cluster.

upvoted 4 times

✉️  **OPT_001122** 1 year, 3 months ago

Selected Answer: D

D. cluster autoscaler
upvoted 1 times

✉️  **tfulanchan** 1 year, 3 months ago

Virtual nodes are only supported with Linux pods and nodes.
<https://learn.microsoft.com/en-us/azure/aks/virtual-nodes>

upvoted 2 times

✉️  **lmy** 1 year, 3 months ago

same questions order has been changed.
upvoted 2 times

✉️  **shako** 1 year, 3 months ago

Selected Answer: D

as it's Windows nodes I go for D.
my notes :
Linux nodes autoscale: virtual nodes.
Windows nodes autoscale: cluster autoscaler.
upvoted 1 times

✉️  **Clarkszw** 1 year, 3 months ago

Selected Answer: D

Linux => Virtual nodes
Windows => cluster autoscale
upvoted 1 times

✉️ **ServerBrain** 1 year, 3 months ago
for a second, I thought answer should be B?
upvoted 1 times

✉️ **[Removed]** 1 year, 3 months ago
Look at question 28 in topic 4
upvoted 1 times

✉️ **[Removed]** 1 year, 3 months ago
Linux is virtual nodes, windows is cluster autoscaler??
upvoted 1 times

✉️ **maku067** 1 year, 3 months ago
For me D.
cluster autoscaler - For Windows
virtual nodes - For Linux
upvoted 1 times

Question #71

Topic 4

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 Application Gateway

Correct Answer: C

Community vote distribution

C (100%)

✉️ **Crossfader2208** 2 months ago
I think I'm now ready to answer to this correctly in the exam
upvoted 2 times

✉️ **lombri** 1 year ago

Selected Answer: C

Azure Service Bus in the recommendation as it provides reliable and scalable cloud messaging between the different cloud services in the application.
Same as question 68
upvoted 3 times

✉️ **Glob3r** 1 year, 1 month ago
Same as question 68
upvoted 1 times

 **zellck** 1 year, 2 months ago

Same as Question 82.

<https://www.examtopics.com/discussions/microsoft/view/99749-exam-az-305-topic-4-question-82-discussion>

upvoted 2 times

 **zellck** 1 year, 2 months ago

Selected Answer: C

C is the answer.

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview>

Azure Service Bus is a fully managed enterprise message broker with message queues and publish-subscribe topics (in a namespace). Service Bus is used to decouple applications and services from each other, providing the following benefits:

- Load-balancing work across competing workers
- Safely routing and transferring data and control across service and application boundaries
- Coordinating transactional work that requires a high-degree of reliability

upvoted 3 times

 **globby118** 1 year, 2 months ago

appeared in exam 02/15/2023

upvoted 4 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: C

C. Azure Service Bus

upvoted 1 times

 **VBK8579** 1 year, 3 months ago

Selected Answer: C

Answer C

upvoted 1 times

 **janvandermerwer** 1 year, 3 months ago

Selected Answer: C

C is the best answer by far.

upvoted 1 times

 **yanlingmedal71** 1 year, 3 months ago

Selected Answer: C

Asynchronous messaging options.

There are different types of messages and the entities that participate in a messaging infrastructure. Based on the requirements of each message type, Microsoft recommends Azure messaging services. The options include Azure Service Bus, Event Grid, and Event Hubs.

Azure Service Bus queues are well suited for transferring commands from producers to consumers.

Data is transferred between different applications and services using messages. A message is a container decorated with metadata, and contains data. The data can be any kind of information, including structured data encoded with the common formats such as the following on JSON, XML, Apache Avro, Plain Text.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/guide/technology-choices/messaging>

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview>

upvoted 1 times

 **maku067** 1 year, 3 months ago

Selected Answer: C

seems correct.

upvoted 1 times

 **ServerBrain** 1 year, 3 months ago

Selected Answer: C

C, all day..

upvoted 1 times

Your company has offices in North America and Europe.

You plan to migrate to Azure.

You need to recommend a networking solution for the new Azure infrastructure. The solution must meet the following requirements:

- The Point-to-Site (P2S) VPN connections of mobile users must connect automatically to the closest Azure region.
- The offices in each region must connect to their local Azure region by using an ExpressRoute circuit.
- Transitive routing between virtual networks and on-premises networks must be supported.
- The network traffic between virtual networks must be filtered by using FQDNs.

What should you include in the recommendation?

- A. Azure Virtual WAN with a secured virtual hub
- B. virtual network peering and application security groups
- C. virtual network gateways and network security groups (NSGs)
- D. Azure Route Server and Azure Network Function Manager

Correct Answer: C

Community vote distribution

A (93%)

5%

✉️  **SilverFox22**  1 year, 3 months ago

Selected Answer: A

The Virtual WAN meets the first 3 requirements, and the secured virtual hub has the Azure Firewall Manager, which can do the FQDN filtering.
<https://learn.microsoft.com/en-us/azure/firewall-manager/secured-virtual-hub> <https://learn.microsoft.com/en-us/azure/firewall/fqdn-filtering-network-rules>

upvoted 23 times

✉️  **steel72** 1 year, 1 month ago

And NSG does not support FQDN filtering.

Source or destination: Any, or an individual IP address, classless inter-domain routing (CIDR) block (10.0.0.0/24, for example), service tag, application security group.

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

upvoted 2 times

 **lombri** Highly Voted 1 year ago

Selected Answer: A

Option A, Azure Virtual WAN with a secured virtual hub, is the best recommendation for this scenario as it allows for automatic connection of mobile users to the closest Azure region, connection of offices to their local Azure region via ExpressRoute circuits, support for transitive routing, and filtering of network traffic between virtual networks by using FQDNs.

Option B, virtual network peering and application security groups, does not provide automatic connection of mobile users to the closest Azure region or support for transitive routing.

Option C, virtual network gateways and network security groups (NSGs), does not provide automatic connection of mobile users to the closest Azure region or support for transitive routing, and filtering network traffic between virtual networks by using FQDNs is more challenging.

Option D, Azure Route Server and Azure Network Function Manager, does not provide automatic connection of mobile users to the closest Azure region or support for filtering network traffic between virtual networks by using FQDNs.

upvoted 9 times

 **Lazylinux** Most Recent 1 week, 3 days ago

Selected Answer: A

I would say A is correct and as per below

Virtual WAN: It represents the virtual overlay of the Azure Virtual Network and other Resources. It is a networking service that brings many networking, security, and routing functionalities together to provide a single operational interface.

HUB: You create a virtual hub in the Virtual WAN Resources. This is Microsoft Managed virtual network. You connect the various endpoints to HUB – Azure virtual Network, Site-to-Site

Some of the main features include: Remember there are two service tiers, Basic and STD

Basic:

ONLY S2S VPN

upvoted 1 times

 **Lazylinux** 1 week, 3 days ago

Following up

STD as per below

Branch connectivity (via connectivity automation from Virtual WAN Partner devices such as SD-WAN or VPN CPE).

Site-to-site VPN connectivity.

Remote user VPN connectivity (point-to-site).

Private connectivity (ExpressRoute).

Intra-cloud connectivity (transitive connectivity for virtual networks).

VPN ExpressRoute inter-connectivity.

Routing, Azure Firewall, and encryption for private connectivity.

upvoted 1 times

 **Leocan** 7 months, 3 weeks ago

Selected Answer: A

Azure Virtual WAN

upvoted 2 times

 **NotMeAnyWay** 9 months, 3 weeks ago

Selected Answer: A

The recommendation that meets the requirements specified would be:

A. Azure Virtual WAN with a secured virtual hub

Azure Virtual WAN allows for transitive routing between virtual networks and on-premises networks, and the automatic connection to the closest Azure region for Point-to-Site (P2S) VPN connections.

The offices in each region can connect to their local Azure region using ExpressRoute circuits that can be integrated into the Virtual WAN.

A Secured Virtual Hub is an Azure Virtual WAN Hub with associated security and routing policies. It is a Microsoft-managed resource that lets easily create hub-and-spoke architectures. When security and routing policies are associated with such a hub, it is referred to as a Secured Virtual Hub.

The Secured Virtual Hub allows for Azure Firewall, which can filter the network traffic between virtual networks using Fully Qualified Domain Names (FQDNs).

upvoted 4 times

 **Dean208** 1 year, 1 month ago

Selected Answer: A

Virtual WAN

upvoted 1 times

 **zellick** 1 year, 2 months ago

Selected Answer: A

A is the answer.

<https://learn.microsoft.com/en-us/azure/firewall-manager/secured-virtual-hub>

A secured virtual hub is an Azure Virtual WAN Hub with associated security and routing policies configured by Azure Firewall Manager. Use secured virtual hubs to easily create hub-and-spoke and transitive architectures with native security services for traffic governance and protection.

You can use a secured virtual hub to filter traffic between virtual networks (V2V), virtual networks and branch offices (B2V) and traffic to the Internet (B2I/V2I).

upvoted 4 times

 **Srirupam** 1 year, 2 months ago

Selected Answer: A

Correct Answer A

upvoted 1 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: A

A. Azure Virtual WAN with a secured virtual hub

upvoted 3 times

 **VBK8579** 1 year, 3 months ago

Selected Answer: A

A. Azure Virtual WAN with a secured virtual hub.

upvoted 1 times

 **tfulanchan** 1 year, 3 months ago

Not sure if this is relevant:

Virtual Networks connected to the Secure Virtual Hub can send traffic to public, destinations on the Internet, using the Secure Hub as a central point of Internet access.

This traffic can be filtered locally using Azure Firewall FQDN rules, or sent to a third-party security service for inspection.

<https://learn.microsoft.com/en-us/azure/virtual-wan/migrate-from-hub-spoke-topology#path-7>

upvoted 1 times

 **Kay04** 1 year, 3 months ago

Selected Answer: A

Only A can filter by FQDN

upvoted 1 times

 **[Removed]** 1 year, 3 months ago

Selected Answer: A

A is correct

upvoted 1 times

 **mercuryit** 1 year, 3 months ago

Selected Answer: A

B & C incorrect: they work at 4th network level

Request is for FQDN filtering

upvoted 1 times

 **Mltytskr** 1 year, 3 months ago

Selected Answer: A

According to <https://learn.microsoft.com/en-us/azure/architecture/networking/hub-spoke-vwan-architecture#architecture>, which shako share, think the answer needs to be A. This supports requirement 1 & 2 (P2S/ExpressRoute) per "Standard Virtual WAN supports any-to-any connectivity (Site-to-Site VPN, VNet, ExpressRoute, Point-to-site endpoints) in a single hub as well as across hubs." Requirement 2 "Virtual network peering is a nontransitive relationship between two virtual networks. While using Azure Virtual WAN, virtual network peering is managed by Microsoft. Each connection added to a hub will also configure virtual network peering. With the help of Virtual WAN, all spokes will have a transitive relationship." Finally, requirement 4, "A virtual hub can be created as a secured virtual hub or converted to a secure one anytime after creation. For additional information, see Secure your virtual hub using Azure Firewall Manager." Azure Firewall Manager will allow the FQDN filtering.

upvoted 2 times

 **Mltytskr** 1 year, 3 months ago

EDIT: the Virtual network peering is actually requirement 3, sorry.

upvoted 1 times

 **mVic** 1 year, 3 months ago

Selected Answer: B

B should be the right one to include FQDN filtering requirement

upvoted 1 times

 **mVic** 1 year, 3 months ago

I think Mltytskr and SilverFox are right, and the answer is A.

upvoted 1 times

 **shako** 1 year, 3 months ago

Selected Answer: B

for connection transitivity and security, I go for B.

IMO the case study stick with this architecture: <https://learn.microsoft.com/en-us/azure/architecture/networking/hub-spoke-vwan-architecture#architecture>

upvoted 2 times

 **Mltytskr** 1 year, 3 months ago

Based on the link you shared, why would the answer not be A - Virtual WAN hub? In the link, it states: "Standard Virtual WANs are by default connected in a full mesh. Standard Virtual WAN supports any-to-any connectivity (Site-to-Site VPN, VNet, ExpressRoute, Point-to-site endpoints) in a single hub as well as across hubs." That seems to meet the different connection requirements listed. Additionally, you state - virtual network peering, and in the same article, it states: "Virtual network peering is a nontransitive relationship between two virtual networks," and the requirement says transitive, so I'm not sure B is correct.

upvoted 1 times

 **Darkeh** 8 months, 3 weeks ago

My ist, your shako

upvoted 1 times

Question #73

Topic 4

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 Managed Instance Business Critical
- C. Azure SQL Database Standard

D. Azure SQL Managed Instance General Purpose

Correct Answer: A

Community vote distribution

A (88%)

12%

 **Lazylinux** 1 week, 3 days ago

Selected Answer: A

A is correct

Business Critical (Highest availability and performance): Offers business applications the highest resilience to failures by using several high availability secondary replicas, and provides the highest I/O performance. The Business Critical service tier is designed for applications that require low-latency responses from the underlying SSD storage (1-2 ms in average), faster recovery if the underlying infrastructure fails, or need to off-load reports, analytics, and read-only queries to the free of charge readable secondary replica of the primary database.

Availability => Three replicas, one read-scale replica and zone-redundant high availability (HA)

upvoted 1 times

 **OrangeSG** 6 months, 1 week ago

Selected Answer: A

C is wrong option because Azure SQL Database Standard do not have Zone-redundant availability.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell#zone-redundant-availability>

Zone-redundant availability is available to databases in the General Purpose, Premium, Business Critical and Hyperscale service tiers of the vCore purchasing model, and not the Basic and Standard service tiers of the DTU-based purchasing model. Zone-redundant availability ensures Recovery Point Objective (RPO) which indicates the amount of data loss is zero.

upvoted 2 times

 **zellick** 1 year, 2 months ago

Same as Question 84.

<https://www.examtopics.com/discussions/microsoft/view/99751-exam-az-305-topic-4-question-84-discussion>

upvoted 3 times

 **zellick** 1 year, 2 months ago

Selected Answer: A

A is the answer.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview?view=azuresql#service-tiers>

The Business Critical service tier is designed for OLTP applications with high transaction rates and low latency I/O requirements. It offers the highest resilience to failures by using several isolated replicas.

upvoted 4 times

 **zellick** 1 year, 2 months ago

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell#premium-and-business-critical-service-tier-zone-redundant-availability>

By default, the cluster of nodes for the premium availability model is created in the same datacenter. With the introduction of Azure Availability Zones, SQL Database can place different replicas of the Business Critical database to different availability zones in the same region. To eliminate a single point of failure, the control ring is also duplicated across multiple zones as three gateway rings (GW). The routing to a specific gateway ring is controlled by Azure Traffic Manager (ATM). Because the zone-redundant configuration in the Premium or Business Critical service tiers doesn't create additional database redundancy, you can enable it at no extra cost. By selecting a zone-redundant configuration, you can make your Premium or Business Critical databases resilient to a much larger set of failures, including catastrophic datacenter outages, without any changes to the application logic.

upvoted 1 times

 **CloudK** 1 year, 2 months ago

Selected Answer: A

From: <https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

Zone-redundant configuration is currently in preview for SQL Managed Instance, and ONLY available for the Business Critical service tier. I think that for a production service it is correct to use a service that is not in preview, so the correct answer should be "A"

upvoted 1 times

 **Mangocurry** 1 year, 2 months ago

Selected Answer: C

I think this should be C, General Purpose with ZRS.

upvoted 2 times

 **Mangocurry** 1 year, 2 months ago

Actually this is wrong. Standard falls under DTU based purchasing model and does not support ZRS. Standard != General Purpose

upvoted 2 times

 **zellck** 1 year, 2 months ago

Azure SQL DB Standard tier only supports LRS.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell#basic-standard-a-general-purpose-service-tier-locally-redundant-availability>

upvoted 1 times

 **clueless888** 1 year, 2 months ago

From what I have read GeneralPurpose(aka Standard) supports ZRS

There are three architectural models that are used in Azure SQL Database:

- General Purpose/Standard
- Business Critical/Premium
- Hyperscale

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

upvoted 4 times

 **Lu5ck** 1 year, 2 months ago

MI GP does not available world wide yet thus the safest choice is as stated.

upvoted 1 times

 **yeanlingmedal71** 1 year, 3 months ago

Selected Answer: A

Duplicate

upvoted 2 times

 **RandomNickname** 1 year, 3 months ago

Selected Answer: A

For no data-loss and as per mVic A is correct.

upvoted 1 times

 **mVic** 1 year, 3 months ago

Selected Answer: A

for these questions where zone-redundancy is required, there are only these options:

- General Purpose
- Premium
- Business Critical

<https://learn.microsoft.com/en-GB/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

upvoted 2 times

 **ServerBrain** 1 year, 3 months ago

Selected Answer: A

Correct, In the absence of Azure SQL Database Premium

upvoted 2 times

Question #74

Topic 4

You are designing a point of sale (POS) solution that will be deployed across multiple locations and will use an Azure Databricks workspace in the Standard tier. The solution will include multiple apps deployed to the on-premises network of each location.

You need to configure the authentication method that will be used by the app to access the workspace. The solution must minimize the

administrative effort associated with staff turnover and credential management.

What should you configure?

- A. a managed identity
- B. a service principal
- C. a personal access token

Correct Answer: B

Community vote distribution

B (86%)

14%

✉  **uettidam**  1 year, 3 months ago

Selected Answer: B

response is B

reason: MID can be used only between Azure resources, here we have on-prem application communicating to Azure resources, then you need a service principal

upvoted 34 times

✉  **[Removed]** 1 year, 3 months ago

A managed identity is a type of service principal.

upvoted 1 times

✉  **[Removed]** 1 year, 3 months ago

Correction. A service principal is one of two types of managed identities fam

upvoted 5 times

✉  **VBK8579**  1 year, 2 months ago

Selected Answer: B

A managed identity can provide authentication for Azure resources, but it cannot provide authentication for on-premises resources. In the case of an on-premises network, you would typically use a service principal or a personal access token for authentication.

upvoted 16 times

✉  **Lazylinux**  1 week, 3 days ago

Selected Answer: B

I would go for B here is why, the key word in the questions is the following

You need to configure the authentication method that will be used by the app to access the workspace. Service App is used by the App and for the App but managed identity in this case is created for the workspace (AZ resource) and used by the App hence not what is required.

*a service principal is "...An application whose tokens can be used to authenticate and grant access to specific Azure resources from a user-service or automation tool, when an organization is using Azure Active Directory..."

upvoted 2 times

✉  **Lazylinux** 1 week, 3 days ago

Following on =>

*Managed Identities are in essence 100% identical in functionality and use case than Service Principals. In fact, they are actually Service Principals.

What makes them different though, is: – They are always linked to an Azure Resource, not to an application or 3rd party connector – They are automatically created for you, including the credentials; big benefit here is that no one knows the credentials

upvoted 1 times

✉  **868Wolf** 1 week ago

thank you for explaining.

upvoted 1 times

✉  **quaternion** 9 months, 2 weeks ago

Selected Answer: B

Service Principal must be used for accessing on-prem apps to Azure resources. (MI is for within Azure resources).

upvoted 3 times

 **NotMeAnyWay** 9 months, 3 weeks ago

Selected Answer: B

If the POS system is on-premises and not on Azure, then you cannot use Azure Managed Identity because Managed Identity is only applicable for resources that reside within Azure.

B. a service principal

A service principal is an identity created for use with applications, hosted services, and automated tools to access Azure resources. This access is restricted by the roles assigned to the service principal, giving you control over which resources can be accessed and at what level. For security reasons, it's always recommended to use service principals with automated tools rather than allowing them to log in with a user identity.

You can create a service principal for the application and grant it just enough permissions to perform the operations it needs. This way, you can manage application credentials and permissions in a centralized way, which helps reduce administrative effort associated with staff turnover and credential management.

upvoted 3 times

 **sjb666** 12 months ago

Selected Answer: B

Service principle, since we're connecting a third party app with AAD. See <https://devblogs.microsoft.com/devops/demystifying-service-principals-managed-identities/>

upvoted 2 times

 **lombri** 1 year ago

Selected Answer: A

A managed identity

Is a service principal that is automatically managed by Azure and provides an easier and more secure way to authenticate applications and services to access Azure resources.

It reduces the administrative effort associated with credential management and provides seamless access to the Azure resources.

With managed identity, you do not have to store any secrets or credentials in the application code or configuration.

upvoted 1 times

 **lombri** 1 year ago

my mistake

service principal is the right one

authentication method for accessing an Azure Databricks workspace from an application deployed on-premises. A service principal provides an identity for the application and enables the application to authenticate with Azure Databricks without requiring user credentials. This approach reduces the administrative effort associated with managing user credentials and simplifies the process of granting and revoking access to the workspace.

upvoted 3 times

 **EXzw** 1 year, 1 month ago

Selected Answer: A

From GPT

Managed identities are a feature of Azure Active Directory (Azure AD) and are primarily designed for use with Azure services. However, you can leverage managed identities for on-premises applications by using Azure AD Application Proxy or Hybrid Connections. This way, the on-prem application can authenticate with Azure services using the managed identity.

Here's a high-level overview of how you can achieve this:

Configure Azure AD Application Proxy or Hybrid Connections to securely expose the on-premises application to the internet.

Register the on-premises application in Azure AD and enable a managed identity for the app.

Assign the appropriate roles and permissions to the managed identity for accessing the required Azure resources, such as the Azure Databricks workspace.

Update the on-premises application to use the managed identity to authenticate with Azure services.

upvoted 1 times

 **BShelat** 4 months, 3 weeks ago

"the solution must minimize the administrative effort associated with staff turnover and credential management." is also need to be considered
Less administrative effort

upvoted 1 times

 **EXzw** 1 year, 1 month ago

Continued....

Please note that this approach adds some complexity and requires additional configuration. However, it allows you to take advantage of managed identities for your on-premises applications, thus minimizing administrative effort associated with staff turnover and credential management.

upvoted 1 times

 **Jamesat** 1 year, 2 months ago

Service Principal as Managed Identity can't be used for On-Premises workloads.

upvoted 1 times

 **cp2323** 1 year, 2 months ago

Selected Answer: B

its onsite app authentication hence it should be Service Principal

upvoted 1 times

 **zellick** 1 year, 2 months ago

Selected Answer: B

B is the answer.

<https://learn.microsoft.com/en-us/azure/databricks/administration-guide/users-groups/service-principals#what-is-a-service-principal>

A service principal is an identity that you create in Azure Databricks for use with automated tools, jobs, and applications. Service principals give automated tools and scripts API-only access to Azure Databricks resources, providing greater security than using users or groups. It also prevents jobs and automations from failing if a user leaves your organization or a group is modified.

upvoted 9 times

 **Eusouzati** 1 year, 2 months ago

Selected Answer: B

B - A Service Principal

upvoted 2 times

 **OPT_001122** 1 year, 2 months ago

Selected Answer: B

on-premises = Service Principle

upvoted 3 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: B

B. a service principal

upvoted 2 times

- ✉️ **VBK8579** 1 year, 3 months ago
A. a managed identity per ChatGPT
upvoted 3 times
- ✉️ **alphajit** 1 year, 2 months ago
ChatGPT is not always right. You should always check for correctness
upvoted 1 times
- ✉️ **VBK8579** 1 year, 2 months ago
Wrong Answer.
Answer is B. a service principal
Because A managed identity can provide authentication for Azure resources, but it cannot provide authentication for on-premises resources.
In the case of an on-premises network, you would typically use a service principal or a personal access token for authentication.
upvoted 1 times
- ✉️ **ed79** 1 year, 3 months ago
Azure Databricks doesn't support use of Managed Identity only Service Principals
upvoted 1 times
- ✉️ **kmk_01** 1 year, 3 months ago
Wrong, Azure Databricks supports system-assigned managed identities not user-assigned. <https://learn.microsoft.com/en-us/azure/databricks/data-governance/unity-catalog/azure-managed-identities#--configure-a-managed-identity-for-unity-catalog>. However the answer for this question is Service Principal.
upvoted 2 times
- ✉️ **diego84** 1 year, 3 months ago
Selected Answer: B
as
The solution will include multiple apps deployed to the on-premises network of each location. You need to configure the authentication method that will be used by the app to access the workspace.
app->on-prem-> service principal-> auth Azure
upvoted 2 times

You have two Azure AD tenants named contoso.com and fabrikam.com. Each tenant is linked to 50 Azure subscriptions. Contoso.com contains two users named User1 and User2.

You need to meet the following requirements:

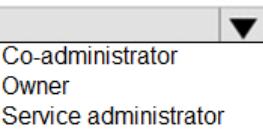
- Ensure that User1 can change the Azure AD tenant linked to specific Azure subscriptions.
- If an Azure subscription is liked to a new Azure AD tenant, and no available Azure AD accounts have full subscription-level permissions to the subscription, elevate the access of User2 to the subscription.

The solution must use the principle of least privilege.

Which role should you assign to each user? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

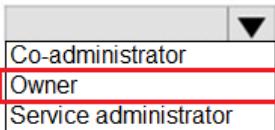
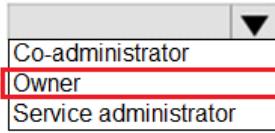
User1: 

Co-administrator
Owner
Service administrator

User2: 

Co-administrator
Owner
Service administrator

Answer Area

Correct Answer: 


User1:
Co-administrator
Owner
Service administrator

User2:
Co-administrator
Owner
Service administrator

 **zellck**  1 year, 2 months ago

1. Owner
2. Owner

<https://learn.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-how-subscriptions-associated-directory#before-you-begin>

Before you can associate or add your subscription, do the following steps:

- Sign in using an account that: Has an Owner role assignment for the subscription.

upvoted 16 times

👤 NotMeAnyWay Highly Voted 10 months ago

User1: b. Owner
User2: b. Owner

For User1 who needs to change the Azure AD tenant linked to specific Azure subscriptions, they need to be assigned the role of "Owner". This because to change the Azure AD tenant linked to a subscription, the user must have enough permissions, which are available at the Owner level.

For User2 who needs to have the access elevated to the subscription if no available Azure AD accounts have full subscription-level permissions to the subscription, they need to be assigned the "Owner" role as well. This role provides full access to all resources, including the right to delegate access to others. In this scenario, the "Owner" role would allow User2 to gain access to the subscription in the absence of any other account with full permissions.

upvoted 10 times

👤 Lazylinux Most Recent 1 week, 3 days ago

Given answer is correct, Owner-Owner or Global admin but GA is not part of the solution
upvoted 1 times

👤 randy0077 5 months, 3 weeks ago

owner owner is correct answer.
upvoted 1 times

👤 MichaelMelb 6 months, 1 week ago

User1: Service Admin
Service Admin fits to all the requirements whereas Owner has more than required permissions
"By default, for a new subscription, the Account Administrator is also the Service Administrator.
The Service Administrator has the equivalent access of a user who is assigned the Owner role at the subscription scope.
The Service Administrator has full access to the Azure portal."
<https://learn.microsoft.com/en-us/azure/role-based-access-control/rbac-and-directory-admin-roles>

User2: Owner
upvoted 1 times

👤 Trillionairejeffe 10 months, 1 week ago

1.Service administrator
2.Co-administrator
reference : <https://learn.microsoft.com/en-us/azure/role-based-access-control/rbac-and-directory-admin-roles#classic-subscription-administrator-roles>
upvoted 1 times

👤 sawanti 8 months, 2 weeks ago

Both roles are LEGACY roles. Do you really believe that Microsoft is proposing something that it takes them years to retire? Both roles will be retired on August 31, 2024 (<https://learn.microsoft.com/en-us/azure/role-based-access-control/rbac-and-directory-admin-roles>)
upvoted 2 times

👤 betterthanlife 11 months, 4 weeks ago

- Co-Administrator "can't change the association of subs to Azure AD directories so it's out.
- Given that the tenants & some subs exist then, & since we live in the real world (as strange as it's become) & there's no mention otherwise, & given the options we can presume User 1 to have the Service Administrator role, which provides full access to the Azure portal.
- Given "elevate the access" is a requirement for User, the only deduction in this whole madness of stupidity mess possible is Owner.
<https://learn.microsoft.com/en-us/azure/role-based-access-control/rbac-and-directory-admin-roles>

upvoted 1 times

👤 cclearn 1 year, 2 months ago

Service Administrator and Co-Administrator are classic subscription roles that have the equivalent access of a user who is assigned the Owner role at the subscription scope. The answer for both is Owner.
<https://learn.microsoft.com/en-us/azure/role-based-access-control/rbac-and-directory-admin-roles>

upvoted 1 times

👤 VBK8579 1 year, 2 months ago

Owner
Owner
upvoted 2 times

👤 RandomNickname 1 year, 3 months ago

Based on the requirements in the question given answer looks correct to me.
upvoted 1 times

OPT_001122 1 year, 3 months ago

Owner

Owner

upvoted 1 times

upwork 1 year, 3 months ago

From ChatGPT:

An Azure AD Service Administrator role is designed to manage user, groups and other resources within an Azure AD tenant. While they can manage the users and groups, they don't have the permission to move a subscription from one tenant to another.

To move a subscription from one tenant to another, you need to have the "Subscription Owner" or "Global Administrator" role within the Azure tenant to which you want to move the subscription.

So I think the answer should be "Owner" x 2

upvoted 8 times

upwork 1 year, 3 months ago

Not sure about the GPT answer, but I find this link useful <https://learn.microsoft.com/en-us/azure/role-based-access-control/classic-administrators>

It suggests the answer would be the Service Admin and the Co-Admin in the old-school days, but today perhaps we should rely on the Owner's role.

upvoted 1 times

sawanti 8 months, 2 weeks ago

Both Service Administrator and Co-something are legacy roles and will be retired, hence Microsoft will NEVER intentionally mark them as correct answer. Owner is the only valid answer

upvoted 2 times

tfulanchan 1 year, 3 months ago

There are only four "Azure roles", and "Owner" is the only "role" in the answers, the other two are "Classic subscription administrator". The Service Administrator and Co-Administrators are assigned the Owner role at the subscription scope.

<https://learn.microsoft.com/en-us/azure/role-based-access-control/rbac-and-directory-admin-roles#azure-roles>

upvoted 2 times

LeeVee 1 year, 3 months ago

Service Administrator and Co-Administrator were a classic subscription role. These two Roles equivalent is current role assignment is Owner. So I think answer is correct. you don't want to use classic RBAC as Microsoft will move away on this classic roles in the future. do future proofing bit on this.

upvoted 1 times

Mo22 1 year, 3 months ago

The answer is correct to me:

<https://learn.microsoft.com/en-us/azure/active-directory/fundamentals/active-directory-how-subscriptions-associated-directory>

upvoted 1 times

Kernely5 1 year, 3 months ago

They are talking about role

Owner : The Service Administrator and Co-Administrators are assigned the Owner role at the subscription scope

Applies to all resource types.

upvoted 1 times

maku067 1 year, 3 months ago

Why 2x "Owner"?

upvoted 1 times

Question #76

Topic 4

Your company has the divisions shown in the following table.

Division	Azure subscription	Azure AD tenant
East	Sub1	Contoso.com
West	Sub2	Fabrikam.com

Sub1 contains an Azure App Service web app named App1. App1 uses Azure AD for single-tenant user authentication. Users from contoso.com can authenticate to App1.

You need to recommend a solution to enable users in the fabrikam.com tenant to authenticate to App1.

What should you recommend?

- A. Configure a Conditional Access policy.
- B. Use Azure AD entitlement management to govern external users.
- C. Configure the Azure AD provisioning service.
- D. Configure Azure AD Identity Protection.

Correct Answer: C

Community vote distribution

B (100%)

 **yonie**  1 year ago

Selected Answer: B

There are 10 variations of this question. In each question there are two possible answers. Either its
- Use Azure AD entitlement management to govern external users

Or

- Configure Supported account types in the application registration and update the sign-in endpoint
These two answers are never offered together in the same question.

upvoted 39 times

 **zellick** Highly Voted 1 year, 2 months ago

Selected Answer: B

B is the answer.

<https://learn.microsoft.com/en-us/azure/active-directory/governance/entitlement-management-overview#what-can-i-do-with-entitlement-management>

Here are some of capabilities of entitlement management:

- Select connected organizations whose users can request access. When a user who isn't yet in your directory requests access, and is approved they're automatically invited into your directory and assigned access. When their access expires, if they have no other access package assignments, their B2B account in your directory can be automatically removed.

upvoted 9 times

 **Lazylinux** Most Recent 1 week, 3 days ago

Selected Answer: B

B is correct

*Managed Identities are in essence 100% identical in functionality and use case than Service Principals. In fact, they are actually Service Principals.

What makes them different though, is: – They are always linked to an Azure Resource, not to an application or 3rd party connector – They are automatically created for you, including the credentials; big benefit here is that no one knows the credentials

upvoted 1 times

 **Lazylinux** 1 week, 3 days ago

oppps wrong typo for another answer..

Entitlement management uses Microsoft Entra business-to-business (B2B) to share access so you can collaborate with people outside your organization. With Microsoft Entra B2B, external users authenticate to their home directory, but have a representation in your directory. This representation in your directory enables the user to be assigned access to your resources.

upvoted 1 times

 **paulseatonsmith** 5 months, 3 weeks ago

If anyone gets this wrong in the exam there's no hope for them!

upvoted 3 times

 **joesatriani** 7 months, 1 week ago

Selected Answer: B

B is right answer. This is pattern.

upvoted 1 times

 **Ario** 10 months ago

Selected Answer: B

Yes B is correct here

upvoted 1 times

 **NotMeAnyWay** 10 months ago

Selected Answer: B

B. Use Azure AD entitlement management to govern external users.

Explanation:

Azure AD entitlement management is an identity governance feature that enables organizations to manage identity and access lifecycle at scale by automating access request workflows, access assignments, reviews, and expiration. In the context of the question, it can be used to enable users from the fabrikam.com tenant to authenticate to App1.

Options A, C and D are not suitable for enabling users from another tenant to authenticate to App1.

upvoted 3 times

 **NotMeAnyWay** 9 months, 3 weeks ago

You would create an access package in the contoso.com tenant and grant access for the fabrikam.com users. These users will then be able to authenticate to App1 in the contoso.com tenant.

upvoted 1 times

 **JohnPhan** 1 year, 1 month ago

Selected Answer: B

B. Use Azure AD entitlement management to govern external users.

upvoted 2 times

 **zellick** 1 year, 2 months ago

Same as Question 38.

<https://www.examtopics.com/discussions/microsoft/view/93994-exam-az-305-topic-1-question-38-discussion>

upvoted 2 times

 **VBK8579** 1 year, 2 months ago

Selected Answer: B

B. Use Azure AD entitlement management to govern external users.

upvoted 1 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: B

B. Use Azure AD entitlement management to govern external users.

upvoted 1 times

 **Mo22** 1 year, 3 months ago

Selected Answer: B

Agreed that B is the correct answer:

<https://learn.microsoft.com/en-us/azure/active-directory/governance/entitlement-management-external-users>

Keep in mind if we wanted to allow the App to be accessible to our AZ AD users then C would be correct like a SaaS

upvoted 2 times

 **ZakySama** 1 year, 3 months ago

Selected Answer: B

It should be B

upvoted 1 times

 **[Removed]** 1 year, 3 months ago

Selected Answer: B

B is correct

upvoted 1 times

 **lmy** 1 year, 3 months ago

This appears at least 3/4 times.

upvoted 4 times

 **FabrityDev** 1 year, 3 months ago

The question is the same but answers might not. If you know which answer is correct you probably don't notice that one or two of others answers change and it matters if you are not sure which one is correct.

upvoted 1 times

 **maku067** 1 year, 3 months ago

Should be B?

upvoted 1 times

 **Clarkszw** 1 year, 3 months ago

Selected Answer: B

Azure AD for single-tenant user authentication

upvoted 1 times

You have a multi-tier app named App1 and an Azure SQL database named SQL1. The backend service of App1 writes data to SQL1. Users use the App1 client to read the data from SQL1.

During periods of high utilization, the users experience delays retrieving the data.

You need to minimize how long it takes for data requests.

What should you include in the solution?

- A. Azure Cache for Redis
- B. Azure Content Delivery Network (CDN)
- C. Azure Data Factory
- D. Azure Synapse Analytics

Correct Answer: A

Community vote distribution

A (100%)

 **sawanti** Highly Voted 8 months, 2 weeks ago

Selected Answer: A

Pretty straightforward this time:

- A. Azure Cache for Redis - Cache the data so users can achieve them quicker
- B. Azure Content Delivery Network (CDN) - There isn't any issue with the networking
- C. Azure Data Factory - This tool is for orchestration, not for enhancing anything existing
- D. Azure Synapse Analytics - Also an orchestration tool with additional data warehouse capabilities, not relevant in this case

upvoted 8 times

 **NotMeAnyWay** Highly Voted 10 months ago

Selected Answer: A

- A. Azure Cache for Redis

Explanation:

Azure Cache for Redis provides an in-memory data store based on open-source software Redis. It can be used to cache the most frequently accessed data, thus significantly reducing latency and increasing throughput for the application data requests. By storing data that's accessed often in a cache, you can improve app performance by reducing the load on your main database and make the app more responsive even during high traffic.

Azure Content Delivery Network (CDN) is more for delivering static content to users, and not designed for database queries.

upvoted 7 times

 **Lazylinux** Most Recent 1 week, 3 days ago

Selected Answer: A

Given Answer A is correct

Distributed, in-memory, scalable solution providing super-fast data access. As traffic and demands on your app increase, scale performance simply and cost-effectively. Add a quick caching layer to the application architecture to handle thousands of simultaneous users with near-instant speed—all with the benefits of a fully managed service.

Features:

- * Superior throughput and performance to handle millions of requests per second with down to sub-millisecond latency
- * Fully managed service with automatic patching, updates, scaling, and provisioning so you can focus on development
- * RedisBloom, RedisSearch, RedisJSON, and RedisTimeSeries module integration, supporting data analysis, search, and streaming
- * Powerful capabilities including clustering, active geo-replication, Redis on Flash, and availability of up to 99.999 percent

upvoted 1 times

 **azureguyx** 8 months, 3 weeks ago

Selected Answer: A

"Azure Cache for Redis" is the correct answer.

I think the other solutions are like using a shotgun to kill flies.

upvoted 2 times

👤 **zelick** 1 year, 2 months ago

Selected Answer: A

A is the answer.

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

Azure Cache for Redis provides an in-memory data store based on the Redis software. Redis improves the performance and scalability of an application that uses backend data stores heavily. It's able to process large volumes of application requests by keeping frequently accessed data in the server memory, which can be written to and read from quickly. Redis brings a critical low-latency and high-throughput data storage solution to modern applications.

upvoted 4 times

👤 **OPT_001122** 1 year, 3 months ago

Selected Answer: A

A. Azure Cache for Redis

upvoted 1 times

👤 **VBK8579** 1 year, 3 months ago

Selected Answer: A

A. Azure Cache for Redis

upvoted 1 times

👤 **[Removed]** 1 year, 3 months ago

Selected Answer: A

Caching: Implementing a caching mechanism, such as Redis, can help to reduce the number of requests made to the Azure SQL database. This can improve the performance of data retrieval for users.

upvoted 3 times

Question #78

Topic 4

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

Name	Type	Description
VM1	Virtual machine	Frontend component in the Central US Azure region
VM2	Virtual machine	Backend component in the East US Azure region
VM3	Virtual machine	Backend component in the West US 2 Azure region
VNet1	Virtual network	Hosts VM1
VNet2	Virtual network	Hosts VM2
VNet3	Virtual network	Hosts VM3

You create peering between VNet1 and VNet2 and between VNet1 and VNet3.

The virtual machines host an HTTPS-based client/server application and are accessible only via the private IP address of each virtual machine.

You need to implement a load balancing solution for VM2 and VM3. The solution must ensure that if VM2 fails, requests will be routed

automatically to VM3, and if VM3 fails, requests will be routed automatically to VM2.

What should you include in the solution?

- A. Azure Firewall Premium
- B. Azure Application Gateway v2
- C. a cross-region load balancer
- D. Azure Front Door Premium

Correct Answer: D

Community vote distribution

D (93%)

7%

 **zellck** Highly Voted 1 year, 2 months ago

Selected Answer: D

D is the answer.

<https://learn.microsoft.com/en-us/azure/frontdoor/front-door-faq#what-is-the-difference-between-azure-front-door-and-azure-application-gateway>

While both Front Door and Application Gateway are layer 7 (HTTP/HTTPS) load balancers, the primary difference is that Front Door is a non-regional service whereas Application Gateway is a regional service. While Front Door can load balance between your different scale units/clusters/stamp units across regions, Application Gateway allows you to load balance between your VMs/containers etc. that is within the scale unit.

upvoted 15 times

 **NotMeAnyWay** Highly Voted 10 months ago

Selected Answer: D

D. Azure Front Door Premium

Azure Front Door Premium now supports Private Link, which enables private connectivity from a virtual network to a service running in Azure. This feature can be used to connect to services across regions privately, so this should work for your use case where VM2 is in East US and VM3 is in West US. Here is how it could work:

Azure Front Door Premium could be set up with Private Link to create a private endpoint in a regional network. This network can route traffic to VM2 and VM3 through the private link over the Microsoft backbone network, without exposure to the public internet. When one VM fails, Azure Front Door can automatically route the traffic to the other VM, maintaining the availability of your application.

upvoted 12 times

 **Lazylinux** Most Recent 1 week, 3 days ago

Selected Answer: D

Given answer D is correct

Azure Front Door Premium with Private Link configuration should meet the requirements

upvoted 1 times

 **cris_exam** 1 month ago

Global LB (cross region LB) could do this same load balancing just the same, but I think this is a slightly old question when cross region LB was still in preview, which is no longer the case.

Still, AFD is capable as per below to have an internal LB as backend (Endpoints), so, let's say that AFD could very well be the answer here.

<https://learn.microsoft.com/en-us/azure/frontdoor/front-door-faq#can-i-deploy-azure-load-balancer-behind-front-door>

upvoted 2 times

 **ubdubdoo** 3 weeks, 2 days ago

i dont think cross region LB supports private endpoints directly.

upvoted 1 times

 **rex303** 1 year ago

Selected Answer: D

The answer is D.

While both front door and the Cross-Region load balancer are used for cross-region load balancing. Front door allows the use of Private IP's, the Cross-region load balancer does not, as per documentation: <https://learn.microsoft.com/en-us/azure/load-balancer/cross-region-overview#regional-redundancy>.

Also, as of the time of writing this answer, the Cross-Region load balancer is still in preview and should not be the first choice for production loads.

upvoted 6 times

 **RandomNickname** 1 year, 3 months ago

Selected Answer: D

Based on the limitation with C: as per below as well as in preview the more appropriate choice is likely D:

<https://learn.microsoft.com/en-us/azure/load-balancer/cross-region-overview#regional-redundancy>

upvoted 1 times

 **SajanK** 1 year, 3 months ago

This link says that Azure Front Door premium can use private IPs.

<https://learn.microsoft.com/en-us/azure/frontdoor/private-link>

upvoted 4 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: D

D. Azure Front Door Premium

upvoted 1 times

 **upwork** 1 year, 3 months ago

Can Azure Front Door load balance or route traffic within a virtual network?

Azure Front Door Standard, Premium and (classic) tier requires a public IP or publicly resolvable DNS name to route traffic to backend resources.

Azure resources such as Application Gateways or Azure Load Balancers can enable routing to resources within a virtual network.

<https://learn.microsoft.com/en-us/azure/frontdoor/front-door-faq#can-azure-front-door-load-balance-or-route-traffic-within-a-virtual-network>

upvoted 3 times

 **sumaju** 6 months, 1 week ago

Azure Front Door Premium can connect to your origin using Private Link. Your origin can be hosted in a virtual network or hosted as a PaaS service such as Azure Web App or Azure Storage. Private Link removes the need for your origin to be accessed publicly.

<https://learn.microsoft.com/en-us/azure/frontdoor/private-link>

upvoted 1 times

 **upwork** 1 year, 3 months ago

Front Door requires public IPs while the case explicitly says the VMs are accessible only on private IPs.

Front Door: Backend pools can be composed of Storage, Web App, Kubernetes instances, or any other custom hostname that has public connectivity. Azure Front Door requires that the backends are defined either via a public IP or a publicly resolvable DNS hostname. Members of backend pools can be across zones, regions, or even outside of Azure as long as they have public connectivity.

upvoted 2 times

 **sumaju** 6 months, 1 week ago

Azure Front Door Premium can connect to your origin using Private Link. Your origin can be hosted in a virtual network or hosted as a PaaS service such as Azure Web App or Azure Storage. Private Link removes the need for your origin to be accessed publicly.

<https://learn.microsoft.com/en-us/azure/frontdoor/private-link>

upvoted 1 times

 **mscbslt** 1 year, 3 months ago

Selected Answer: D

<https://learn.microsoft.com/en-us/azure/frontdoor/front-door-faq>

upvoted 1 times

 **janvandermerwer** 1 year, 3 months ago

Selected Answer: D

D - Looks to be the best answer
<https://learn.microsoft.com/en-us/azure/frontdoor/health-probes>

b - Application load balancer is only for in-region connectivity. - incorrect
upvoted 3 times

 **jwjwjjw** 1 year, 3 months ago

Selected Answer: D

VMs are in different regions so only FrontDoor
upvoted 3 times

 **[Removed]** 1 year, 3 months ago

Selected Answer: B

Answer is B as per - <https://learn.microsoft.com/en-us/azure/application-gateway/overview-v2>

"The autoscaling v2 SKU now supports default health probes to automatically monitor the health of all resources in its backend pool and high those backend members that are considered unhealthy. "

upvoted 3 times

 **[Removed]** 1 year, 3 months ago

Answer might be correct looking at this
upvoted 1 times

 **[Removed]** 1 year, 3 months ago

<https://learn.microsoft.com/en-us/azure/frontdoor/health-probes>
upvoted 1 times

Question #79

Topic 4

You are designing an app that will include two components. The components will communicate by sending messages via a queue.

You need to recommend a solution to process the messages by using a First in, First out (FIFO) pattern.

What should you include in the recommendation?

- A. storage queues with a custom metadata setting
- B. Azure Service Bus queues with partitioning enabled
- C. Azure Service Bus queues with sessions enabled
- D. storage queues with a stored access policy

Correct Answer: C

Community vote distribution

C (100%)

 **zellck**  1 year, 2 months ago

Selected Answer: C

C is the answer.

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/message-sessions>

Azure Service Bus sessions enable joint and ordered handling of unbounded sequences of related messages. Sessions can be used in first in first out (FIFO) and request-response patterns. This article shows how to use sessions to implement these patterns when using Service Bus.

upvoted 15 times

✉️ **NotMeAnyWay** Highly Voted 10 months ago

Selected Answer: C

C. Azure Service Bus queues with sessions enabled

Explanation:

Azure Service Bus supports a FIFO pattern through the use of sessions. A session is a sequence of ordered messages. All messages in a session are handled in the order they arrive. This ensures that messages are processed in the order they were added to the queue.

Options A and D are incorrect because Azure Storage queues do not natively support the First In, First Out (FIFO) pattern. There are no such features as custom metadata setting or stored access policy that can establish FIFO in Azure Storage queues.

Option B is incorrect because while partitioning in Azure Service Bus can improve performance by spreading the load across multiple message brokers and stores, it doesn't enforce FIFO ordering across partitions. FIFO ordering is maintained within a partition, but not across partitions. Hence, for strict FIFO, you would not want to enable partitioning, you would want to use sessions.

upvoted 12 times

✉️ **Lazylinux** Most Recent 1 week, 3 days ago

Selected Answer: C

Given Answer C is correct

Service Bus queues are part of a broader Azure messaging infrastructure that supports queuing, publish/subscribe, and more advanced integration patterns. They're designed to integrate applications or application components that might span multiple communication protocols, data contracts, trust domains, or network environments.

Advanced messaging features like first-in and first-out (FIFO), batching/sessions, transactions, dead-lettering, temporal control, routing and filtering, and duplicate detection

upvoted 1 times

✉️ **xRiot007** 2 months, 1 week ago

The wording of the question is slightly misleading.

A queue has by default a FIFO mechanism to send and receive messages.

In this context the user wants to create his own CUSTOM order.

To do this, sessions are used to mark the messages that should be received first, then second, etc, so what is known as FIFO is broken.

This article helps with a visualization of the process:

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/message-sessions#session-features>

A session is like a subqueue.

upvoted 2 times

✉️ **steel72** 1 year, 1 month ago

Selected Answer: C

"Azure Service Bus queues with sessions enabled"

As a solution architect/developer, you should consider using Service Bus queues when your solution requires the queue to provide a guaranteed first-in-first-out (FIFO) ordered delivery.

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted#consider-using-service-bus-queues>

Sessions can be used in first in, first out (FIFO) and request-response patterns.

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/message-sessions>

upvoted 2 times

✉️ **VBK8579** 1 year, 2 months ago

Selected Answer: C

C. Azure Service Bus queues with sessions enabled.

Azure Service Bus queues with sessions enabled ensure a FIFO pattern by allowing messages to be processed in order, and messages are processed by a single receiver instance.

upvoted 2 times

 OPT_001122 1 year, 3 months ago

Selected Answer: C

C. Azure Service Bus queues with sessions enabled
upvoted 2 times

 janvandermerwer 1 year, 3 months ago

Selected Answer: C

C is a go and recommended from what i can see.

Service Bus queues ordering guarantee

Yes - First-In-First-Out (FIFO)
(by using message sessions)

upvoted 2 times

 FabrityDev 1 year, 3 months ago

Selected Answer: C

Only Service Bus guarantees FIFO and you need to use Sessions for this.

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>
upvoted 2 times

 [Removed] 1 year, 3 months ago

Selected Answer: C

C:

Sessions: Enabling sessions on an Azure Service Bus queue allows for grouping of related messages together. This can be useful if you need ensure that messages related to a specific session or conversation are processed in order. With sessions, you can also allow multiple consumers to process messages from the same session in parallel, which can improve the overall throughput of the queue. This is useful if you expect to have a large number of conversations and need to scale out the processing of those messages.

upvoted 2 times

Question #80

Topic 4

HOTSPOT

-

You need to deploy an instance of SQL Server on Azure Virtual Machines. The solution must meet the following requirements:

- Support 15,000 disk IOPS.
- Support SR-IOV.
- Minimize costs.

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.

Answer Area

Virtual machine series:

DS
NC
NV

Disk type:

Standard SSD
Premium SSD
Ultra Disk

Answer Area

Virtual machine series:

DS
NC
NV

Correct Answer:

Disk type:

Standard SSD
Premium SSD
Ultra Disk

 **SomeCert** Highly Voted 1 year, 1 month ago

What's the point of memorizing this kind of sheit?

upvoted 94 times

 **AdventureChick** 7 months, 2 weeks ago

Microsoft has a minimum WTF?!? threshold required per user per exam (min_WTF)

If they don't add crap like this, they don't hit the quota, it generates a crapload of alerts and a dashboard in Redmond turns bright red. :))
Yes I've been studying too long and just seeing if anyone is paying attention.

upvoted 18 times

 **exam_taker24** 11 months, 1 week ago

I agree, it's dumb

upvoted 3 times

 **betterthanlife** 12 months ago

It's stupidity...

upvoted 4 times

 **NinjaDog00** 1 year, 1 month ago

Agree.....

upvoted 7 times

 **[Removed]** Highly Voted 1 year, 3 months ago

Answers are correct:

Azure Virtual Machine:

Use a high-performance Azure Virtual Machine such as the Dv3 or Ev3 series, which are optimized for workloads that require low latency and high throughput.

SR-IOV: Enable SR-IOV on the Virtual Machine. SR-IOV allows for direct communication between the virtual NIC and the physical NIC, reducing latency and increasing throughput.

Azure Premium SSD Disks:

Use Azure Premium SSD Disks as they are optimized for performance-sensitive workloads and have a high IOPS and throughput limit.

upvoted 12 times

✉️  **Lazylinux** Most Recent 1 week, 3 days ago

Given answer is correct,

Here is my take on this and no disrespect to anyone

1- If you got this question right within 60 seconds than i suggest you definitely need to get a life

2- MS asks such questions, i call them landmines!! means if you get it right (trigger the landmine) MS will know for sure you have been reading/accessing braindumb; so i will happily answer this question wrong even though i was able to guess one part right!!

upvoted 2 times

✉️  **Crossfader2208** 2 months ago

I will tattoo this info into my brain. Very important.

upvoted 3 times

✉️  **mtc9** 2 months ago

I just love questions like that.

upvoted 2 times

✉️  **dave22339** 2 months, 3 weeks ago

Just memorise the answer. It's the one named after a Citroen. Don't have a way of memorising premium yet.

upvoted 3 times

✉️  **guntor66** 1 month, 3 weeks ago

Citroen DS could target people in the "Premium" class, with a certain prestige.

Citroen DS was at the time a presidential car in France ;)

upvoted 3 times

✉️  **Fidel_104** 2 months ago

these are the kind of insights I'm looking for among the comments

upvoted 1 times

✉️  **NIC_Name** 7 months, 2 weeks ago

The exam is open book at last, so a search in the Exam for Virtual Machine DS gives the answer.

upvoted 7 times

✉️  **SaiKJ** 8 months ago

:-.. there is no point in asking such questions in design.

upvoted 3 times

✉️  **hantolini** 8 months, 3 weeks ago

Answer is Correct:

NC and NV does not support SR-IOV (Accelerated Networking). Per this note, enable it on this VMs types has no effect.

<https://learn.microsoft.com/en-us/azure/virtual-network/accelerated-networking-overview?tabs=redhat#supported-vm-instances>

So, only Ds vms type take advantage of SR-IOV.

The, Premium SSD is enough to support 15000 IOPs

upvoted 2 times

✉️  **Bintokol** 9 months, 3 weeks ago

From olabiba.ai:

DS= Dedicated series

NC=GPU-optimized

NV=Virtualized GPU

....and I agree, Why we need to memorize this!!!!

upvoted 9 times

NotMeAnyWay 10 months ago

Virtual machine series:

The correct option is a. DS.

Explanation: The DS series Azure Virtual Machines are designed for applications that require high storage performance and are ideal for SQL Server instances. The DSv3 and Dsv4-series, for instance, support Azure's premium SSDs and offer good I/O throughput, making them suitable for SQL Server workloads. NC and NV series are more oriented towards GPU-intensive and AI workloads, which are not the requirement in this case. SR-IOV is supported by DS series VMs.

Disk Type:

The correct option is b. Premium SSD.

Explanation: To achieve 15,000 IOPS, you would need Premium SSDs. Standard SSDs offer lower performance in terms of IOPS and throughput while Ultra Disks could provide the necessary IOPS, they are more expensive and hence not the optimal choice for minimizing costs.

upvoted 6 times

lombri 1 year ago

The answer seems correct:

1. DS

Ideal for testing and development, small to medium databases, and low to medium traffic web servers.

D-series, feature a more powerful CPU and optimal CPU-to-memory configuration, making them suitable for most production workloads.

2. Premium SSD

Azure Premium SSDs deliver high-performance and low-latency disk support for virtual machines (VMs) with input/output (IO)-intensive workloads.(max IOPS 20,000)

For any consultation see look this link is going to be helpful for every one :

Link 1 = <https://learn.microsoft.com/en-us/azure/virtual-machines/sizes>

Link 2 = <https://learn.microsoft.com/en-us/azure/virtual-machines/dv2-dsv2-series>

Link 3 = <https://learn.microsoft.com/en-us/azure/virtual-machines/sizes-general>

Link 3 = <https://learn.microsoft.com/en-us/azure/virtual-machines/disks-types#disk-type-comparison>

upvoted 1 times

zellck 1 year, 2 months ago

1. DS

2. Premium SSD

<https://learn.microsoft.com/en-us/azure/virtual-network/accelerated-networking-overview>

<https://learn.microsoft.com/en-us/azure/virtual-machines/disks-types#disk-type-comparison>

Premium SSD

- Max IOPS: 20,000

upvoted 7 times

pkkalra 1 year, 2 months ago

Premium SSD supports upto 20,000 IOPS

Only DS supports SR-IOV/Accelerated Networking

Although NC and NV sizes will show in the command below, they do not support Accelerated Networking. Enabling Accelerated Networking on NC or NV VMs will have no effect.

<https://learn.microsoft.com/en-us/azure/virtual-network/accelerated-networking-overview>

<https://learn.microsoft.com/en-us/azure/virtual-network/accelerated-networking-overview>

upvoted 3 times

pkkalra 1 year, 2 months ago

<https://learn.microsoft.com/en-us/azure/virtual-machines/disks-types>

upvoted 1 times

OPT_001122 1 year, 3 months ago

1. DS

2. Premium SSD

upvoted 1 times

 **janvandermerwer** 1 year, 3 months ago

Agreed - DS series and premium SSD
initially thought maybe a use case for ultra - but that is lacking a few features we'll probably need for sql
upvoted 1 times

 **RandomNickname** 1 year, 3 months ago

Answer looks correct;

<https://learn.microsoft.com/en-us/azure/virtual-machines/disks-types>

<https://azure.microsoft.com/en-us/pricing/details/virtual-machines/series/>

<https://learn.microsoft.com/en-us/azure/site-recovery/azure-vm-disaster-recovery-with-accelerated-networking>

upvoted 3 times

Question #81

Topic 4

You are developing an app that will use Azure Functions to process Azure Event Hubs events. Request processing is estimated to take between five and 20 minutes.

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

- Supports estimates of request processing runtimes
- Supports event-driven autoscaling for the app

Which hosting plan should you recommend?

- A. Dedicated
- B. Consumption
- C. App Service
- D. Premium

Correct Answer: D

Community vote distribution

D (100%)

 **NotMeAnyWay**  10 months ago

Selected Answer: D

D. Premium

The Premium plan is the best fit for this scenario. It supports both longer execution times and event-driven scaling, which are the requirement specified in the question.

Azure Functions on a Premium plan can run for a longer period, up to 60 minutes (or indefinitely if the host.json "functionTimeout" setting is not specified), making it suitable for the estimated request processing times of five to 20 minutes. The Premium plan also supports event-driven autoscaling.

The Consumption plan supports event-driven autoscaling but only allows functions to run for up to 10 minutes, so it wouldn't support the estimated request processing times of five to 20 minutes.

The Dedicated and App Service plans can run for a longer period, but they do not support event-driven autoscaling. The Dedicated plan is also the most costly option and should be used when you need the most control over the function app environment.

upvoted 16 times

azkumar305 Highly Voted 1 year ago

Got this on 14-Apr-2023

upvoted 12 times

Lazylinux Most Recent 1 week, 3 days ago

Selected Answer: D

Given Answer D is correct as per

Scale-in behaviors

Event-driven scaling automatically reduces capacity when demand for your functions is reduced. It does this by draining instances of their current function executions and then removes those instances. This behavior is logged as drain mode. The grace period for functions that are currently executing can extend up to 10 minutes for Consumption plan apps and up to 60 minutes for Premium plan apps. Event-driven scaling and this behavior don't apply to Dedicated plan apps.

The following considerations apply for scale-in behaviors:

For Consumption plan function apps running on Windows, only apps created after May 2021 have drain mode behaviors enabled by default.

To enable graceful shutdown for functions using the Service Bus trigger, use version 4.2.0 or a later version of the

<https://learn.microsoft.com/en-us/azure/azure-functions/event-driven-scaling?tabs=azure-cli>

upvoted 1 times

BShelat 4 months, 3 weeks ago

Selected Answer: D

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

D is the answer.

upvoted 1 times

zellck 1 year, 2 months ago

Selected Answer: D

D is the answer.

<https://learn.microsoft.com/en-us/azure/event-hubs/compare-tiers#features>

Premium

Dynamic Partition scale out

- Yes

upvoted 5 times

zellck 1 year, 2 months ago

<https://learn.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

Premium plan

- default timeout: 30 mins

- max timeout: Unlimited

upvoted 2 times

zellck 1 year, 2 months ago

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

Premium plan

- Event driven. Scale out automatically, even during periods of high load. Azure Functions infrastructure scales CPU and memory resources adding additional instances of the Functions host, based on the number of events that its functions are triggered on.

upvoted 3 times

VBK8579 1 year, 2 months ago

Selected Answer: D

App timeout duration for Consumption plan is 5 mins default and Maximum is 10 mins. For dedicated and Premium, it is 30 mins default and maximum is unlimited.

Dedicated supports Autoscaling but cannot support event driven. Only Consumption and Premium supports Event driven autoscaling.

So best suitable option is Premium

upvoted 2 times

OPT_001122 1 year, 3 months ago

Selected Answer: D

D. Premium

upvoted 2 times

Jzx 1 year, 3 months ago

Selected Answer: D

D it is...

upvoted 1 times

 **janvandermerwer** 1 year, 3 months ago

Selected Answer: D

Let's go with D

- Mostly due to time based limits.

upvoted 2 times

 **vldt** 1 year, 3 months ago

Selected Answer: D

Only Dedicated and Premium have the matching timeout so we need to choose between A and D. Then as usual they let us guess what is hid in the "Supports estimates of request processing runtimes". If it is "Predictive scaling and costs are required" then the correct answer is D as <https://learn.microsoft.com/en-us/azure/azure-functions/functions-scale#overview-of-plans>

upvoted 2 times

 **RandomNickname** 1 year, 3 months ago

Selected Answer: D

D looks like as per article provided by jose

<https://learn.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

upvoted 1 times

 **rolmisha** 1 year, 3 months ago

Premium - consumption time is up to 30 minutes.

upvoted 1 times

 **[Removed]** 1 year, 3 months ago

Think this should be B, consumption:

The Consumption Plan is a serverless hosting plan that automatically scales the number of instances of your function based on the number of incoming events, which can help to optimize costs and ensure that your app can handle varying loads. Additionally, the Consumption Plan supports the ability to set a timeout for your functions, which can help to ensure that your app can handle estimates of request processing runtimes.

upvoted 2 times

 **jose** 1 year, 3 months ago

In consumption plan the maximum timeout is 10 minutes:

<https://learn.microsoft.com/en-us/azure/azure-functions/functions-scale#timeout>

upvoted 6 times

Question #82

Topic 4

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 Notification Hubs
- B. Azure Application Gateway
- C. Azure Service Bus
- D. Azure Traffic Manager

Correct Answer: C

Community vote distribution

C (100%)

✉️  **Crossfader2208** 2 months ago

I now definitely know the answer to this question.

upvoted 2 times

✉️  **Sanjeevsn** 11 months, 2 weeks ago

Selected Answer: C

Azure Service Bus

upvoted 2 times

✉️  **malcubierre** 1 year, 1 month ago

Selected Answer: C

Azure Service Bus is the only one that allow async comm

upvoted 1 times

✉️  **zellck** 1 year, 2 months ago

Selected Answer: C

C is the answer.

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview>

Azure Service Bus is a fully managed enterprise message broker with message queues and publish-subscribe topics (in a namespace). Service Bus is used to decouple applications and services from each other, providing the following benefits:

- Load-balancing work across competing workers
- Safely routing and transferring data and control across service and application boundaries
- Coordinating transactional work that requires a high-degree of reliability

upvoted 1 times

✉️  **pkkalra** 1 year, 2 months ago

Selected Answer: C

service bus

upvoted 1 times

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 Notification Hubs
- B. Azure Application Gateway
- C. Azure Queue Storage
- D. Azure Traffic Manager

Correct Answer: C

Community vote distribution

C (100%)

 **Tplenty** 5 months, 3 weeks ago

The answer is either Azure Queue Storage or Azure Service Bus. C is correct
upvoted 3 times

 **Alessandro365** 1 year, 1 month ago

Selected Answer: C
C is the correct answer
upvoted 2 times

 **zellick** 1 year, 2 months ago

Selected Answer: C
C is the answer.

<https://learn.microsoft.com/en-us/azure/storage/queues/storage-queues-introduction>

Azure Queue Storage is a service for storing large numbers of messages. You access messages from anywhere in the world via authenticated calls using HTTP or HTTPS. A queue message can be up to 64 KB in size. A queue may contain millions of messages, up to the total capacity limit of a storage account. Queues are commonly used to create a backlog of work to process asynchronously.

upvoted 4 times

 **pkkalra** 1 year, 2 months ago

Selected Answer: C
Azure Queue Storage
upvoted 2 times

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 Basic
- B. Azure SQL Database Business Critical
- C. Azure SQL Database Standard
- D. Azure SQL Managed Instance General Purpose

Correct Answer: B

Community vote distribution

B (77%)	D (15%)	8%
---------	---------	----

 **NotMeAnyWay** Highly Voted 10 months ago

Selected Answer: B

B. Azure SQL Database Business Critical

Azure SQL Database Business Critical tier is designed to provide high availability with zero data loss during failover, which meets one of the requirements of the scenario.

Additionally, Azure SQL Database Business Critical tier offers zone redundant configurations, which means that replicas of the data are stored in different availability zones. This means the database will remain available in the event of a zone outage, meeting another requirement of the scenario.

Azure SQL Managed Instance General Purpose, while providing automatic backups and high availability within a single region, doesn't support the required zone redundancy.

Please note, while Business Critical tier might appear costly, the requirement is to minimize costs, not to choose the least costly option. Considering the high availability and zero data loss requirements, Business Critical tier would be the most cost-effective choice.

upvoted 5 times

 **rumino** Most Recent 1 month, 3 weeks ago

Selected Answer: D

Azure SQL Managed Instance General Purpose, as it's cheaper than Azure SQL Database Business Critical

By selecting a zone-redundant configuration, you can make your Business Critical or General Purpose instances resilient to a much larger set of failures, including catastrophic datacenter outages, without any changes to the application logic. You can also convert any existing Business Critical or General Purpose instances to zone-redundant configuration.

<https://learn.microsoft.com/en-us/azure/azure-sql/managed-instance/high-availability-sla?view=azuresql-mi&preserve-view=true>

upvoted 2 times

 **mariomishty** 4 months, 3 weeks ago

D. Azure SQL Managed Instance General Purpose

upvoted 2 times

 **Tplenty** 5 months, 3 weeks ago

It is a repeated question, the answer is B. Azure SQL Database Business Critical

upvoted 1 times

 **sainandam** 1 year, 2 months ago

Selected Answer: C

Minimize costs

upvoted 1 times

 **zellck** 1 year, 2 months ago

Azure SQL DB Standard tier only supports LRS.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell#basic-standard-a-general-purpose-service-tier-locally-redundant-availability>

upvoted 3 times

 **zellick** 1 year, 2 months ago

Selected Answer: B

B is the answer.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview?view=azuresql#service-tiers>

The Business Critical service tier is designed for OLTP applications with high transaction rates and low latency I/O requirements. It offers the highest resilience to failures by using several isolated replicas.

upvoted 3 times

 **zellick** 1 year, 2 months ago

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell#premium-and-business-critical-service-tier-zone-redundant-availability>

By default, the cluster of nodes for the premium availability model is created in the same datacenter. With the introduction of Azure Availability Zones, SQL Database can place different replicas of the Business Critical database to different availability zones in the same region. To eliminate a single point of failure, the control ring is also duplicated across multiple zones as three gateway rings (GW). The routing to a specific gateway ring is controlled by Azure Traffic Manager (ATM). Because the zone-redundant configuration in the Premium or Business Critical service tiers doesn't create additional database redundancy, you can enable it at no extra cost. By selecting a zone-redundant configuration, you can make your Premium or Business Critical databases resilient to a much larger set of failures, including catastrophic datacenter outages, without any changes to the application logic.

upvoted 1 times

 **pkkalra** 1 year, 2 months ago

Selected Answer: B

Azure SQL Database Business Critical

upvoted 2 times

Question #85

Topic 4

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 Hyperscale
- B. Azure SQL Database Premium

- C. Azure SQL Database Standard
- D. Azure SQL Managed Instance General Purpose

Correct Answer: B

Community vote distribution

B (100%)

 **Tplenty** Highly Voted 5 months, 3 weeks ago

The answer is either Azure SQL Database Premium or Azure SQL Database Business Critical
upvoted 5 times

 **williamjcg** 1 month, 2 weeks ago

Don't forget about Hyperscale haha.
Premium - Hyperscale - Business Critical
upvoted 2 times

 **c7d45f4** Most Recent 7 months, 3 weeks ago

Selected Answer: B

the answer is Premium so B
upvoted 1 times

 **lombri** 1 year ago

Selected Answer: B

In Premium, Business Critical, and Hyperscale service tiers, SQL Database supports the use of read-only replicas to offload read-only query workloads, using the ApplicationIntent=ReadOnly parameter in the connection string.

The question to ask for costs must be minimized.

So the answer is Premium
upvoted 3 times

 **lombri** 1 year ago

In Premium, Business Critical, and Hyperscale service tiers, SQL Database supports the use of read-only replicas to offload read-only query workloads, using the ApplicationIntent=ReadOnly parameter in the connection string.

The question to ask for costs must be minimized.

So the answer is Premium
upvoted 1 times

 **Alessandro365** 1 year, 1 month ago

Selected Answer: B

B is the correct answer
upvoted 2 times

Question #86

Topic 4

HOTSPOT

-

You company has offices in New York City, Sydney, Paris, and Johannesburg.

The company has an Azure subscription.

You plan to deploy a new Azure networking solution that meets the following requirements:

- Connects to ExpressRoute circuits in the Azure regions of East US, Southeast Asia, North Europe, and South Africa

- Minimizes latency by supporting connection in three regions
- Supports Site-to-site VPN connections
- Minimizes costs

You need to identify the minimum number of Azure Virtual WAN hubs that you must deploy, and which virtual WAN SKU to use.

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

NOTE: Each correct selection is worth one point.

Answer Area

Number of Virtual WAN hubs:

1
2
3
4

Virtual WAN SKU:

Basic
Standard

Answer Area

Number of Virtual WAN hubs:

1
2
3
4

Virtual WAN SKU:

Basic
Standard

Correct Answer:

  cryptotafkar 7 months, 1 week ago

Minimizes latency by supporting connection in three regions

The requirement to “minimize latency by supporting connection in three regions” suggests that connections should be optimized across three regions. However, the solution also needs to connect to ExpressRoute circuits in four specific Azure regions: East US, Southeast Asia, North Europe, and South Africa.

To meet all these requirements, a hub should be deployed in each of these four regions. This ensures that each region has a local connection point, reducing latency. Even though connections are optimized across three regions, the fourth hub is necessary to provide a local connection point in the fourth region.

So, while three hubs might seem sufficient based on one requirement, considering all requirements makes it clear that four hubs are needed. This is a common scenario in network planning where various factors and requirements must be balanced.

upvoted 14 times

✉️  **r3nenge** Highly Voted 1 year, 2 months ago

But why is it 3 virtual hubs, if we have 4 localisations?

upvoted 11 times

✉️  **kanag1** 1 year, 2 months ago

Q :Minimizes latency by supporting connection in three regions

upvoted 14 times

✉️  **Ras_AI_Ghul** 7 months, 2 weeks ago

The most important part and then the question asks what is the minimum ...

upvoted 1 times

✉️  **bd1234** 1 year, 1 month ago

should be 4 virtual hubs.

upvoted 6 times

✉️  **sankar07** 1 year ago

Requirement is "Minimizes latency by supporting connection in three regions". 3 is sufficient.

upvoted 4 times

✉️  **arxxas** 1 year, 1 month ago

Based on the requirements, you should deploy at least one Azure Virtual WAN hub in each of the following regions: East US, North Europe and South Africa.

To support Site-to-site VPN connections and minimize costs, you should use the Basic SKU of Azure Virtual WAN.

Therefore, you should deploy three Azure Virtual WAN hubs using the Basic SKU, one in each of the required regions. This configuration will allow you to connect to ExpressRoute circuits in those regions and minimize latency by supporting connections in three regions.

upvoted 1 times

✉️  **AdventureChick** 7 months, 2 weeks ago

Basic does not support ExpressRoute. Therefore, it's Standard.

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

upvoted 5 times

✉️  **Debosree** 1 year, 1 month ago

why Southeast Asia not considered here?

upvoted 12 times

✉️  **obllew** 9 months, 1 week ago

What does "supporting connection" mean here? The requirement is also that the virtual WAN "connects to ExpressRoute circuits" in 4 different regions. Doesn't that require a hub in each region? You can't have one extra connected circuit that also isn't connected...

upvoted 1 times

✉️  **Lazylinux** Most Recent 1 week, 3 days ago

My take on this is 4 hubs: East US, Southeast Asia, North Europe, and South Africa and SKU:

Standard because Basic ONLY supports S2S VPN

In terms of this requirements "Minimizes latency by supporting connection in three regions" it is feature of the STD SKU called Inter-hub and VNet-to-VNet transiting through the virtual hub follow next as no space

upvoted 1 times

✉️  **Lazylinux** 1 week, 3 days ago

Hub-to-hub connectivity

An Enterprise cloud footprint can span multiple cloud regions and it's optimal (latency-wise) to access the cloud from a region closest to the physical site and users. One of the key principles of global transit network architecture is to enable cross-region connectivity between all cloud and on-premises network endpoints. This means that traffic from a branch that is connected to the cloud in one region can reach another branch or a VNet in a different region using hub-to-hub connectivity enabled by Azure Global Network. So you can use to connect Hub-to-Hub

<https://learn.microsoft.com/en-us/azure/virtual-wan/upgrade-virtual-wan>

<https://learn.microsoft.com/en-us/azure/virtual-wan/virtual-wan-global-transit-network-architecture>

upvoted 1 times

✉️  **Azwscp2023** 6 months ago

4 hubs: East US, Southeast Asia, North Europe, and South Africa
and
SKU: Standard
upvoted 10 times

✉️  **PatrickMel** 7 months, 2 weeks ago

should have 4 hub as ExpressRoute should not connect cross region.
upvoted 2 times

✉️  **fred356** 12 months ago

SKU: Standard, because:

Basic: Site-to-site VPN only

Standard: ExpressRoute, User VPN (P2S), VPN (site-to-site), Inter-hub and VNet-to-VNet transiting through the virtual hub, Azure Firewall, NV, a virtual WAN

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

upvoted 6 times

✉️  **sjb666** 1 year ago

4 hubs, standard sku.
upvoted 3 times

✉️  **sjb666** 1 year ago

Moderator, please ignore this comment, should be three hubs

upvoted 2 times

✉️  **VBK8579** 1 year, 1 month ago

deploy at least three Azure Virtual WAN hubs in order to minimize latency by supporting connections in three regions.

As for the SKU, the Basic SKU does not support ExpressRoute or site-to-site VPN connections, so you would need to use the Standard SKU meet all the requirements.

upvoted 5 times

✉️  **sainandam** 1 year, 2 months ago

A Basic hub is limited to site-to-site VPN functionality only. When you upgrade from Basic to Standard, all the hubs within the virtual WAN are upgraded to Standard hubs. Standard hubs support ExpressRoute, point-to-site (User VPN), a full mesh hub, and VNet-to-VNet transit through the Azure hubs.

upvoted 4 times

✉️  **mscbslt** 1 year, 2 months ago

Site-to-site VPN only => Basic virtual WAN only.
Standard => ExpressRoute available.

upvoted 1 times

Question #87

Topic 4

You have an Azure Functions microservice app named App1 that is hosted in the Consumption plan. App1 uses an Azure Queue Storage trigger.

You plan to migrate App1 to an Azure Kubernetes Service (AKS) cluster.

You need to prepare the AKS cluster to support App1. The solution must meet the following requirements:

- Use the same scaling mechanism as the current deployment.
- Support kubenet and Azure Container Networking Interface (CNI) networking.

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

NOTE: Each correct answer is worth one point.

- A. Configure the horizontal pod autoscaler.
- B. Install Virtual Kubelet.
- C. Configure the AKS cluster autoscaler.
- D. Configure the virtual node add-on.
- E. Install Kubernetes-based Event Driven Autoscaling (KEDA).

Correct Answer: AE*Community vote distribution*

AE (97%)

3%

 **zellck** Highly Voted 1 year, 2 months ago**Selected Answer: AE**

AE is the answer.

<https://learn.microsoft.com/en-us/azure/aks/concepts-scale#horizontal-pod-autoscaler>

Kubernetes uses the horizontal pod autoscaler (HPA) to monitor the resource demand and automatically scale the number of replicas. By default, the horizontal pod autoscaler checks the Metrics API every 15 seconds for any required changes in replica count, but the Metrics API retrieves data from the Kubelet every 60 seconds. Effectively, the HPA is updated every 60 seconds. When changes are required, the number of replicas increased or decreased accordingly. Horizontal pod autoscaler works with AKS clusters that have deployed the Metrics Server for Kubernetes 1.8+.

<https://learn.microsoft.com/en-us/azure/aks/keda-about>

Kubernetes Event-driven Autescaling (KEDA) is a single-purpose and lightweight component that strives to make application autoscaling simple and is a CNCF Incubation project.

It applies event-driven autoscaling to scale your application to meet demand in a sustainable and cost-efficient manner with scale-to-zero.
upvoted 17 times

 **NotMeAnyWay** Highly Voted 10 months ago**Selected Answer: AE**

- A. Configure the horizontal pod autoscaler.
- E. Install Kubernetes-based Event Driven Autoscaling (KEDA).

In order to replicate the same scaling mechanism as the Azure Function Consumption plan (which scales based on the number of incoming events), you need to implement Kubernetes-based Event Driven Autoscaling (KEDA). KEDA allows for fine-grained autoscaling (including to/from zero) for event-driven Kubernetes workloads. KEDA serves as a Kubernetes Metrics Server and allows users to define autoscaling rules using dedicated Kubernetes custom resource definition.

Horizontal Pod Autoscaler (HPA) is a Kubernetes component that automatically scales the number of pods in a replication controller, deployment, replica set, or stateful set based on observed CPU utilization or with custom metrics support. You need the HPA to work with KEDA for autoscaling your pods.

upvoted 10 times

 **marcellov** Most Recent 7 months, 1 week ago**Selected Answer: AE**

"KEDA works by horizontally scaling a Kubernetes Deployment or a Job. It is built on top of the Kubernetes Horizontal Pod Autoscaler and allows the user to leverage External Metrics in Kubernetes to define autoscaling criteria based on information from any event source, such as a Kafka topic lag, length of an Azure Queue, or metrics obtained from a Prometheus query."

<https://cloudblogs.microsoft.com/opensource/2020/05/12/scaling-kubernetes-keda-intro-kubernetes-based-event-driven-autoscaling/>
upvoted 3 times

 **acepanda99** 8 months, 1 week ago**Selected Answer: AE**

- Support kubenet and Azure Container Networking Interface (CNI) networking.

With Azure Container Networking Interface (CNI), every pod gets an IP address from the subnet and can be accessed directly. Systems in the same virtual network as the AKS cluster see the pod IP as the source address for any traffic from the pod.

Therefore, Pods level autoscaler is required. Which means AE would be the answer.

upvoted 1 times

 **AHUI** 11 months, 1 week ago**Selected Answer: AE**

ans is correct

upvoted 1 times

 **Tr619899** 11 months, 2 weeks ago

To prepare the AKS cluster to support App1 and meet the requirements you specified, you should perform two actions: Configure the horizontal pod autoscaler and Install Kubernetes-based Event Driven Autoscaling (KEDA).

The horizontal pod autoscaler will allow you to use the same scaling mechanism as the current deployment by automatically scaling the number of pods based on CPU utilization or other application-provided metrics. KEDA will enable event-driven autoscaling by allowing you to scale based on events in Azure Queue Storage.

upvoted 3 times

 **Sudhir204** 1 year ago

apps can be part of only pods not the nodes.. hence it should be hpa.

upvoted 1 times

 **azkumar305** 1 year ago

Got this on 14-Apr-2023

upvoted 4 times

 **megaejay** 1 year, 1 month ago

Selected Answer: AC

each choice represent part of solution. A and E do the same action . it's wrong . For me it's A & C

upvoted 1 times

 **bd1234** 1 year, 1 month ago

Even A looks good,

I vote for:

C. AKS cluster autoscaler

E. KEDA

upvoted 2 times

 **bd1234** 1 year, 1 month ago

just wondering why there are no AKS node scaling involved? which is C.

A and E are both pod level scaling.

upvoted 1 times

 **infavolante** 1 year, 2 months ago

Answers are correct

upvoted 1 times

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 Application Gateway
- B. Azure Queue Storage
- C. Azure Data Lake
- D. Azure Traffic Manager

Correct Answer: B

Community vote distribution

B (100%)

 **Tplenty** 5 months, 3 weeks ago

It is either B. queue Storage or Service Bus Queue
upvoted 2 times

 **ahmadns** 8 months ago

Selected Answer: B
Duplicate for the 100th time...
upvoted 2 times

 **RonZhong** 9 months, 2 weeks ago

Again? :)
upvoted 4 times

 **NotMeAnyWay** 10 months ago

Selected Answer: B
B. Azure Queue Storage.

Explanation:

Azure Queue Storage is a service for storing large numbers of messages that can be accessed from anywhere in the world via authenticated calls using HTTP or HTTPS. It provides cloud messaging between application components, which would be ideal for this scenario where different components (customer orders, billing, payment, inventory, and shipping) need to communicate transaction information asynchronously.
upvoted 3 times

 **fred356** 12 months ago

Selected Answer: B
asynchronously = queue Storage or Service Bus Queue
upvoted 3 times

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 Managed Instance General Purpose
- B. Azure SQL Database Hyperscale
- C. Azure SQL Database Premium
- D. Azure SQL Managed Instance Business Critical

Correct Answer: C

Community vote distribution

C (100%)

 NotMeAnyWay Highly Voted 10 months ago

Selected Answer: C

C. Azure SQL Database Premium.

Explanation:

Azure SQL Database Premium tier offers the best high availability with an always-on model, with automatic failover and zero data loss in case of failure (RPO = 0). It also supports availability across multiple zones, meaning that it can remain available in the event of a zone outage.

Here's why other options may not be suitable:

Azure SQL Managed Instance General Purpose: While it provides high availability, it doesn't support automatic failover with zero data loss. It lacks the zone redundant configuration.

Azure SQL Database Hyperscale: While it supports high scale and rapid growth, it may not necessarily be the most cost-effective option for the scenario described.

Azure SQL Managed Instance Business Critical: While it supports automatic failover with zero data loss, and has built-in zone redundancy, it is typically more expensive than the Azure SQL Database Premium.

upvoted 5 times

 Wavy_Bel Most Recent 1 month, 1 week ago

I will finally be able to validate this question on the exam

upvoted 1 times

 mariomishty 4 months, 3 weeks ago

D. Azure SQL Managed Instance General Purpose

In this scenario, Azure SQL Managed Instance meets the given requirements because it offers automatic failover with zero data loss, ensuring data consistency and minimizing any potential loss during failover. Additionally, it supports zone redundancy, allowing for availability even during a zone outage by automatically failing over to replicas in other zones. This high availability is coupled with cost efficiency, making Azure SQL Managed Instance a suitable option that balances the necessary features with cost considerations.

Hence, the correct answer is: D. Azure SQL Managed Instance General Purpose

Azure SQL Database Premium is incorrect because it does not inherently provide zone redundancy, so in the event of a zone outage, there may be downtime and unavailability of the database until the issue is resolved or failover is initiated.

upvoted 2 times

 joesatriani 7 months, 1 week ago

Selected Answer: C

Question #90

Topic 4

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 Hyperscale
- B. Azure SQL Database Premium
- C. Azure SQL Database Basic
- D. Azure SQL Database Serverless

Correct Answer: B

Community vote distribution

B (100%)

 williamjcg 1 month, 2 weeks ago

Hopefully this question will come up in my exam... I'll surely get it right
upvoted 2 times

 c7d45f4 7 months, 3 weeks ago

Selected Answer: B

Azure SQL Database Premium is correct

upvoted 2 times

 joykdutta 9 months ago

hiiiiiiiiiiiiiiii

upvoted 1 times

 lombri 11 months ago

Azure SQL Database Hyperscale is a scalable option for large workloads with flexible storage management. However, it is not specifically designed to ensure availability in case of zone outages and does not offer data-loss-free failover.

Azure SQL Database Basic is the most cost-effective option but lacks advanced features such as automatic failover and high availability.

Azure SQL Database Serverless is a cost-effective option for light and intermittent workloads but may not be suitable for an application requiring high availability without interruptions.

Azure SQL Database Premium is the recommended option as it offers advanced features like active geo-replication and automatic, data-loss-failover. It also supports high availability in case of zone outages, ensuring the database remains accessible even if a specific zone experiences an interruption.

upvoted 2 times

 Andy_S 10 months ago

Answer C

There is no mentioning about interruption. So correct Answer is "Serverless"

upvoted 3 times

 techrat 1 year ago

Selected Answer: B

Passed the exam with 979 today, my answer to this question on the exam was Premium

upvoted 3 times

 waqarahmed78 1 year ago

This Question is same as Question # 52 on page 31 and answer is different. Why? Shouldn't it be Serverless??

upvoted 3 times

 yonie 1 year ago

There are *16* variations of this question. Each of them offering different possible answers.

The answer priority is as follows. If it exists then choose it. If it doesn't, proceed to the next priority. Sometimes both appear in the same question, so make sure to select the higher priority.

1. Azure SQL Database Premium
 2. Azure SQL Database Serverless
 3. Azure SQL Database Business Critical

upvoted 34 times

Page 1

Paul_white 5

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 Notification Hubs
- B. Azure Service Bus
- C. Azure Blob Storage
- D. Azure Service Fabric

Correct Answer: B

Community vote distribution

B (100%)

✉️  **Vimeiro** 1 year ago

What is the purpose of repeating these questions over and over ???

upvoted 4 times

✉️  **exam_taker24** 11 months, 1 week ago

Haha it's nice cause I have to finish fewer questions than expected

upvoted 10 times

✉️  **GS300** 1 year ago

Selected Answer: B

It is B

upvoted 1 times

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 Traffic Manager
- C. Azure Queue Storage
- D. Azure Notification Hubs

Correct Answer: C

Community vote distribution

C (100%)

 **abdx** Highly Voted 9 months ago

To enable asynchronous communication between cloud services using XML messages, you should use a messaging system. Out of the options provided:

- A. Azure Service Fabric: It's a distributed systems platform for deploying and managing microservices and containers. While it can be used to build resilient applications, it's not a messaging system per se.
- B. Azure Traffic Manager: It's a DNS-based traffic load balancer. It doesn't deal with asynchronous messaging.
- C. Azure Queue Storage: This service allows you to decouple cloud components and ensure asynchronous message delivery. Messages can be placed into a queue, where another service can pick them up and process them, which is exactly what's described in the scenario. The messages can be in XML format or any other format that suits your needs.
- D. Azure Notification Hubs: This is for sending push notifications to mobile devices. It's not designed for inter-service communication.

Therefore, the correct Answer is:

C. Azure Queue Storage.

upvoted 5 times

 **Tikalosh** Most Recent 1 month, 4 weeks ago

Selected Answer: C

Correct answer selected, same as various others, either Queue Storage or Service Bus - Queue Storage for this one.

upvoted 2 times

You have an on-premises Microsoft SQL Server 2008 instance that hosts a 50-GB database.

You need to migrate the database to an Azure SQL managed instance. The solution must minimize downtime.

What should you use?

- A. Azure Migrate

- B. Azure Data Studio
- C. WANdisco LiveData Platform for Azure
- D. SQL Server Management Studio (SSMS)

Correct Answer: B

Community vote distribution

B (57%)	A (39%)	4%
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✉️  **psr83** Highly Voted 1 year ago

Selected Answer: B

Migration guide: SQL Server to Azure SQL Managed Instance

Prerequisites

To migrate your SQL Server to Azure SQL Managed Instance, make sure you have:

- 1.Chosen a migration method and the corresponding tools for your method.
- 2.Install the Azure SQL migration extension for Azure Data Studio.
- 3.Created a target Azure SQL Managed Instance
4. Configured connectivity and proper permissions to access both source and target.
5. Reviewed the SQL Server database engine features available in Azure SQL Managed Instance.
<https://learn.microsoft.com/en-us/azure/azure-sql/migration-guides/managed-instance/sql-server-to-managed-instance-guide?view=azuresq>

upvoted 17 times

✉️  **lombri** Highly Voted 1 year ago

Selected Answer: A

Azure Data Studio

Is a lightweight multi-platform database tool for managing SQL Server instances and databases. While it can be used for migrations, it is not specifically designed for this purpose and does not provide the same level of automation and ease of use as Azure Migrate.

upvoted 11 times

✉️  **NotMeAnyWay** 10 months ago

You mean B. Azure Data Studio

upvoted 4 times

✉️  **Lazylinux** Most Recent 1 week, 3 days ago

Selected Answer: B

i'm at my wits end with Microsoft endlesssssss tools methods features!! How far is Venus!!

I was so sure answer was A as MS seem to recommend this path for anything on-prem to Azure but after reading the link below i have sadly confusingly shockingly choose B as the answer

it is applicable to both Azure SQL instance and MI as i read both, check the left side for both types

<https://learn.microsoft.com/en-us/azure/azure-sql/migration-guides/database/sql-server-to-sql-database-guide?view=azuresql>

upvoted 1 times

✉️  **LGWJ12** 4 weeks, 1 day ago

Selected Answer: C

It's C. WANdisco LiveData Platform for Azure. Check this.

<https://azure.microsoft.com/en-us/blog/migrate-your-hadoop-data-lakes-with-wandisco-livedata-platform-for-azure/>

<https://learn.microsoft.com/en-us/azure/storage/blobs/migrate-gen2-wandisco-live-data-platform>

upvoted 1 times

✉️  **LGWJ12** 4 weeks, 1 day ago

I apologize for any confusion. Let me clarify why C. WANdisco LiveData Platform for Azure is not the recommended choice for minimizing downtime during database migration:

WANdisco LiveData Platform is primarily designed for continuous data replication across different environments, including on-premises and cloud. It ensures data consistency and availability by synchronizing data in real-time. However, it is not specifically tailored for database migrations.

While WANdisco LiveData Platform can be useful for maintaining data consistency during ongoing operations, it does not provide the necessary features for a seamless migration process.

Azure Data Studio Solution: On the other hand, the Azure SQL Migration extension for Azure Data Studio is specifically designed for seamless migrations with minimal disruption. It provides step-by-step guidance, assessment, and online migration options, ensuring a smooth transition.

So, Correct Answer it's B. no C.

upvoted 1 times

✉️  **ahmedkmj** 1 month, 2 weeks ago

Selected Answer: B

Correct Answer

upvoted 1 times

✉️  **rumino** 1 month, 3 weeks ago

Selected Answer: B

<https://learn.microsoft.com/en-us/sql/sql-server/migrate/dma-azure-migrate-compare-migration-tools?view=sql-server-ver16#quick-comparison>
Use Azure Migrate in the following scenarios:

Easily migrate SQL Server databases to Azure SQL Database without the need for complex scripts or manual steps.

Migrate small or large databases.

upvoted 1 times

✉️  **rumino** 1 month, 3 weeks ago

Use Azure Migrate in the following scenarios:

Assess and discover your SQL Server data estate.

Get Azure SQL deployment recommendations, target sizing, and monthly estimates.

Lift your entire data estate to SQL Server on Azure VMs.

upvoted 1 times

✉️  **01111010** 2 months, 1 week ago

Selected Answer: B

Per Microsoft's migration matrix Azure Data Studio is compatible with SQL Managed Instance. See the link below:

<https://learn.microsoft.com/en-us/sql/sql-server/migrate/dma-azure-migrate-compare-migration-tools?view=sql-server-ver16#quick-comparison>

Capability Azure Migrate DMA SSMA DMS DEA Azure Data Studio xtn

SQL Managed No Yes No Yes No Y

upvoted 2 times

✉️  **glynglyn84** 5 months ago

Answer B: Azure SQL migration extension for Azure Data Studio - migration with near-zero downtime. taken from <https://learn.microsoft.com/us/azure/azure-sql/migration-guides/managed-instance/sql-server-to-managed-instance-guide?view=azuresql>

upvoted 2 times

 **Paul_white** 5 months ago

Selected Answer: B

To migrate your SQL Server 2008 database to an Azure SQL managed instance with minimal downtime, you should use Azure Data Studio¹².

Here are the steps you need to follow:

1. Choose a migration method and the corresponding tools for your method.
2. Install the Azure SQL migration extension for Azure Data Studio¹.
3. Create a target Azure SQL Managed Instance¹.
4. Configure connectivity and proper permissions to access both source and target¹.

So, the correct answer is B. Azure Data Studio**. Please note that you should also review the SQL Server database engine features available in Azure SQL Managed Instance to validate the supportability of your migration target².

upvoted 2 times

 **PMPft17** 5 months ago

Azure Migrate doesn't cater to SQL Server migrations. For that Azure Data Studio or from previous answers SQL Server Migration Assistant would be useful to migrate to a Managed Instance.

upvoted 1 times

 **a03** 5 months, 2 weeks ago

Azure Database Migration Service is part of Azure Migrate hub, for one side...

Database Migration Service powers the "Azure SQL Migration" extension for Azure Data Studio, for another side... but... Azure portal, PowerShell and Azure CLI can also be used to access Database Migration Service as well... so, generally it should be A (Azure Migrate)... because B (Azure Data Studio) is only one particular case...

upvoted 1 times

 **GODUSGREAT** 5 months, 3 weeks ago

Selected Answer: B

B is correct

upvoted 1 times

 **Som_triv** 7 months, 1 week ago

<https://learn.microsoft.com/en-us/azure/dms/dms-tools-matrix>

Azure SQL MI - Azure Migrate for Discovery/inventory

Azure SQL Migration extension - Target and SKU recommendation.

upvoted 1 times

 **xRiot007** 1 month, 2 weeks ago

Azure Data Studio can also target managed instances.

upvoted 2 times

 **burns25** 7 months, 2 weeks ago

Selected Answer: A

Please refer to this overview and focus on Managed Instance which will not available for Azure Migrate.

<https://learn.microsoft.com/en-us/sql/sql-server/migrate/dma-azure-migrate-compare-migration-tools?view=sql-server-ver16#quick-comparison>

upvoted 7 times

 **Leocan** 7 months, 3 weeks ago

Question #94

Topic 4

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 Managed Instance Business Critical
- B. Azure SQL Managed Instance General Purpose
- C. Azure SQL Database Standard

D. Azure SQL Database Premium

Correct Answer: D

Community vote distribution

D (100%)

 **OrangeSG** Highly Voted 6 months, 1 week ago

Selected Answer: D

This question appears a lot of time, with different options as answer.
Always the answers are (in this order):

1. Azure SQL Database Premium
2. Azure SQL Database Serverless
3. Azure SQL Database Business Critical

If there is only one of them, select it. If there are 2 of them, remember the order, and select the option in the order showed here.

upvoted 10 times

 **joesatriani** Most Recent 7 months, 1 week ago

Selected Answer: D

This is another duplicate question.

upvoted 1 times

 **c7d45f4** 7 months, 3 weeks ago

Selected Answer: D

Now its D,Azure SQL Database Premium

upvoted 1 times

 **RouterWifi443** 7 months, 4 weeks ago

Selected Answer: D

Duplicated

upvoted 1 times

 **acepanda99** 8 months, 1 week ago

Duplicated Question

upvoted 1 times

Question #95

Topic 4

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 Basic
- C. Azure SQL Managed Instance General Purpose
- D. Azure SQL Database Hyperscale

Correct Answer: A

Community vote distribution

A (100%)

 **OrangeSG** Highly Voted 6 months, 1 week ago

Selected Answer: A

This question appears a lot of time, with different options as answer.

Always the answers are (in this order):

1. Azure SQL Database Premium
2. Azure SQL Database Serverless
3. Azure SQL Database Business Critical

If there is only one of them, select it. If there are 2 of them, remember the order, and select the option in the order showed here.

upvoted 6 times

 **Tplenty** Most Recent 5 months, 3 weeks ago

This question better come out in the exam because it's repeated multiple times

upvoted 2 times

 **c7d45f4** 7 months, 3 weeks ago

Selected Answer: A

Azure SQL Database Business Critical is the one

upvoted 1 times

 **joesatriani** 10 months ago

Selected Answer: A

Answer is A, I just tested also check this table this took me to the answer

<https://docs.microsoft.com/en-us/azure/azure-sql/database/service-tiers-general-purpose-business-critical#service-tier-comparison>

fast failover only applies for biz critical and only azure sql support and

Would you like to make this database zone redundant? is only available for normal Azure SQL and not for managed instances.

upvoted 2 times

 **csol** 1 year ago

Selected Answer: A

A - Hyperscale is more expensive and the other options doesn't support zone outage

upvoted 1 times

Question #96

Topic 4

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 Queue Storage
- C. Azure Traffic Manager
- D. Azure Application Gateway

Correct Answer: B

Community vote distribution

B (100%)

 fred356 Highly Voted 12 months ago

asynchronously => queue

upvoted 5 times

 Tplenty Most Recent 5 months, 3 weeks ago

Azure Queue Storage

upvoted 1 times

 joesatriani 7 months, 1 week ago

Selected Answer: B

This is another duplicate question.

upvoted 1 times

Question #97

Topic 4

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 Application Gateway
- B. Azure Data Lake
- C. Azure Queue Storage
- D. Azure Blob Storage

Correct Answer: C

Community vote distribution

C (100%)

 **joesatriani** 7 months, 1 week ago

Selected Answer: C

This is another duplicate question.

upvoted 1 times

 **joesatriani** 7 months, 1 week ago

Selected Answer: C

This is another duplicate question.

upvoted 1 times

 **c7d45f4** 7 months, 3 weeks ago

Selected Answer: C

Azure Queue Storage is the one

upvoted 1 times

 **RouterWifi443** 7 months, 4 weeks ago

Selected Answer: C

The answer is always Azure Service Bus or Azure Queue Storage.

upvoted 2 times

 **Darkeh** 8 months, 2 weeks ago

The answer is always Azure Service Bus or Azure Queue Storage.

upvoted 1 times

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 Blob Storage
- B. Azure Data Lake
- C. Azure Queue Storage
- D. Azure Service Fabric

Correct Answer: C

Community vote distribution

C (100%)

✉️  **InvalidNickname** Highly Voted 9 months, 1 week ago

Repeated like a 1000 times. I might forget my name but won't forget the ans to this question.

upvoted 22 times

✉️  **niket67** 4 months, 3 weeks ago

HAHAHHAHAAHA

upvoted 1 times

✉️  **Poluxzin** Most Recent 2 weeks, 6 days ago

Gravei essa pergunta para o resto da vida :D

upvoted 1 times

✉️  **ehabsoa** 3 months, 1 week ago

Okey believe me I get it!

upvoted 1 times

✉️  **cesco1286** 4 months, 3 weeks ago

I swear if I dont get this in the exam... :D

upvoted 1 times

✉️  **joesatriani** 7 months, 1 week ago

Selected Answer: C

This is another duplicate question.

upvoted 1 times

✉️  **c7d45f4** 7 months, 3 weeks ago

Selected Answer: C

Azure Queue Storage is the one

upvoted 1 times

✉️  **gca22** 1 year ago

C. Azure Queue Storage

upvoted 3 times

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 Serverless
- B. Azure SQL Managed Instance General Purpose
- C. Azure SQL Database Basic
- D. Azure SQL Database Business Critical

Correct Answer: A

Community vote distribution

A (50%) D (50%)

✉ **yonie** Highly Voted 1 year ago

There are *16* variations of this question. Each of them offering different possible answers.

The answer priority is as follows. If it exists then choose it. If it doesn't, proceed to the next priority. Sometimes both appear in the same question, so make sure to select the higher priority.

1. Azure SQL Database Premium
2. Azure SQL Database Serverless
3. Azure SQL Database Business Critical

upvoted 99 times

✉ **HarryRhodes** 4 weeks, 1 day ago

Good stuff yonie, you beat me to it.

upvoted 1 times

✉ **betterthanlife** 1 year ago

It is true, thanks yonie.

upvoted 4 times

✉ **SandCloud** 12 months ago

thanks yonie

upvoted 5 times

✉ **Azwscp2023** Highly Voted 6 months, 1 week ago

Selected Answer: D

D. Azure SQL Database Business Critical

Azure SQL Database Serverless is a good option for workloads that experience variable or unpredictable traffic. However, it does not offer the same level of high availability as Azure SQL Database Business Critical.

upvoted 5 times

✉ **dejedi** Most Recent 3 weeks, 5 days ago

Selected Answer: A

I would go for this serie of question with this priority order Premium , serverless , business Critical
In this case Serverless

upvoted 1 times

✉  **varinder82** 1 month, 1 week ago

Final Answer:

Cost Of : Premium < Serverless < Business Critical < HyperScale

upvoted 3 times

✉  **[Removed]** 3 months, 3 weeks ago

Selected Answer: A

1. Azure SQL Database Premium
2. Azure SQL Database Serverless
3. Azure SQL Database Business Critical

upvoted 3 times

✉  **joesatriani** 7 months, 1 week ago

Selected Answer: A

This is another duplicate question.

upvoted 2 times

✉  **c7d45f4** 7 months, 3 weeks ago

Selected Answer: A

Azure SQL Database Serverless is the one

upvoted 2 times

✉  **Leocan** 7 months, 3 weeks ago

Selected Answer: A

Serverless is a better answer than Business Critical.

upvoted 2 times

✉  **SDiwan** 2 months, 1 week ago

No serverless can not guarantee no data loss failover

upvoted 2 times

✉  **reddyreddy** 8 months ago

thanks a lot yonie,

upvoted 1 times

✉  **tdctdc** 9 months, 2 weeks ago

Selected Answer: A

Serverless.

upvoted 2 times

✉  **AdelM** 9 months, 2 weeks ago

Selected Answer: D

should be D

upvoted 3 times

✉  **skye_winnn** 11 months ago

The general purpose service tier zone redundant availability is only available in some regions, not all of the regions:

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell#general-purpose-service-tier-zone-redundant-availability>

upvoted 1 times

✉  **sankar07** 1 year ago

Selected Answer: D

Several times repeated and now the answer is A. It should be D.

upvoted 4 times

✉  **sankar07** 1 year ago

I take it back. the order is Premium - Serverless - Business Critical. Answer is right. A.

upvoted 4 times

✉  **przema86** 1 year ago

Why these question is constantly repeating? last 10x times a correct answer on the same question was "Azure SQL Database Business Critical"

upvoted 2 times

 **gca22** 1 year ago

D. Azure SQL Database Business Critical
upvoted 4 times

Question #100

Topic 4

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

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

Which deployment option should you use?

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

Correct Answer: D

Community vote distribution

D (81%)

C (19%)

 P8r Highly Voted 1 year ago

Selected Answer: D

In order of preference:

Premium > Serverless > Business Critical

upvoted 24 times

 reddyreddy 7 months, 2 weeks ago

thank u

upvoted 1 times

 eoicp Highly Voted 11 months, 3 weeks ago

I think it's serverless. Servers the requirement AT less cost

upvoted 6 times

 techtest848 Most Recent 2 months, 2 weeks ago

Selected Answer: C

I believe the order or preference for this question is Serverless, Premium and Business Critical (from least expensive to Most expensive)

upvoted 1 times

 joesatriani 7 months, 1 week ago

Selected Answer: D

1. Azure SQL Database Premium 2. Azure SQL Database Serverless 3. Azure SQL Database Business Critical

upvoted 1 times

 pxo1000 1 year ago

Selected Answer: C

Please explain how Premium is a better answer here than serverless? If serverless supports zone availability, it can failover without any data loss.

upvoted 5 times

 resser19 11 months, 1 week ago

Here are some factors to consider when choosing between Azure Database Serverless and Premium:

Database size: If your database is small, Azure Database Serverless is the most cost-effective option.

Database usage: If your database is used infrequently, Azure Database Serverless is the most cost-effective option.

Database requirements: If your database has specific requirements, such as high availability or disaster recovery, Azure Database Premium may be the best option.

Ultimately, the best way to choose between Azure Database Serverless and Premium is to consider your specific needs and requirements.

Question #101

Topic 4

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 Notification Hubs
- B. Azure Queue Storage
- C. Azure Blob Storage
- D. Azure Application Gateway

Correct Answer: B

Community vote distribution

B (100%)

 **psr83** Highly Voted  1 year ago

Selected Answer: B

Azure Queue Storage / Azure Service Bus are used asynchronously to communicate transaction information by using XML messages.
upvoted 6 times

 **joesatriani** Most Recent  7 months, 1 week ago

Selected Answer: B

1. Azure SQL Database Premium 2. Azure SQL Database Serverless 3. Azure SQL Database Business Critical
upvoted 1 times

 **c7d45f4** 7 months, 3 weeks ago

Selected Answer: B

Azure Queue Storage > correct
upvoted 1 times

 **Madbo** 11 months, 1 week ago

Azure Queue Storage provides a reliable messaging solution for asynchronous communication between different components of an application. It allows messages to be stored in a queue and processed later by the receiving service. XML messages can be stored as messages in the Azure Queue Storage, enabling asynchronous communication between the cloud services.

upvoted 1 times

 **JohnPhan** 1 year ago

Selected Answer: B

Answer is B

upvoted 2 times

Question #102

Topic 4

HOTSPOT

-

You are developing a multi-tier app named App1 that will be hosted on Azure virtual machines. The peak utilization periods for App1 will be from 8 AM to 9 AM and 4 PM to 5 PM on weekdays.

You need to deploy the infrastructure for App1. The solution must meet the following requirements:

- Support virtual machines deployed to four availability zones across two Azure regions.
- Minimize costs by accumulating CPU credits during periods of low utilization.

What is the minimum number of virtual networks you should deploy, and which virtual machine size should you use? To answer, select the appropriate options in the answer area.

Answer Area

Number of virtual networks:

- 1
- 2
- 3
- 4

Virtual machine size:

- A-Series
- B-Series
- D-Series
- M-Series

Answer Area

Number of virtual networks:

- 1
- 2
- 3
- 4

Correct Answer:

Virtual machine size:

- A-Series
- B-Series
- D-Series
- M-Series

✉️  **MegaBro** Highly Voted 9 months, 3 weeks ago
GIVEN SOLUTION IS CORRECT according to GPT-4

Number of Virtual networks:

✓ 2

Virtual machine size

✓ B-Series

Explanation:

Number of Virtual networks:

You need at least one virtual network per Azure region for the local resources, hence since you have two Azure regions, you'll need at least 2 virtual networks.

Virtual machine size:

The B-Series VM size is the best choice here because of the ability to bank CPU credits during periods of low utilization. The B-series are burstable VMs that accumulate CPU credits during idle times and then consume these credits during periods of high CPU usage. This matches well with your requirement to minimize costs by accumulating CPU credits during periods of low utilization. Other series like A-Series, D-Series and M-Series do not have this functionality.

upvoted 15 times

✉️  **memo454** Highly Voted 7 months, 2 weeks ago
This question is on today's exam 17-09-2023.

upvoted 8 times

✉️  **trferreiraBR** Most Recent 4 months, 1 week ago
Correct.. Number of Virtual networks: 2

Question #103

Topic 4

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 Bus
- B. Azure Blob Storage
- C. Azure Notification Hubs
- D. Azure Application Gateway

Correct Answer: A

Community vote distribution

A (100%)

✉️  **m1dp** Highly Voted 8 months, 3 weeks ago

Selected Answer: A

Always service bus or queue storage for asynchronous & XML. By now, 20 variants of this question have passed, I better get one of these on exam.

upvoted 5 times

✉️  **reddyreddy** Most Recent 7 months, 2 weeks ago

how many variants of this question there are?? really 20 o maybe more

upvoted 3 times

Question #104

Topic 4

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

You plan to migrate SQL1 to Azure SQL Managed Instance.

You need to perform an offline migration of SQL1. The solution must minimize administrative effort.

What should you include in the solution?

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

Correct Answer: B

Community vote distribution

B (96%)

4%

 **NotMeAnyWay** Highly Voted 9 months, 3 weeks ago

Selected Answer: B

The best solution for this scenario is:

- B. Azure Database Migration Service

Azure Database Migration Service is a tool that helps you simplify, guide, and automate your database migration to Azure. Specifically for SQL Server to Azure SQL Managed Instance migrations, it provides an option for offline (one-time) migrations which is suitable for your scenario.

The Data Migration Assistant (DMA) tool can be used beforehand to assess your SQL Server databases for any feature parity and compatibility issues that could impact the database functionality in Azure SQL Managed Instance.

Azure Migrate is a service that helps you assess and migrate applications, infrastructure, and data, but it doesn't specifically cater to SQL Server migrations. SQL Server Migration Assistant (SSMA) is more suited for migrations to Azure SQL Database and does not support Azure SQL Managed Instance.

upvoted 22 times

 **accon100** 9 months ago

Thanks NotMeAnyWay, can you share me all the question of this dump. I don't know but I cannot see some Questions ...

upvoted 1 times

 **husam421** Highly Voted 7 months, 1 week ago

Azure Database Migration Service (classic) - SQL scenarios are on a deprecation path. Since August 1, 2023, you're no longer able to create Database Migration Service (classic) resources for SQL Server scenarios from Azure portal. The service will be retired on March 15, 2026 for all customers. You can migrate to Azure SQL Database using the latest version of Azure Database Migration Service, which is available as an extension in Azure Data Studio, or by using Azure PowerShell and Azure CLI. For more information, see Retirement notice: Database Migration Service (classic).

upvoted 5 times

 **Azure2020** Most Recent 1 week, 2 days ago

Selected Answer: B

DMA is needed if you want to assess before migration with DMS. Alternatively, if you use the Azure SQL Migration extension in Azure Data Studio, you can run assessments and migrations in a single place. The Data Migration Assistant provides seamless assessments of SQL Server on-premises and upgrades to later versions of SQL Server or migrations to SQL Server on Azure VMs or Azure SQL Database. It also helps you upgrade to a modern data platform by detecting compatibility issues that can impact database functionality in your new version of SQL Server or Azure SQL Database.

upvoted 1 times

✉️  **Azure2020** 1 week, 2 days ago

DMA is needed if you want to assess before migration with DMS. Alternatively, if you use the Azure SQL Migration extension in Azure Data Studio, you can run assessments and migrations in a single place. The Data Migration Assistant provides seamless assessments of SQL Server on-premises and upgrades to later versions of SQL Server or migrations to SQL Server on Azure VMs or Azure SQL Database. It also helps you upgrade to a modern data platform by detecting compatibility issues that can impact database functionality in your new version of Server or Azure SQL Database.

upvoted 1 times

✉️  **Lazylinux** 1 week, 2 days ago

Selected Answer: B

Given answer B is correct,

Considering MS have so many tools and features it is more confusing than ever, i found great link that compare the 3 answers BCD hope it helps
<https://techcommunity.microsoft.com/t5/microsoft-data-migration-blog/differentiating-microsoft-s-database-migration-tools-and/ba-p/36852>

upvoted 1 times

✉️  **rumin0** 1 month, 3 weeks ago

Selected Answer: B

Use the Database Migration Service in the following scenarios:

Migrate both databases to Azure SQL, especially at scale, and for extensive (in terms of number and size of databases) migrations.

Migrate databases to Azure Database.

<https://learn.microsoft.com/en-us/sql/sql-server/migrate/dma-azure-migrate-compare-migration-tools?view=sql-server-ver16#quick-compari>

upvoted 1 times

✉️  **husam421** 7 months, 1 week ago

Selected Answer: D

<https://learn.microsoft.com/en-us/sql/sql-server/migrate/dma-azure-migrate-compare-migration-tools?view=sql-server-ver16#quick-compari>

upvoted 1 times

✉️  **seong** 5 months, 2 weeks ago

DMA does not support database migrations to Azure SQL Managed Instance. Use the Azure SQL migration extension for Azure Data Studio instead, which supports both online and offline database migrations to Azure SQL Managed Instance.

<https://learn.microsoft.com/en-us/sql/dma/dma-overview?view=sql-server-ver16>

upvoted 2 times

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 Bus
- B. Azure Data Lake
- C. Azure Traffic Manager
- D. Azure Notification Hubs

Correct Answer: A

Community vote distribution

A (100%)

 **chair123** 1 month, 2 weeks ago

Selected Answer: A

people don't even comment or vote at this point lol
upvoted 1 times

 **Darkeh** 8 months, 2 weeks ago

The answer is always Azure Service Bus or Azure Queue Storage.
upvoted 4 times

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 Bus
- B. Azure Data Lake
- C. Azure Application Gateway
- D. Azure Notification Hubs

Correct Answer: A

Community vote distribution

A (100%)

 **olivier13** 6 months, 1 week ago

Examtopic please stop spam with repetitive questions.
upvoted 1 times

 **dorl** 5 months, 2 weeks ago

Agree.
I'm gonna be crazy due to so many same questions,
Or is it training to see how much mental pain you can endure?
upvoted 1 times

 **tigerz** 8 months ago

Selected Answer: A

A. Azure Service Bus

What is Azure Service Bus?

Data is transferred between different applications and services using messages. A message is a container decorated with metadata, and contains data. The data can be any kind of information, including structured data encoded with the common formats such as the following on JSON, XML, Apache Avro, Plain Text.

<https://learn.microsoft.com/en-us/azure/service-bus-messaging/service-bus-messaging-overview>

upvoted 1 times

 **Darkeh** 8 months, 2 weeks ago

The answer is always Azure Service Bus or Azure Queue Storage.
upvoted 2 times

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

Correct Answer: A

Community vote distribution

A (100%)

 **InvalidNickname** Highly Voted  9 months, 1 week ago

Choice should be :

- 1) SQL DB Premium
- 2) SQL DB Serverless
- 3) SQL DB Business Critical

upvoted 10 times

 **AndPorks** 4 months, 3 weeks ago

Exatamente

upvoted 2 times

 **ssmit** 4 months, 2 weeks ago

You got 2 business critial.

The SQL DB is a cheaper version and require less administration then the SQL Manged Instance.

upvoted 1 times

 **LGWJ12** Most Recent  4 weeks, 1 day ago

Selected Answer: A

1. Azure SQL Database Premium
2. Azure SQL Database Serverless
3. Azure SQL Database Business Critical

Premium < Serverless < Business Critical < HyperScale

upvoted 1 times

 **katonab** 1 month ago

Selected Answer: A

Correct: A. SQL DB Business Critical
yepp, not the first question of sort...

upvoted 1 times

 **ziggy1117** 4 months, 3 weeks ago

Choice should be :

- 1) SQL DB Premium
- 2) SQL DB Serverless / General Purpose
- 3) SQL DB Business Critical

upvoted 2 times

DRAG DROP

You plan to deploy an infrastructure solution that will contain the following configurations:

- External users will access the infrastructure by using Azure Front Door.
- External user access to the backend APIs hosted in Azure Kubernetes Service (AKS) will be controlled by using Azure API Management.
- External users will be authenticated by an Azure AD B2C tenant that uses OpenID Connect-based federation with a third-party identity provider.

Which function does each service provide? To answer, drag the appropriate functions to the correct services. Each function 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.

Functions

Protection against Open Web Application Security Project (OWASP) vulnerabilities

IP filtering on a per-API level

Validation of Azure B2C JSON Web Tokens (JWTs)

Answer Area

Front Door:

API Management:

Answer Area

Correct Answer: Front Door:

Validation of Azure B2C JSON Web Tokens (JWTs)

API Management:

IP filtering on a per-API level

 **MenadeCai** Highly Voted 7 months, 1 week ago

Correct answers should be:

- Front Door --> OWASP
- APIM --> Validation JWT

upvoted 30 times

✉️  **Som_triv**  7 months, 1 week ago

Front Door - OWASP with WAF
APIM - JWT VALIDATION and IP filtering
<https://learn.microsoft.com/en-us/azure/api-management/ip-filter-policy>
<https://learn.microsoft.com/en-us/azure/api-management/validate-jwt-policy>
upvoted 15 times

✉️  **marcellov** 7 months, 1 week ago

I wasn't sure I could select 2 functions for APIM but indeed that is the right answer.
upvoted 2 times

✉️  **mmarkiew** 5 months ago

Is IP filtering even needed for this solution, given it's B2C? Why would we want to restrict IP addresses?
upvoted 1 times

✉️  **Lazylinux**  1 week, 2 days ago

Given answer is incorrect,
The first one is obvious as it is one of functions of Azure FD ->OWASP

2nd API management does both JWT VALIDATION and IP filtering however JWT VALIDATION comes first, however there are number of tiers & hence some may not support IP filtering => Consumption, Developer, Basic, Standard , Premium, IsolatedPreview
Follow below

upvoted 1 times

✉️  **Lazylinux** 1 week, 2 days ago

All requests from client applications first reach the API gateway, which then forwards them to respective backend services. It enables consistent configuration of routing, security, throttling, caching, and observability.

Specifically, the gateway:

- *Acts as a facade to backend services by accepting API calls and routing them to appropriate backends
- *Verifies API keys and other credentials such as JWT tokens and certificates presented with requests
- *Enforces usage quotas and rate limits
- *Optionally transforms requests and responses as specified in policy statements
- *If configured, caches responses to improve response latency and minimize the load on backend services
- *Emits logs, metrics, and traces for monitoring, reporting, and troubleshooting

upvoted 1 times

✉️  **9b03b96** 3 weeks, 4 days ago

Appeared on the test, 3 April, 24. Answered Front Door -> OWASP and APIM -> Validation JWT. Passed with 840.
upvoted 3 times

✉️  **varinder82** 1 month ago

Final Answer:

- Front Door --> OWASP
- APIM --> Validation JWT

upvoted 1 times

✉️  **Fidel_104** 1 month, 3 weeks ago

Got this on today's exam (March of 2024), answered OWASP / JWT and passed the exam.
Thanks guys for the votes & comments, this was a useful learning resource.
upvoted 2 times

✉️  **177c705** 2 months ago

Front Door - OWASP with WAF
APIM - JWT VALIDATION and IP filtering !!
upvoted 1 times

✉️  **[Removed]** 3 months, 3 weeks ago

Since we don't know the SKU for the Azure Front Door deployment (not all tiers support WAF, only the premium SKU does that), I tend to agree with:

Front Door: IP Filtering on a per-API level
API Management: JWT validation
upvoted 1 times

✉️  **Santosh4u** 4 months, 3 weeks ago

Looks like the given answer is correct:
<https://learn.microsoft.com/en-us/azure/architecture/solution-ideas/articles/protect-backend-apis-azure-management>
upvoted 3 times

✉️  **BShelat** 4 months, 3 weeks ago

Front Door SKU (Classic, standard or Premium) information is not given and we cannot assume that it is Premium SKU. Only Premium SKU has WAF so protection against OWASP is ruled out as it is function of WAF. Front Door provides IP Filtering per API level but cannot validate B2C JWTs. API management can validate B2C JWTs.

upvoted 2 times

✉️  **BShelat** 4 months, 3 weeks ago

Azure Front Door has three SKUs. Classic, Standard and Premium. In this question SKU information is not given. Classic version just do load balancing of https traffic across regions. We need CDN & WAF as additional components if it is Classic SKU. Standard SKU is basically Azure Front Door classic + CDN and Premium SKU = standard + WAF. Considering this fact I would rule out mapping the Function "Protection (OWASP) vulnerabilities" to Front Door because WAF performs that and we do not have enough information of Front Door SKU here. So answers given here are correct.

upvoted 1 times

✉️  **Paul_white** 5 months ago

1. **Protection against Open Web Application Security Project (OWASP) Vulnerabilities**: This function is provided by **Azure Front Door**. It offers platform-level protection against network-level DDoS attacks¹. It also provides a Web Application Firewall².

2. **IP Filtering on a per-API level**: This function is provided by **Azure API Management**. It allows you to manage and secure your APIs, including IP filtering⁶.

3. **Validation of Azure B2C JSON Web Tokens(JWTs)**: This function is also provided by **Azure API Management**. It supports authentication by relying on industry standards such as OAuth 2.0 and OpenID Connect^[^10^].

upvoted 3 times

✉️  **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 4 times

✉️  **Elecktrus** 7 months ago

A complicated question.

Box 2 is clear, it's Validation of Azure B2C. Front Door can't validate token and it is a requirement

Box 1, Front Door can do both things (Protect from Owasp vulnerabilities and filter by IP).

But:

- Front Door only can filter by the origin IP, not for the destination IP (that is, the Per-API level commented)

- the question say that "External user access to the backend APIs hosted in Azure Kubernetes Service (AKS) will be controlled by using Azure Management", so if API Management do it, we don't need filter the IP

So, i think that right answers are:

Box1 - FrontDoor => Protect against OWASP Vulnerabilities

Box2 - API Management => Validation token JWT

upvoted 4 times

✉️  **z** 6 months ago

The trick is that both can block by IP, but the answer offers only Per-API level.

FrontDoor => IP Filtering

API Management => Validation token JWT

<https://learn.microsoft.com/en-AU/azure/api-management/api-management-policies>

OWASP is not applicable here.

The given answer is correct.

upvoted 1 times

✉️  **z** 6 months ago

Sorry, the default answer is not correct, mine is.

FrontDoor => IP Filtering

API Management => Validation token JWT

upvoted 1 times

✉️  **z** 6 months ago

This article shows that Front Door can do both too

<https://learn.microsoft.com/en-us/azure/active-directory-b2c/custom-domain>

upvoted 1 times

 **HeroDad** 7 months ago

It was on exam today.

Front Door: IP Filtering

<https://learn.microsoft.com/en-us/azure/web-application-firewall/afds/waf-front-door-configure-ip-restriction>

APIM: JWT

Trick questions. it's not asking for vulnerabilities so OWASP doesn't apply.

upvoted 5 times

 **mmarkiew** 5 months ago

I disagree with your first answer. Both Front Door and APIM support IP filtering, but I don't see why that's needed for this solution given it's supporting a B2C scenario. On the other hand, you're going to want OWASP vulnerability protection via Front Door WAF.

upvoted 1 times

Question #109

Topic 4

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

Your company plans to deploy various Azure App Service instances that will use Azure SQL databases. The App Service instances will be deployed at the same time as the Azure SQL databases.

The company has a regulatory requirement to deploy the App Service instances only to specific Azure regions. The resources for the App Service instances must reside in the same region.

You need to recommend a solution to meet the regulatory requirement.

Solution: You recommend using an Azure Policy initiative to enforce the location of resource groups.

Does this meet the goal?

A. Yes

B. No

Correct Answer: A

Community vote distribution

B (97%)

3%

 **marcellov** Highly Voted 7 months, 1 week ago

Selected Answer: B

It seems like a trick question:

"You recommend using an Azure Policy initiative to enforce the location of resource groups".

You need to enforce the location of the App Service instances, and not of resource groups.

The right answer was in the question #57: "You recommend using an Azure Policy initiative to enforce the location".

upvoted 17 times

 **Azure2020** Most Recent 2 days, 22 hours ago

Given answer is correct!

Once your business rules have been formed, the policy definition or initiative is assigned to any scope of resources that Azure supports, such management groups, subscriptions, resource groups, or individual resources. The assignment applies to all resources within the Resource Manager scope of that assignment.

<https://learn.microsoft.com/en-us/azure/governance/policy/concepts/scope>

upvoted 1 times

 **Lazylinux** 1 week, 2 days ago

Selected Answer: B

Given answer A is incorrect

The Policy enforcement should target more App services NOT RG

upvoted 1 times

 **dejedi** 3 weeks, 5 days ago

Selected Answer: B

No , should be the location of the resources not the resource groups

upvoted 2 times

 **ayadmawla** 4 months ago

Selected Answer: A

The question is referring to a Policy Initiative that can have multiple policies. Whilst Allowed Location policy does not control RGs, there is another policy for that purpose.

Resource groups are excluded from "Allowed locations" policy. If you want to restrict the locations where resource groups can be created, please use "Allowed locations for resource groups" policy.

For reference, below is the Description of Allowed locations policy definition:

This policy enables you to restrict the locations your organization can specify when deploying resources. Use to enforce your geo-compliance requirements. Excludes resource groups, Microsoft.AzureActiveDirectory/b2cDirectories, and resources that use the 'global' region.

See: <https://learn.microsoft.com/en-us/answers/questions/1193471/azure-policy-on-location-is-not-affecting-to-resou>

upvoted 1 times

 **cesco1286** 4 months, 3 weeks ago

Selected Answer: B

Resources can be created in a region different than the RG's one

upvoted 2 times

 **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 3 times

 **Tplenty** 5 months, 3 weeks ago

The answer is A, it's a repeated question

upvoted 1 times

 **GODUSGREAT** 5 months, 3 weeks ago

Selected Answer: B

tricky question

upvoted 2 times

 **maxuermann** 6 months, 2 weeks ago

Selected Answer: B

The location of rg has nothing to do with the location of the resources inside the rg. So the answer is no --> B

upvoted 4 times

 **joesatriani** 7 months, 1 week ago

Host stateless web apps with Azure subscriptions = create Azure Traffic Manager profiles

Deploy to multiple Azure regions Support rate limiting = Azure Front Door

Deploy App Service instances only to specific Azure regions = Azure Policy initiative

upvoted 2 times

✉️  **LavaPup** 7 months, 1 week ago
Yes. Pretty straight-forward I believe :)
upvoted 1 times

✉️  **sixlips** 7 months, 1 week ago

Question #110

Topic 4

Your on-premises datacenter contains a server that runs Linux and hosts a Java app named App1. App1 has the following characteristics:

- App1 is an interactive app that users access by using HTTPS connections.
- The number of connections to App1 changes significantly throughout the day.
- App1 runs multiple concurrent instances.
- App1 requires major changes to run in a container.

You plan to migrate App1 to Azure.

You need to recommend a compute solution for App1. The solution must meet the following requirements:

- The solution must run multiple instances of App1.
- The number of instances must be managed automatically depending on the load.
- Administrative effort must be minimized.

What should you include in the recommendation?

- A. Azure Batch
- B. Azure App Service
- C. Azure Kubernetes Service (AKS)
- D. Azure Virtual Machine Scale Sets

Correct Answer: D

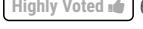
Community vote distribution

B (76%)	D (22%)	3%
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✉️  **Geekyhunchback**  6 months, 4 weeks ago

Selected Answer: B

In order to minimize administrative effort, I believe Azure App Service is the right answer
upvoted 17 times

✉️  **sumaju**  6 months, 1 week ago

Selected Answer: D

It is not a containerized application. So AKS is out of question. VMSS is the only solution considering the scaling requirements.
upvoted 5 times

✉️  **cesco1286** 4 months, 3 weeks ago

have you ever ever deployed an app service? Do you know that you can have auto-scaling based on many metrics?
upvoted 3 times

✉️  **arnitjoe**  2 days, 16 hours ago

This is a tricky one because minimize admin effort is stated but not clearly defined. Is it minimize admin effort to migrate or maintain or both? migrate or both I would lean towards VMSS. If maintain, then Azure App Service.
upvoted 1 times

✉️  **Lazylinux** 1 week, 2 days ago

Selected Answer: B

The competition between App service and VMSS as AKS is out due to major change to do so
App service is PaaS and VMSS is IaaS but administrative effort to be minimized, also you can run Multiple apps per instance by using App Service plan, also Web hosting is builtin, application composition is predominantly Apps and Containers

VMSS => Azure VMs can automatically scale by using virtual machine scale sets. This capability isn't strictly a PaaS, but it's the type of management feature found in PaaS. There's a tradeoff between control and ease of management. IaaS gives the most control, flexibility, and portability, but you have to provision, configure, and manage the VMs and network components you create hence is very administrative intensive. Also application composition is AGNOSTIC hence more complex for this scenario

So based on the above App services is winner (B)

upvoted 1 times

✉️  **rumin0** 1 month, 3 weeks ago

Selected Answer: B

App Service app does not need to be containerized

upvoted 1 times

✉️  **[Removed]** 3 months, 3 weeks ago

Selected Answer: B

If your application requires major changes to run in a container, and you want to minimize administrative effort, Azure App Service is likely the better choice. It abstracts away many infrastructure management tasks and provides a simpler deployment model for applications.

Azure Virtual Machine Scale Sets might be more suitable when you need more control over the virtual machines, have specific configuration requirements, or if you need to run the application on a specific operating system.

upvoted 3 times

✉️  **ziggyl1117** 4 months, 3 weeks ago

Selected Answer: D

D. Azure Virtual Machine Scale Sets

Administration effort must be minimized. Switching to Azure App service would require code modifications

upvoted 3 times

✉️  **Hammer84** 6 months, 1 week ago

Selected Answer: C

Azure Batch (Option A) is more suitable for high-performance computing workloads and batch processing rather than running interactive, stateless applications like App1. Azure App Service (Option B) is designed for hosting web applications, but it may not provide the same level of control and flexibility as AKS, especially for complex applications like App1. Azure Virtual Machine Scale Sets (Option D) can be used for scalable VM deployments, but it doesn't provide the same level of container orchestration and automatic scaling that AKS offers for containerized applications.

So, for the given scenario and requirements, Azure Kubernetes Service (AKS) is the recommended solution.

upvoted 1 times

✉️  **sumaju** 6 months, 1 week ago

"App1 requires major changes to run in a container". AKS can run only containerized applications. So VMSS is the only option.

upvoted 2 times

✉️  **pabsinaz** 6 months, 2 weeks ago

Selected Answer: B

Absolutely Azure App Service.

"requires major changes to run in a container" so Azure Kubernetes Service discarded. No need for Azure Batch. Azure Virtual Machine Scale Sets is bigger a burden and setup.

upvoted 4 times

✉️  **pabsinaz** 6 months, 2 weeks ago

Also, Azure App Service has horizontal autoscaling to adjust the number of instances automatically based on thresholds.

upvoted 2 times

✉️  **alfaAzure** 6 months, 3 weeks ago

Selected Answer: B

B.

Echo what Geekyhunchback said.

upvoted 2 times

HOTSPOT

You have an Azure App Service web app named Webapp1 that connects to an Azure SQL database named DB1. Webapp1 and DB1 are deployed to the East US Azure region.

You need to ensure that all the traffic between Webapp1 and DB1 is sent via a private connection.

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

NOTE: Each correct selection is worth one point.

Answer Area

Create a virtual network that contains at least:

1 subnet
2 subnets
3 subnets

From the virtual network, configure name resolution to use:

A private DNS zone
A public DNS zone
The Azure DNS Private Resolver

Answer Area

Create a virtual network that contains at least:

1 subnet
2 subnets
3 subnets

Correct Answer:

From the virtual network, configure name resolution to use:

A private DNS zone
A public DNS zone
The Azure DNS Private Resolver

 **OrangeSG** Highly Voted 6 months, 1 week ago

Box 1: 2 subnets

Create a virtual network that contains at least 2 subnets. One for the Azure App Service VNet Integration and another for the Azure Private Link.

Box 2: a private DNS zone

Configure name resolution to use a private DNS zone. This is necessary for the web app to work with Azure DNS private zones.

upvoted 16 times

✉  **kodathedog** 6 months ago

Private Endpoints do not require their own subnet - see <https://learn.microsoft.com/en-us/azure/private-link/private-link-faq> :
"Do I require a dedicated subnet for Private Endpoints?
No. You don't require a dedicated subnet for Private Endpoints. You can choose a Private Endpoint IP from any subnet from the VNet where your service is deployed."

upvoted 5 times

✉  **fodocel235** 5 months ago

You are correct that Private Endpoint does NOT require a dedicated subnet, but when you use Web Apps inside a VNet, then delegation (integration) comes into place. If the subnet of the Web App has a delegation (Microsoft.Web/serverFarms) nothing can be created in that subnet besides the "Microsoft.Web/serverFarms". So it is NOT possible to create Private Endpoint in a delegated subnet.

So in this case you need a VNet. In that VNet you create a subnet for Web Apps with delegation. You need another subnet for the Private Endpoint to connect to the SQL database.

Answer:

2 subnets (1x Private Endpoint; 1x Web Apps)

A private DNS zone

upvoted 13 times

✉  **Lazylinux** Most Recent 1 week, 2 days ago

2 Subnets - vNET integration + Private EP (Note subnet is not dedicated to EP and can be other subnet but not Integration subnet hence another subnet must be provisioned),
Private EP require private DNS in this scenario

upvoted 1 times

✉  **cris_exam** 1 month ago

Box1: 2 VNets

Box2: Private DNS zone

I have been working with PE/PLs for the past 3 years, so MS tells us that PEs don't go along with delegated subnets as in this case with the webapp and the SQL PE.

Any Subnet that has been delegated (as in webapp VNET integration), doesn't support to have a PE inside it.

<https://learn.microsoft.com/en-us/azure/virtual-network/subnet-delegation-overview#effect-of-subnet-delegation-on-your-subnet>

"Each Azure service defines their own deployment model, where they can define what properties they do or don't support in a delegated subnet for injection purposes as follows:

Can't be used with a private endpoint if the subnet is delegated."

upvoted 2 times

✉  **cris_exam** 1 month ago

sorry = correction

Box1: 2 Subnets

upvoted 2 times

✉  **go4adil** 2 weeks ago

Correct. Box1: 2 Subnets

"Virtual network integration depends on a dedicated subnet."

<https://learn.microsoft.com/en-us/azure/app-service/overview-vnet-integration>

upvoted 1 times

✉  **kodjoa2024** 1 month, 1 week ago

Azure App Service VNet Integration required dedicated subnet and we need second subnet for IP address of Private Link.

upvoted 1 times

✉  **cesco1286** 4 months, 3 weeks ago

People that respond in here never used Azure. You need Virtual network integration for a Web App to talk with a service inside a Vnet. And you need a different subnet for the SQL Private endpoint. So you need at the very least 2 subnets to have this working

upvoted 4 times

✉  **kodathedog** 5 months, 3 weeks ago

This is a nasty question.

1 subnet would be sufficient if the App only needs inbound traffic, because Private Endpoints only support Inbound traffic - "Private endpoint only used for incoming traffic to your app. Outgoing traffic won't use this private endpoint. You can inject outgoing traffic to your network in a different subnet through the virtual network integration feature." - <https://learn.microsoft.com/en-us/azure/app-service/overview-private-endpoint>

So you need Virtual Network Integration as well as a private endpoint for the app, to enable the app to talk to the database.

For example, see <https://gregorsuttie.com/2023/01/16/azure-web-app-using-azure-sql-using-private-endpoints/>

upvoted 3 times

✉  **a03** 5 months, 2 weeks ago

in this example are 2 subnets
webappsSubnet: 10.1.2.0/24
sqlSubnet: 10.1.1.0/24

upvoted 3 times

✉  **JazzyStahh** 6 months ago

2 subnets. one for the DB and one for the app service. <https://learn.microsoft.com/en-us/azure/app-service/overview-vnet-integration#subnets>
requirements

upvoted 2 times

✉  **randy0077** 6 months ago

given answer is correct.

upvoted 1 times

✉  **pabsinaz** 6 months, 2 weeks ago

Correct answer.
1 subnet and Private DNS zone.

upvoted 3 times

Your on-premises network contains an Active Directory Domain Services (AD DS) domain. The domain contains a server named Server1. Server1 contains an app named App1 that uses AD DS authentication. Remote users access App1 by using a VPN connection to the on-premises network.

You have an Azure AD tenant that syncs with the AD DS domain by using Azure AD Connect.

You need to ensure that the remote users can access App1 without using a VPN. The solution must meet the following requirements:

- Ensure that the users authenticate by using Azure Multi-Factor Authentication (MFA).
- Minimize administrative effort.

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.

Answer Area

In Azure AD:

- A managed identity
- An access package
- An app registration
- An enterprise application

On-premises:

- A server that runs Windows Server and has the Azure AD Application Proxy connector installed
- A server that runs Windows Server and has the on-premises data gateway (standard mode) installed
- A server that runs Windows Server and has the Web Application Proxy role service installed

Answer Area

In Azure AD:

- A managed identity
- An access package
- An app registration
- An enterprise application

Correct Answer:

On-premises:

- A server that runs Windows Server and has the Azure AD Application Proxy connector installed
- A server that runs Windows Server and has the on-premises data gateway (standard mode) installed
- A server that runs Windows Server and has the Web Application Proxy role service installed

 **matanzpl** Highly Voted 6 months, 3 weeks ago

Correct answers

box1: ent app (required for MFA in conditional access)

box2: azure ad app proxy

upvoted 11 times

 **prshntdxt7** Most Recent 1 month, 1 week ago

answers are correct, there's another similar mcq in earlier topics with same answer.

upvoted 1 times

 **techtest848** 2 months, 2 weeks ago

Provided answers are correct - <https://learn.microsoft.com/en-us/entra/identity/app-proxy/application-proxy-add-on-premises-application#an-on-premises-app-to-microsoft-entra-id>

upvoted 3 times

 **OrangeSG** 6 months, 1 week ago

Box 1: An app registration

This allows App1 to use Azure AD for authentication.

<https://learn.microsoft.com/en-us/answers/questions/270680/app-registration-vs-enterprise-applications>

Box 2: a server that runs windows server and has the Azure AD Application Proxy connector installed

On-premises: A server that runs Windows Server and has the Azure AD Application Proxy connector installed. This allows App1 to be accessed from outside the on-premises network without a VPN.

Question #113

Topic 4

You have an Azure subscription that contains an Azure Kubernetes Service (AKS) instance named AKS1. AKS1 hosts microservice-based APIs that are configured to listen on non-default HTTP ports.

You plan to deploy a Standard tier Azure API Management instance named APIM1 that will make the APIs available to external users.

You need to ensure that the AKS1 APIs are accessible to APIM1. The solution must meet the following requirements:

- Implement MTLS authentication between APIM1 and AKS1.
- Minimize development effort.
- Minimize costs.

What should you do?

- A. Implement an external load balancer on AKS1.
- B. Redeploy APIM1 to the virtual network that contains AKS1.
- C. Implement an ExternalName service on AKS1.
- D. Deploy an ingress controller to AKS1.

Correct Answer: D

Community vote distribution

D (100%)

 **OrangeSG** Highly Voted 6 months ago

Selected Answer: D

Mutual TLS (mTLS) authentication is natively supported by Azure API Management and can be enabled in Kubernetes by installing an Ingress Controller. This approach simplifies the microservices as the authentication will be performed in the Ingress Controller. This solution also meets the requirements of implementing mTLS authentication between APIM1 and AKS1, minimizing development effort, and minimizing costs.

Please note that while deploying an ingress controller to AKS1, you should ensure that it supports mTLS. Examples of enterprise-level ingress controllers that support mTLS include NGINX and AGIC1.

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

upvoted 6 times

 **Lazylinux** Most Recent 1 week, 1 day ago

Selected Answer: D

Given answer D is correct , as note is that Ingress Controller is part of App GWY L7 Load Balancer

The Application Gateway Ingress Controller (AGIC) is a Kubernetes application, which makes it possible for Azure Kubernetes Service (AKS) customers to leverage Azure's native Application Gateway L7 load-balancer to expose cloud software to the Internet. AGIC monitors the Kubernetes cluster it's hosted on and continuously updates an Application Gateway, so that selected services are exposed to the Internet.

<https://learn.microsoft.com/en-us/azure/application-gateway/ingress-controller-overview>

upvoted 1 times

 **a03** 5 months ago

Ingress controller is correct answer.

There is picture describing the architecture (API Management > Ingress Controller > AKS cluster):

<https://learn.microsoft.com/en-us/azure/architecture/solution-ideas/articles/mutual-tls-deploy-aks-api-management>

upvoted 4 times

 **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 3 times

 **KakashiCopyNinja** 6 months, 3 weeks ago

Selected Answer: D

D

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

upvoted 4 times

 **KakashiCopyNinja** 6 months, 3 weeks ago

D is correct.

<https://learn.microsoft.com/en-us/azure/api-management/api-management-kubernetes#option-2-install-an-ingress-controller>

upvoted 4 times

You need to recommend a solution to integrate Azure Cosmos DB and Azure Synapse. The solution must meet the following requirements:

- Traffic from an Azure Synapse workspace to the Azure Cosmos DB account must be sent via the Microsoft backbone network.
- Traffic from the Azure Synapse workspace to the Azure Cosmos DB account must NOT be routed over the internet.
- Implementation effort 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.

Answer Area

When provisioning the Azure Synapse workspace:

Configure a dedicated managed virtual network.
Disable public network access to the workspace endpoints.
Enable the use of the Azure AD authentication.

When configuring the Azure Cosmos DB account, enable:

Managed private endpoints
Server-level firewall rules
Service endpoint policies

Answer Area

When provisioning the Azure Synapse workspace:

Configure a dedicated managed virtual network
Disable public network access to the workspace endpoints.
Enable the use of the Azure AD authentication.

Correct Answer:

When configuring the Azure Cosmos DB account, enable:

Managed private endpoints
Server-level firewall rules
Service endpoint policies

 **Elecktrus** Highly Voted  6 months, 3 weeks ago

In the exam 11-Oct. Answers are right

upvoted 8 times

 **OrangeSG** Highly Voted  6 months ago

Box 1: Configure a dedicated managed virtual network

Provision the Azure Synapse workspace with the option to Configure a dedicated managed virtual network. This will ensure that the traffic between Azure Synapse and Azure Cosmos DB is routed through the Microsoft backbone network and not over the internet.

Box 2: Managed private endpoints

Configure the Azure Cosmos DB account to use Managed private endpoints. This will allow Azure Synapse to securely connect to Azure Cosm DB using a private link.

upvoted 8 times

 **Lazylinux** Most Recent  1 week, 1 day ago

Given answer is correct

upvoted 1 times

 **trferreiraBR** 4 months, 1 week ago

Correct.

Box 1: Configure a dedicated managed virtual network

Managed private endpoints are only supported in Azure Synapse workspaces with a Managed workspace Virtual Network.

Box 2: Managed private endpoints

Question #115

Topic 4

You have an Azure subscription that contains an Azure Cosmos DB for NoSQL account named account1 and an Azure Synapse Analytics workspace named Workspace1. The account1 account contains a container named Contained that has the analytical store enabled.

You need to recommend a solution that will process the data stored in Contained in near-real-time (NRT) and output the results to a data warehouse in Workspace1 by using a runtime engine in the workspace. The solution must minimize data movement.

Which pool in Workspace1 should you use?

- A. Apache Spark
- B. serverless SQL
- C. dedicated SQL
- D. Data Explorer

Correct Answer: B

Community vote distribution

A (43%)	D (43%)	14%
---------	---------	-----

 **varinder82** 3 weeks, 5 days ago

Final Answer : D

upvoted 1 times

 **LGWJ12** 4 weeks, 1 day ago

Selected Answer: A

A: Apache Spark, it's in Azure Synapse Analytics is an analytics engine that facilitates large-scale data processing. It can read data from Cosm DB in near-real-time, process it, and then output the results to a data warehouse in the same Azure Synapse Analytics workspace. This minim data movement as the data processing and storage are happening within the same service (Azure Synapse Analytics).

upvoted 1 times

✉️  **masetromain** 1 month ago

Selected Answer: A

Apache Spark is a distributed processing framework that can handle near-real-time processing and is well-integrated with Azure Synapse Analytics. It can directly access data stored in Azure Cosmos DB analytical store without needing to move the data around. This minimizes data movement and provides efficient processing capabilities.

So, the correct answer is:

A. Apache Spark

upvoted 2 times

✉️  **azureworm** 1 month, 1 week ago

A is the correct answer <https://learn.microsoft.com/en-us/azure/cosmos-db/synapse-link-use-cases>

upvoted 1 times

✉️  **MohsenSic** 1 month, 1 week ago

I go with A:

Two reasons:

Synapse had Apache Spark,

Data explore is mainly for logs, refer to the bottom flowchart of the below link

<https://learn.microsoft.com/en-us/azure/data-explorer/data-explorer-overview>

upvoted 1 times

✉️  **varinder82** 1 month, 2 weeks ago

Final Answer :

D

upvoted 1 times

✉️  **Frank_2022** 1 month, 2 weeks ago

Selected Answer: C

Dedicated SQL pools are specifically designed for low-latency analytical workloads, making them ideal for processing data in near-real-time.

upvoted 1 times

✉️  **rumino** 1 month, 3 weeks ago

Selected Answer: D

Azure Data Explorer is a fully managed, high-performance, big data analytics platform that makes it easy to analyze high volumes of data in near real time. The Azure Data Explorer toolbox gives you an end-to-end solution for data ingestion, query, visualization, and management.

<https://learn.microsoft.com/en-us/azure/data-explorer/data-explorer-overview>

<https://learn.microsoft.com/en-us/azure/synapse-analytics/data-explorer/data-explorer-overview>

upvoted 1 times

✉️  **Frank_2022** 1 month, 3 weeks ago

Data Explorer is a powerful tool for querying data in Synapse Workspace, it's not designed for real-time data processing. I believe.

upvoted 1 times

✉️  **Felas** 1 month, 1 week ago

Azure Data Explorer is a fast, fully managed data analytics service for analyzing large volumes of streaming data from applications, websites, IoT devices, etc. in real time.

<https://azure.microsoft.com/es-es/products/data-explorer>

upvoted 1 times

✉️  **Frank_2022** 1 month, 4 weeks ago

I recommend using a dedicated SQL pool

Near-real-time processing: Dedicated SQL pools are specifically designed for low-latency analytical workloads, making them ideal for processing data in near-real-time.

Data minimization: Dedicated SQL pools are integrated with Workspace1, allowing for seamless data movement between the Cosmos DB analytical store and the data warehouse within the same workspace. This minimizes data movement and avoids the need for external data transfer processes.

Runtime engine: Dedicated SQL pools provide a T-SQL compatible query engine that can be used to interact with data stored in the data warehouse. This allows you to leverage familiar SQL syntax for data transformation and analysis.

upvoted 1 times

✉️  **Appon** 2 months, 1 week ago

Selected Answer: D

because of "near-real-time"

upvoted 2 times

✉️  **KeyMan** 3 months, 3 weeks ago

B. Serverless SQL pool

Reasoning:

Serverless SQL pool in Azure Synapse Analytics is designed to handle on-demand queries against large datasets, which is suitable for the NF processing requirement stated.

Minimal Data Movement: Using serverless SQL pool allows querying data in place without the need to move data into the pool, which aligns with the need to minimize data movement. It can directly query the Cosmos DB analytical store.

Integration with Cosmos DB Analytical Store: Serverless SQL pool has built-in integration with Azure Cosmos DB's analytical store, allowing efficient and performant processing of the data.

Apache Spark could also process the data, but it would involve more data movement compared to serverless SQL. Dedicated SQL pool requires pre-provisioned resources and wouldn't be as cost-effective for NRT scenarios. Data Explorer is not a compute pool within Azure Synapse Analytics.

upvoted 4 times

✉️  **deegadaze1** 3 months, 2 weeks ago

NO!

When to use Azure Synapse Data Explorer?

Use Data Explorer as a data platform for building near real-time log analytics and IoT analytics solutions to:

Consolidate and correlate your logs and events data across on-premises, cloud, and third-party data sources.

Accelerate your AI Ops journey (pattern recognition, anomaly detection, forecasting, and more).

Replace infrastructure-based log search solutions to save cost and increase productivity.

Build IoT analytics solutions for your IoT data.

Build analytics SaaS solutions to offer services to your internal and external customers.

Azure Data Explorer is a fully managed, high-performance, big data analytics platform that makes it easy to analyze high volumes of data in near real time. The Azure Data Explorer toolbox gives you an end-to-end solution for data ingestion, query, visualization, and management

upvoted 7 times

✉️  **deegadaze1** 3 months, 2 weeks ago

<https://learn.microsoft.com/en-us/azure/data-explorer/data-explorer-overview>

<https://learn.microsoft.com/en-us/azure/synapse-analytics/data-explorer/data-explorer-overview>

upvoted 6 times

✉️  **Fidel_104** 1 month, 3 weeks ago

Further supporting B - serverless SQL pool, the Azure Synapse Link guide for Cosmos DB also recommends serverless pools for the real-time operational reporting use-cases:

Source: <https://learn.microsoft.com/en-us/azure/cosmos-db/synapse-link-use-cases>

upvoted 1 times

DRAG DROP

You have an on-premises datacenter named Site1. Site1 contains a VMware vSphere cluster named Cluster1 that hosts 100 virtual machines. Cluster1 is managed by using VMware vCenter.

You have an Azure subscription named Sub1.

You plan to migrate the virtual machines from Cluster1 to Sub1.

You need to identify which resources are required to run the virtual machines in Azure. The solution must minimize administrative effort.

What should you configure? To answer, drag the appropriate resources to the correct targets. Each resource 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.

Resources

An Azure Migrate appliance

An Azure Migrate project

An Azure VMware Solution private cloud

An Azure VMware Solution host

Answer Area

Sub1:

Cluster1:

Answer Area**Correct Answer:**

Sub1: An Azure VMware Solution private cloud

Cluster1: An Azure Migrate project

 **Mc71** Highly Voted 3 months, 4 weeks ago

Answers should be:

Sub: Azure Migrate project

Cluster: Azure Migrate appliance

Assuming that the agentless migration is the optimal way to reduce admin effort. You need a Migrate Project in Azure, and a Migrate Appliance (VM) in the on-prem host to discover and assess the rest of the VMs. As per: <https://learn.microsoft.com/en-us/azure/migrate/server-migrate-overview#compare-deployment-steps>

upvoted 15 times

 **[Removed]**  3 months, 3 weeks ago

IMO this should be:

Sub1: Azure Migrate Project

Cluster: Azure Migrate appliance

I've done this kind of migrations several times in production environments and I can tell you that the effort is not that big when you use Azure Migrate.

I never used stuff like VMware Solution host/private cloud so I am not sure how that would work but when you have Azure Migrate which is free for 180 days and is natively supported + has a ton of features to assist with the migration, I don't know why you would go for anything else

upvoted 11 times

 **MHguy**  3 days, 2 hours ago

in the Exam April 2024

upvoted 1 times

 **Lazylinux** 1 week, 1 day ago

As per others comments given answer is incorrect

Subscription: Azure Migrate project

VMware Cluster: Azure Migrate appliance

upvoted 1 times

 **varinder82** 3 weeks, 5 days ago

Final Answer:

Answers should be:

Sub: Azure Migrate project

Cluster: Azure Migrate appliance

upvoted 1 times

 **varinder82** 1 month ago

Final Answer:

1. Sub: Azure Migrate project

2. Cluster: Azure Migrate appliance

upvoted 1 times

 **Hiteshp2288** 2 months ago

<https://learn.microsoft.com/en-us/azure/migrate/tutorial-discover-vmware>

Sub: Azure Migrate project

Cluster: Azure Migrate appliance

upvoted 2 times

 **fe0b3b4** 2 months, 3 weeks ago

Be careful! The question is not about performing the migration but about assessing the required resources. So it should be:

Sub: Azure Migrate Project

Cluster: Azure Migrate Appliance

See: <https://learn.microsoft.com/en-us/azure/migrate/tutorial-assess-vmware-azure-vm>

upvoted 4 times

 **trferreiraBR** 3 months, 4 weeks ago

Sub1: An Azure VMware Solution host

Azure VMware Solution is a pre-requisite to provides Azure VMware Solution private cloud.

An Azure VMware Solution host is the infrastructure layer

An Azure VMware Solution private cloud is the software layer

<https://learn.microsoft.com/en-us/azure/azure-vmware/introduction>

<https://learn.microsoft.com/en-us/azure/azure-vmware/concepts-private-clouds-clusters>

Cluster1: An Azure Migrate project

<https://learn.microsoft.com/en-us/azure/migrate/tutorial-migrate-vmware-agent>

upvoted 1 times

 **trferreiraBR** 3 months, 4 weeks ago

Question #117

Topic 4

HOTSPOT

-

Your on-premises datacenter contains a server named Server1 that runs Microsoft SQL Server 2022. Server1 contains a 30-TB database named DB1 that stores customer data. Server1 runs a custom application named App1 that verifies the compliance of records in DB1. App1 must run on the same server as DB1.

You have an Azure subscription.

You need to migrate DB1 to Azure. The solution must minimize administrative effort.

To which service should you migrate DB1, and what should you use to perform the migration? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

Migrate to:

- Azure SQL Database
- Azure SQL Managed Instance
- SQL Server on Azure Virtual Machines

By using:

- Azure Database Migration Service
- Azure Migrate
- The Azure SQL Migration extension for Azure Data Studio

Migrate to:

Correct Answer:

By using:

bazylson Highly Voted 1 month ago

According to this: <https://learn.microsoft.com/en-us/sql/sql-server/migrate/dma-azure-migrate-compare-migration-tools?view=sql-server-ver16#quick-comparison>
only Azure Migrate & DMA can handle a SQL Server migration to Azure VM. Since DMA option is not available, only Azure Migrate remains.
upvoted 5 times

arnitjoe Most Recent 1 day, 20 hours ago

Its SQL on Azure VM and Azure Migrate. Since the existing server has a custom app that must be installed on the local DB server and SQL is already SQL 2022 there is no need to do anything other than lift and shift. With that Azure Migrate to simply move the VM to Azure. Minimal Admin effort.
<https://learn.microsoft.com/en-us/azure/azure-sql/migration-guides/virtual-machines/sql-server-to-sql-on-azure-vm-migration-overview?view=azuresql>
upvoted 1 times

Lazylinux 1 week, 2 days ago

Agree with first box answer correct because of the App tied to the DB and hence SQL VM but
Second box i would chose AZ SQL Migration Extension for AZ Data Studio as per below snippet from MS Doco
The Azure SQL migration extension for Azure Data Studio provides a seamless wizard based experience to assess, get Azure recommendations and migrate your SQL Server databases on-premises to SQL Server on Azure Virtual Machines. Besides, highlighting any migration blockers or warnings, the extension also includes an option for Azure recommendations to collect your databases' performance data to recommend a right-sized Azure SQL Managed Instance to meet the performance needs of your workload (with the least price).

Follow below

upvoted 1 times

Lazylinux 1 week, 2 days ago

Azure Migrate When to use - Discovery and assess single databases or at scale from different environments.

Azure SQL Migration extension for Azure Data Studio when to use

- Migrate single databases or at scale.
- Offline mode only.

Supported sources:

- SQL Server (2008 onwards) on-premises, or on Azure Virtual Machines
- SQL Server on Amazon EC2
- Amazon RDS for SQL Server
- SQL Server on Google Compute Engine

upvoted 1 times

LGWJ12 4 weeks, 1 day ago

SQL Server on Azure Virtual Machines and Azure Database Migration Service.

Given the requirement that the custom application App1 must run on the same server as DB1, the best option is SQL Server on Azure Virtual Machines.

For the migration process, you should use Azure Database Migration Service because the Azure SQL Migration extension for Azure Data Studio is more suited for migrating to Azure SQL Database or Azure SQL Managed Instance and not to SQL server on Azure virtual machine.

upvoted 3 times

MohsenSic 1 month, 1 week ago

Sql database tier and DMS, 30Tb is only supported by databsetier

upvoted 1 times

- ✉  **kodjoa2024** 1 month, 1 week ago
for the second question it sound for me Azure Migrate because there also app to migrate.
upvoted 1 times
- ✉  **ahmedkmj** 1 month, 2 weeks ago
I would say also it should be Azure SQL migration extension for Azure Data Studio, according to Microsoft recommendations
<https://learn.microsoft.com/en-us/azure/azure-sql/migration-guides/virtual-machines/sql-server-to-sql-on-azure-vm-migration-overview?view=azuresql>
upvoted 2 times
- ✉  **rumin0** 1 month, 3 weeks ago
The first choice is easy, obviously we need VM to install additional app.
Regarding the second, I'd go for SQL Migration extension for Azure Data Studio. It seems to be all-in-one easy to use tool.
<https://learn.microsoft.com/en-us/azure-data-studio/extensions/azure-sql-migration-extension?tabs=connected>
upvoted 3 times
- ✉  **rumin0** 1 month, 1 week ago
For migration Azure Database Migration Service
<https://learn.microsoft.com/en-us/azure/migrate/migrate-services-overview#integrated-tools>
Data Studio is only for Azure SQL migration not MI or VM SQL. (link from the original comment)
upvoted 1 times
- ✉  **Lazylinux** 1 week, 2 days ago
Not correct read below
The Azure SQL migration extension for Azure Data Studio provides a seamless wizard based experience to assess, get Azure recommendations and migrate your SQL Server databases on-premises to SQL Server on Azure Virtual Machines. Besides, highlighting any migration blockers or warnings, the extension also includes an option for Azure recommendations to collect your databases' performance data to recommend a right-sized Azure SQL Managed Instance to meet the performance needs of your workload (with the least price).
upvoted 1 times
- ✉  **xRiot007** 1 month, 3 weeks ago
The second box is slightly ambiguous. Bot Azure Migrate and Azure Database Migration Service are correct. This is because the service sits inside the context of Azure Migrate.
upvoted 2 times
- ✉  **xRiot007** 1 month, 3 weeks ago
Thinking again, using the DMS might be more precise of a response, so that is more correct...
upvoted 2 times
- ✉  **Crossfader2208** 1 month, 3 weeks ago
given answer is correct.
upvoted 2 times

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

Correct Answer: B

Community vote distribution

B (100%)

 **rumin0** 1 month, 3 weeks ago

Selected Answer: B

SQL Database Business Critical as it's cheaper than Managed Instance Business Critical
upvoted 1 times

 **Crossfader2208** 1 month, 3 weeks ago

How many copies of this question ET is going to post here. That is the question.
upvoted 2 times

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 Log Analytics
- B. Azure Arc
- C. Azure Monitor metrics
- D. Azure Monitor action groups

Correct Answer: A

Community vote distribution

A (100%)

 **rumin0** 1 month, 3 weeks ago

Selected Answer: A

We want Activity Logs and they can be send to Log Analytics Workspace
<https://learn.microsoft.com/en-us/azure/azure-monitor/essentials/diagnostic-settings>

upvoted 1 times

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 Log Analytics
- B. Azure Arc
- C. Azure Analysis Services
- D. Azure Monitor action groups

Correct Answer: A

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 Log Analytics
- B. Azure Analysis Services
- C. Azure Monitor metrics
- D. Azure Monitor action groups

Correct Answer: A

 **PTark** 1 month, 1 week ago

If this question comes up twice in the Exam I will laugh my head off.

upvoted 2 times

 **LGWJ12** 4 weeks, 1 day ago

hahahah x2

upvoted 1 times

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 Premium
- C. Azure SQL Database Basic
- D. Azure SQL Database Hyperscale

Correct Answer: A

Community vote distribution

B (100%)

✉️  **Lazylinux** 1 week, 2 days ago

Selected Answer: B

I think B based on cost
upvoted 1 times

✉️  **Joonzz** 1 month, 2 weeks ago
What about recent update ?

Improve the resiliency of your General Purpose Azure SQL Managed Instances by upgrading to a zone-redundant configuration.
<https://azure.microsoft.com/en-au/updates/public-preview-azure-sql-updates-for-midmarch-2024/>

upvoted 1 times

✉️  **LGWJ12** 4 weeks, 1 day ago

While the General Purpose tier now supports zone-redundant configuration, it does not guarantee zero data loss in the event of a failover.
Business Critical tier, on the other hand, provides automatic failover within the same region without any data loss, which is one of your requirements.

upvoted 1 times

✉️  **rumin0** 1 month, 1 week ago

Still costs are Serverless < Premium DTU < General Purpose < General Purpose MI < Business Critical
upvoted 1 times

✉️  **dejedi** 1 month, 3 weeks ago

Selected Answer: B

Database premium is cheaper B
upvoted 2 times

✉️  **rumin0** 1 month, 3 weeks ago

Selected Answer: B

Premium is cheaper than Business Critical that is cheaper than Hyperscale
upvoted 1 times

✉️  **Frank_2022** 1 month, 3 weeks ago

Selected Answer: B

B should be the correct answer.
upvoted 2 times

✉️  **Crossfader2208** 1 month, 3 weeks ago

Selected Answer: B

The answer is incorrect. B is the correct answer. After dozens of variations of this question. How can it be? Really.
upvoted 2 times

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. Application Insights
- B. Azure Analysis Services
- C. Azure Advisor
- D. Azure Log Analytics

Correct Answer: D

Community vote distribution

D (100%)

 **Lazylinux** 1 week, 2 days ago

Selected Answer: D

D is correct as it collects AZ activity logs
upvoted 1 times

HOTSPOT

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

Name	Type	Description
contoso.com	Azure Private DNS zone	<i>None</i>
VNet1	Virtual network	Linked to contoso.com Peered with VNet2
VNet2	Virtual network	Linked to contoso.com Peered with VNet1
VNet3	Virtual network	Linked to contoso.com Isolated from VNet1 and VNet2
Workspace1	Log Analytics workspace	Stores logs collected from the virtual machines on all the virtual networks

VNet1, VNet2, and VNet3 each has multiple virtual machines connected. The virtual machines use the Azure DNS service for name resolution.

You need to recommend an Azure Monitor log routing solution that meets the following requirements:

- Ensures that the logs collected from the virtual machines and sent to Workspace1 are routed over the Microsoft backbone network
- Minimizes administrative effort

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

Answer Area

Minimum number of Azure Monitor Private Link Scope (AMPLS) objects:

1
2
3

Minimum number of private endpoints:

1
2
3

Answer Area

Minimum number of Azure Monitor Private Link Scope (AMPLS) objects:

1
2
3

Correct Answer:

Minimum number of private endpoints:

1
2
3

 **ubdubdoo** 3 weeks, 1 day ago

If your VNets share the same DNS configuration, you should use a single AMPLS for all of them
upvoted 1 times

 **cris_exam** 1 month ago

Box1: 1 AMPLS
Box2: 2 PEs

I tested this and used 1 AMPLS and 2 PEs.

As long as the DNS settings are correct and the PEs resolve for each VM fine without overlapping IPs, with just 1 AMPLS you can make this work to as many VNets you want.

The key idea here is to have the proper DNS private zone settings configured and of course VMs to have network connectivity to the PE.
upvoted 4 times

✉️  **varinder82** 1 month, 1 week ago

Final Answer:

1. 2

2. 2

upvoted 2 times

✉️  **Kbueno** 1 month, 2 weeks ago

It should be AMPLS 2 and Private endpoint 2 (because the peering with vnet1 and vnet2)

upvoted 2 times

✉️  **Frank_2022** 1 month, 3 weeks ago

box 1, AMPLS object should be: 2

One for VNet1 and VNet 2, since they are peered. And one for VNet3. It isolated from VNet1 and VNet2.

Here is explanation:

Peered networks

Network peering is used in various topologies, other than hub and spoke. Such networks can share each other's IP addresses, and most likely share the same DNS. In such cases, create a single private link on a network that's accessible to your other networks. Avoid creating multiple private endpoints and AMPLS objects because ultimately only the last one set in the DNS applies.

Isolated networks

If your networks aren't peered, you must also separate their DNS to use private links. After that's done, create a separate private endpoint for each network, and a separate AMPLS object. Your AMPLS objects can link to the same workspaces/components or to different ones.

Link from MS Learn:

<https://learn.microsoft.com/en-us/azure/azure-monitor/logs/private-link-design>

upvoted 2 times

✉️  **PRACKY** 1 month, 2 weeks ago

we have to consider this fact that VNet3 is connected to private DNS contoso.com

As per MS documentation , Isolated networks: If your networks aren't peered, you must also separate their DNS to use private links So basically on that I think AMPLS object should be: 1.

Please counter this reason.

upvoted 1 times

✉️  **cris_exam** 1 month ago

I agree with Pracky, 1 AMPLS presence is enough to satisfy this design and then 2 PEs, 1PE for VNET 1 & 2 (since they are peered) and 1PE for VNET 3.

Key point here is that as long as the FQDN resolves to the proper private IP of the PE it should work fine.

So separate DNS settings for VNET1&2 and VNET3 for this to work, and only 1 AMPLS required configured with Workspace1.

upvoted 2 times

✉️  **Crossfader2208** 1 month, 3 weeks ago

given answer is correct.

upvoted 1 times

✉️  **DH333** 1 month, 3 weeks ago

Shouldn't the answer be 2 AMPLS -2 Private Endpoint?? Because of the isolated VNET3, for that another AMPLS and a Private Endpoint is necessary

<https://learn.microsoft.com/en-us/azure/azure-monitor/logs/private-link-design>

upvoted 3 times

✉️  **rumino** 1 month, 3 weeks ago

Network peering is used in various topologies, other than hub and spoke. Such networks can share each other's IP addresses, and most likely share the same DNS. In such cases, create a single private link on a network that's accessible to your other networks. Avoid creating multiple private endpoints and AMPLS objects because ultimately only the last one set in the DNS applies.

So I'd agree that we need two private link connections thus 2 Link Scopes and 2 Endpoints

upvoted 2 times

✉️  **chair123** 1 month, 2 weeks ago

i agree with you. but don't know how to confirm!

upvoted 2 times

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

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

Which deployment option should you use?

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

Correct Answer: B

Community vote distribution

D (100%)

Frank_2022 Highly Voted 1 month, 3 weeks ago

Selected Answer: D

The given answer is wrong. It should be D (Azure SQL Database Remium).

upvoted 5 times

HarryRhodes 1 month, 2 weeks ago

Agreed. Only choose Business Critical in the absence of Premium in these questions.

upvoted 3 times

Lazylinux Most Recent 1 week, 2 days ago

Selected Answer: D

D meet the requirements

upvoted 1 times

HOTSPOT

You have 100 Azure Storage accounts.

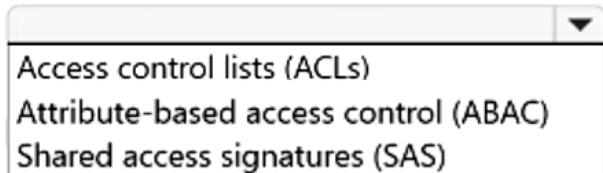
Access to the accounts is restricted by using Azure role-based access control (Azure RBAC) assignments.

You need to recommend a solution that uses role assignment conditions based on the tags assigned to individual resources within the storage accounts.

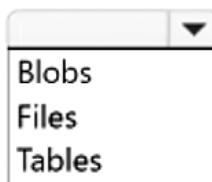
What should you include in the recommendation? To answer, select the appropriate options in the answer area.

Answer Area

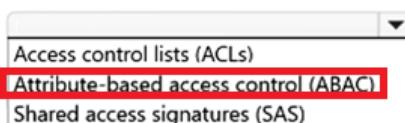
Implement role assignment conditions by using:



Assign permissions to:



Implement role assignment conditions by using:



Correct Answer:

Assign permissions to:



DH333 Highly Voted 1 month, 3 weeks ago

Given answer is correct

<https://techcommunity.microsoft.com/t5/microsoft-entra-blog/introducing-attribute-based-access-control-abac-in-azure/ba-p/2147069>
upvoted 7 times

Crossfader2208 Most Recent 1 month, 3 weeks ago

given answer is correct.

upvoted 4 times

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 Notification Hubs
- C. Azure Service Bus
- D. Azure Traffic Manager

Correct Answer: C

Topic 5 - Testlet 1

Introductory Info

Case Study -

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To start the case study -

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Overview -

Litware, Inc. is a medium-sized finance company that has a main office in Boston.

Existing Environment -

Identity Environment -

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

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

The litware.com tenant has a Conditional Access policy named Capolicy1. Capolicy1 requires that when users manage the Azure subscription for

a production environment by using the Azure portal, they must connect from a hybrid Azure AD-joined device.

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

Planned Changes -

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 AD-joined 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 to management groups.

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.

▪

Question

HOTSPOT -

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

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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

To register the users for Azure MFA, use:

Azure AD Identity Protection
Security defaults in Azure AD
Azure AD authentication methods policy

To enforce Azure MFA authentication, configure:

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

Correct Answer:

Answer Area

To register the users for Azure MFA, use:

Azure AD Identity Protection
Security defaults in Azure AD
Azure AD authentication methods policy

To enforce Azure MFA authentication, configure:

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

Box 1: Azure AD Identity Protection

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

Note: Policy configuration -

1. Navigate to the Azure portal.
2. Browse to Azure Active Directory > Security > Identity Protection > MFA registration policy.
3. Under Assignments
4. Users - Choose All users or Select individuals and groups if limiting your rollout.
5. Optionally you can choose to exclude users from the policy.
6. Enforce Policy - On
7. Save

Box 2: Grant control in capolicy1

The litware.com tenant has a Conditional Access policy named Capolicy1. Capolicy1 requires that when users manage the Azure subscription for a production environment by using the Azure portal, they must connect from a hybrid Azure AD-joined device.

Note: We need to configure the policy conditions for capolicy1 that prompt for MFA.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/howto-identity-protection-configure-mfa-policy>

<https://docs.microsoft.com/en-us/azure/active-directory/authentication/tutorial-enable-azure-mfa>

 Guest Highly Voted 1 year, 4 months ago

If it helps there seem to be only 3 case studies.

All the others have the same case, but different questions

Maybe the admins can merge this ?

topic 5: Litware

topic 6: Contoso

topic 7: Fabrikam

topic 8: Litware = topic 5

topic 9: Fabrikam = topic 7

topic 10: Contoso ltd = topic 6

topic 11: Fabrikam = topic 7

topic 12: Litware = topic 5

topic 13: Contoso ltd = topic 6

topic 14: Contoso ltd = topic 6

topic 15: Litware = topic 5

topic 16: Fabrikam = topic 7

upvoted 44 times

✉️  **OPT_001122** 1 year, 3 months ago

This is a great help!!!! . i added few more details into it - case study specific details

topic 5: Litware-Question #1-Page42

topic 8: Litware-Question #1-Page44

topic 8: Litware-Question #2-Page44

topic 8: Litware-Question #3-Page45

topic 8: Litware-Question #4-Page45

topic 8: Litware-Question #5-Page45

topic 12: Litware-Question #1-Page47

topic 15: Litware-Question #1-Page48

=====

Total = 8

upvoted 15 times

✉️  **OPT_001122** 1 year, 3 months ago

Total = 9

topic 5: Litware-Question #2-Page42

upvoted 3 times

✉️  **comoon** 1 year, 1 month ago

what is this, man?

upvoted 4 times

✉️  **Davin0406** Highly Voted  1 year, 6 months ago

Correct. appeared in exam, 10/14/2022. I passed with 946/1000 and there were only 1~2 new questions but others were all from AZ-305 dum
upvoted 27 times

✉️  **Lazylinux** Most Recent  6 days, 20 hours ago

Given Answer is correct

upvoted 1 times

✉️  **memo454** 7 months, 2 weeks ago

This Case study was in the Exam.

I passed the exam today 17-09-2023 with a score of 906/1000. Four new questions.! The team is easier than AZ-104.

A new question of hot spot related to FrontDoor and PIM, to drag the OWASP or Just-in Time.

Another question related to subnets and DNS.

upvoted 8 times

✉️  **NotMeAnyWay** 10 months ago

1. To register the users for Azure MFA, use: a. Azure AD identity Protection. Azure AD Identity Protection is a tool that allows organizations to discover, investigate, and remediate identity-based risks in their environment. It can help you manage the roll-out of Multi-Factor Authentication (MFA) registration by prompting users for registration during risk sign-in attempts.

2. To enforce Azure MFA authentication, configure: a. Grant control in capolicy1. Grant controls are used to enforce additional requirements the user must meet before they are granted access. You can enforce Azure MFA by setting it as a requirement in the Grant control settings of Capolicy1.

upvoted 6 times

✉️  **steel72** 1 year, 1 month ago

The provided answer is correct.

First box "Azure AD Identity Protection":

<https://learn.microsoft.com/en-us/azure/active-directory/identity-protection/howto-identity-protection-configure-mfa-policy>

Second box "Grant control in capolicy1":

7. Under Access controls > Grant, select Grant access, Require multifactor authentication, and select Select.

<https://learn.microsoft.com/en-us/azure/active-directory/conditional-access/howto-conditional-access-policy-all-users-mfa#create-a-conditional-access-policy>

upvoted 6 times

✉️  **globy118** 1 year, 2 months ago

appeared in exam 02/15/2023

upvoted 2 times

✉️  **OPT_001122** 1 year, 3 months ago

the given ans is correct

upvoted 1 times

Mo22 1 year, 3 months ago

I agree with both selections, the answer is correct to me
upvoted 1 times

[Removed] 1 year, 3 months ago

Given answer is correct, 'nuff said.
upvoted 1 times

Ghoshy 1 year, 4 months ago

One can define AD Authentication Method Policy which enforces MFA. So, it could be Azure AD Authentication Method Policy and Grant Con

You could navigate to Access Method for the AD by Security-> Manage Section-> Authentication Methods

upvoted 3 times

jellybiscuit 1 year, 7 months ago

Identity Protection
Grant control

Identity protection can create MFA registration policies if you have AD Premium P2. (which is mentioned in the study)

<https://learn.microsoft.com/en-us/azure/active-directory/identity-protection/howto-identity-protection-configure-mfa-policy>

<https://learn.microsoft.com/en-us/azure/active-directory/identity-protection/overview-identity-protection>

<https://learn.microsoft.com/en-us/azure/active-directory/authentication/tutorial-enable-azure-mfa>

upvoted 11 times

Neo2c 1 year, 7 months ago

It's security defaults for MFA
<https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/concept-fundamentals-security-defaults>

upvoted 2 times

Neo2c 1 year, 7 months ago

The Document Says the if we use Conditional access policy then it does not make sense to use Security defaults. so it should be the third option which enables the MS authenticator APP for MFA

upvoted 1 times

Som_triv 7 months, 1 week ago

You can use security defaults in Microsoft Entra tenants to quickly enable Microsoft Authenticator for all users. The scenario here is only for specific users, so that option is not valid.

upvoted 1 times

key000001 1 year, 7 months ago

1: Azure AD Identity Protection
2: Grant control in capolicy1
upvoted 4 times

One111 1 year, 8 months ago

First part does not make sense. Identity Protection has nothing to do with hybrid joined device or enforcing mfa to resource managers. It can provide risky policies or password protection.

upvoted 2 times

ServerBrain 1 year, 3 months ago

Because Microsoft is notorious for providing irrelevant info to try and throw you off, focus on the buzzwords. By focusing on those buzzwords the answer should be easier to formulate..

upvoted 1 times

jellybiscuit 1 year, 7 months ago

<https://learn.microsoft.com/en-us/azure/active-directory/identity-protection/howto-identity-protection-configure-mfa-policy>

It does if you have Azure AD Premium P2

upvoted 2 times

Introductory Info

Case Study -

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Overview -

Litware, Inc. is a medium-sized finance company that has a main office in Boston.

Existing Environment -

Identity Environment -

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

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

The litware.com tenant has a Conditional Access policy named Capolicy1. Capolicy1 requires that when users manage the Azure subscription for a production environment by using the Azure portal, they must connect from a hybrid Azure AD-joined device.

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
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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

Planned Changes -

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 AD-joined 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 to management groups.

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.

-

Question

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: A

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>

Community vote distribution

A (93%)

7%

✉️  **Davin0406**  1 year, 6 months ago

Selected Answer: A

This case study appeared in exam, 10/14/2022. I passed with 946/1000 and there were only 1~2 new questions but others were all from AZ-3 dump.

upvoted 36 times

✉️  **AzureJobsTillRetire** 1 year, 4 months ago

Your contributions are much appreciated

upvoted 5 times

✉️  **Kikota12** 1 year, 1 month ago

He posts this in every comment, i think we understood

upvoted 5 times

✉️  **AHUI** 1 year ago

appreciated your feedback Davin0406. keep it up

upvoted 2 times

 **Mwavy** 1 year, 6 months ago

Well, we are tired of your comments on every question that you passed.

You are adding no value to this dump.

upvoted 40 times

 **MarkMac** 1 year, 4 months ago

Totally disagree. Helps validate the accuracy of the post. Please keep it up Davin0406.

upvoted 14 times

 **EXzw** 1 year, 1 month ago

Agree. keep it up Davin0406.

upvoted 3 times

 **Mo22** 1 year, 3 months ago

wow, just no comments ... how can you be so disrespectful, he is adding a great a value

upvoted 7 times

 **ExamTopicsTST** 1 year, 5 months ago

No value? The lad is giving you heads up this is case study was seen on recent exam. Why would you not find value in that? And the fact that they got a high score, if they saw a question, and agreed with the answer, then I'd probably take note of this and for sure study this the exam. We know there are not this many questions on the exam. So appreciate those that come back to help others. Geez.

upvoted 24 times

 **ExamTopicsTST** 1 year, 5 months ago

I will confirm, after passing w/903 on 11/13, this case study was the one that I was presented w/8 questions from this dump.

upvoted 4 times

 **ExamTopicsTST** 1 year, 5 months ago

My bad...CORRECTION...it was the next case study with Fabrikam that had the App1 and App2 scenario.

upvoted 3 times

 **ianzzy** 1 year, 4 months ago

Hey mate did you studied the 304 dump as well or only this one?

upvoted 1 times

 **zellck** Highly Voted 1 year, 2 months ago

Selected Answer: A

A is the answer.

<https://learn.microsoft.com/en-us/azure/storage/blobs/imutable-storage-overview>

Immutable storage for Azure Blob Storage enables users to store business-critical data in a WORM (Write Once, Read Many) state. While in a WORM state, data cannot be modified or deleted for a user-specified interval. By configuring immutability policies for blob data, you can protect your data from overwrites and deletes.

upvoted 9 times

 **zellck** Most Recent 1 year, 2 months ago

Same as Question 1.

<https://www.examtopics.com/discussions/microsoft/view/67635-exam-az-305-topic-5-question-1-discussion>

upvoted 2 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: A

A. Create an access policy for the blob service.

upvoted 2 times

 **janvandermerwer** 1 year, 3 months ago

Selected Answer: A

I'm going to go with A - Seems to be "most" correct.

upvoted 2 times

 **marcellov** 7 months, 1 week ago

Agree with you. A most precise answer would be retention policy or immutability policies. Anyway, it is the closest.

upvoted 1 times

 **MadSysadmin** 1 year, 3 months ago

Selected Answer: B

Azure resource locks can do this
upvoted 1 times

 **Villa76** 1 year, 4 months ago

access policy is the right answer because resource lock will not achieve the time based retention which is required here.Have a look here you understand all :<https://learn.microsoft.com/en-us/azure/storage/blobs/immutable-policy-configure-version-scope?tabs=azure-portal#configurable-default-time-based-retention-policy>

upvoted 3 times

 **Born_Again** 1 year, 4 months ago

Selected Answer: A

100% A is the right choice!
upvoted 1 times

 **CLToh** 1 year, 6 months ago

Selected Answer: B

Why not B since the explanation is about applying resource lock?
As an administrator, you can lock a subscription, resource group, or resource to prevent other users in your organization from accidentally deleting or modifying critical resources. The lock overrides any permissions the user might have.
upvoted 3 times

 **FabrityDev** 1 year, 3 months ago

Because you don't want to lock the resource, only the data in it, specifically in a storage.

upvoted 2 times

 **randomaccount123** 1 year, 6 months ago

That's used for the actual resource in Azure mate. Access policies are used for the actual data in the containers.
upvoted 11 times

 **Snownoodles** 1 year, 6 months ago

Selected Answer: A

Given answer is correct
upvoted 1 times

 **kay000001** 1 year, 7 months ago

Selected Answer: A

A. Create an access policy for the blob service.
upvoted 1 times

 **kay000001** 1 year, 7 months ago

Selected Answer: A

A. Create an access policy for the blob service.
upvoted 1 times

Topic 6 - Testlet 10

Question #1

Topic 6

Introductory Info

Case Study -

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Overview -

Contoso, Ltd. is a research company that has a main office in Montreal.

Existing Environment -

Technical Environment -

The on-premises network contains a single Active Directory domain named contoso.com.

Contoso has a single Azure subscription.

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.

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:

Connections to App1 must pass through a web application firewall (WAF).

Connections to App1 must be active-active load balanced between instances.

All connections to App1 from North America must be directed to the East US region. All other connections must be directed to the West Europe region.

Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location.

App2 -

App2 will be a .NET app hosted in App Service that requires a Windows runtime. 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.

You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

A staging instance of a new application version must be deployed to the application host before the new version is used in production.

After testing the new version, the staging version of the application will replace the production version.

▪

The switch to the new application version from staging to production must occur without any downtime of the application.

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.

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.

Question

You need to recommend a solution for the App1 maintenance task. The solution must minimize costs.

What should you include in the recommendation?

- A. an Azure logic app
- B. an Azure function
- C. an Azure virtual machine
- D. an App Service WebJob

Correct Answer: A

Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location.

App1 will have six instances: three in the East US Azure region and three in the West Europe Azure region.

You can create and manage workflows with Azure PowerShell in Azure Logic Apps.

You can create a Consumption logic app in multi-tenant Azure Logic Apps by using the JSON file for a logic app workflow definition. You can then manage your logic app by running the cmdlets in the Az.LogicApp PowerShell module.

Reference:

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

Community vote distribution

B (59%)

A (41%)

 **Tusharsp** Highly Voted 1 year, 4 months ago

Selected Answer: A

Azure function will need to be run from every region. This will need 2 functions. Logic app can be created centrally and executed for both regions as per given requirement. "The PowerShell script will run from a central location."

upvoted 25 times

pkkalra 1 year, 4 months ago

Azure function as a resource is created in a region but it can access data store from a different region if access is provided. A single function from a region should be able to do the job. I have no reason to believe that a logic app can access data store from two regions but a function cannot. Answer is B.

upvoted 5 times

AzureJobsTillRetire 1 year, 4 months ago

You can create a Consumption logic app in multi-tenant Azure Logic Apps by using the JSON file for a logic app workflow definition. You can then manage your logic app by running the cmdlets in the Az.LogicApp PowerShell module.

Reference:

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

upvoted 2 times

AzureJobsTillRetire 1 year, 4 months ago

"Azure Functions resources are region-specific and can't be moved across regions. You must create a copy of your existing function app resources in the target region, then redeploy your functions code over to the new app."

<https://learn.microsoft.com/en-us/azure/azure-functions/functions-move-across-regions>

upvoted 4 times

techrat Highly Voted 1 year ago

I am confident it's B. Azure Function. I had this question on the exam today, and I got 979, in the Design Infrastructure Solutions, I was 100% correct, and this question belongs to this category.

upvoted 16 times

Lazylinux Most Recent 6 days, 20 hours ago

Selected Answer: B

I would agree with B and below show why

<https://learn.microsoft.com/en-us/azure/azure-functions/functions-compare-logic-apps-ms-flow-webjobs>

upvoted 1 times

ubdubdoo 2 weeks, 6 days ago

Azure Logic Apps does not have a native connector to directly run PowerShell scripts within its workflows

upvoted 1 times

varinder82 1 month, 1 week ago

Final Answer:

an Azure logic app

upvoted 1 times

177c705 2 months ago

B. an Azure function

upvoted 2 times

IN4Dev 2 months ago

Selected Answer: B

PowerShell script and every hour, this is Azure Function for sure.

upvoted 2 times

BShelat 4 months, 3 weeks ago

"Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. " --> This shows that the required coding for copying is taken care of by PowerShell script and now it just needs to be scheduled and executed. Logic App does not need coding. Azure Functions need coding. So ruling out Azure Functions. Answer is Logic App.

upvoted 1 times

mtc9 1 month, 4 weeks ago

Bro you need to run a PS script, which can be the code of the function

upvoted 1 times

👤 **ziggy1117** 4 months, 3 weeks ago

Selected Answer: A

Azure Logic App. The key here is the term "every hour"

"Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location."

In Azure Logic App, you can schedule every hour.

upvoted 1 times

👤 **xRiot007** 2 months ago

Wrong. The thing you call "key" should be "minimize costs". As for "every hour" all those options can be timed to execute hourly.

upvoted 2 times

👤 **dlenc** 3 months, 3 weeks ago

timer-triggered azure function: exists

upvoted 2 times

👤 **Paul_white** 5 months ago

For the App1 maintenance task, I would recommend using an **Azure Function** (Option B). Azure Functions is a serverless compute service that lets you run event-triggered code without having to explicitly provision or manage infrastructure. Given that the maintenance task needs to run every hour, this can be easily configured with a timer trigger in Azure Functions. This approach would minimize costs as you only pay for the compute time you consume - there is no charge when your code is not running. Plus, with Azure Functions, you can write your function code in PowerShell, which aligns with your requirement to run a PowerShell script.

upvoted 4 times

👤 **xxavimr** 7 months, 3 weeks ago

Selected Answer: A

Both Azure function and Logic App may solve the problem but in terms of cost, Logic App is more efficient.

Azure Functions need to have VNet integration to connect to every resource. As it is in different regions, they need Dedicated plan with a VNet Gateway (with its charges). See the matrix in <https://learn.microsoft.com/en-us/azure/azure-functions/functions-networking-options?tabs=az-cli#virtual-network-integration>

upvoted 2 times

👤 **Red0101** 7 months, 3 weeks ago

Selected Answer: A

I'd say Logic App because we don't know how much time the powershell script is going to take (with the risk of being over the 10 minutes allowed from the consumption plan); and something should still trigger the azure function periodically, so it would require another component

upvoted 1 times

👤 **mtc9** 1 month, 4 weeks ago

The function code can be the script itself, so you don't need to code 2 components

upvoted 1 times

👤 **Red0101** 7 months, 3 weeks ago

I'd say Logic App because we don't know how much time the powershell script is going to take (with the risk of being over the 10 minutes allowed from the consumption plan); and something should still trigger the azure function periodically, so it would require another component

upvoted 2 times

👤 **Leocan** 7 months, 3 weeks ago

Selected Answer: B

I choose B.

upvoted 2 times

👤 **Raj70** 8 months, 3 weeks ago

Super clear that one cannot run functions with one central copy across regions. So it has to be Logic Apps.

upvoted 2 times

👤 **danioloaclima** 10 months ago

Selected Answer: A

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

upvoted 1 times

 **Tr619899** 10 months, 3 weeks ago

Yes, Azure Functions can run a PowerShell script from a central location. Azure Functions support PowerShell as a language for writing functions and you can use the timer trigger to run the function every hour as mentioned in the current web page context. The function can be hosted in one of the regions where App1 is deployed, either East US or West Europe, and can access all the App1 instances to copy the files.

upvoted 2 times

Question #2

Topic 6

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Contoso has a single Azure subscription.

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.

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:

Connections to App1 must pass through a web application firewall (WAF).

Connections to App1 must be active-active load balanced between instances.

All connections to App1 from North America must be directed to the East US region. All other connections must be directed to the West Europe region.

Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location.

App2 -

App2 will be a .NET app hosted in App Service that requires a Windows runtime. 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.

You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

A staging instance of a new application version must be deployed to the application host before the new version is used in production.

After testing the new version, the staging version of the application will replace the production version.

▪

The switch to the new application version from staging to production must occur without any downtime of the application.

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.

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.

Question

You need to recommend a solution that meets the application development requirements.

What should you include in the recommendation?

- A. the Azure App Configuration service
- B. an Azure Container Registry instance
- C. deployment slots
- D. Continuous Integration/Continuous Deployment (CI/CD) sources

Correct Answer: C

When you deploy your web app, web app on Linux, mobile back end, or API app to Azure App Service, you can use a separate deployment slot instead of the default production slot when you're running in the Standard, Premium, or Isolated App Service plan tier. Deployment slots are live apps with their own host names.

App content and configurations elements can be swapped between two deployment slots, including the production slot.

Deploying your application to a non-production slot has the following benefits:

- * You can validate app changes in a staging deployment slot before swapping it with the production slot.
- * Deploying an app to a slot first and swapping it into production makes sure that all instances of the slot are warmed up before being swapped into production.

This eliminates downtime when you deploy your app.

* After a swap, the slot with previously staged app now has the previous production app. If the changes swapped into the production slot aren't as you expect, you can perform the same swap immediately to get your "last known good site" back.

Note: Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

- ¤ A staging instance of a new application version must be deployed to the application host before the new version is used in production.
- ¤ After testing the new version, the staging version of the application will replace the production version.
- ¤ The switch to the new application version from staging to production must occur without any downtime of the application.

Reference:

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

Community vote distribution

C (100%)

 **codefries** Highly Voted 1 year, 7 months ago

Selected Answer: C

Should be C - Deployment Slots

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

upvoted 6 times

 **zellick** Highly Voted 1 year, 2 months ago

Selected Answer: C

C is the answer.

<https://learn.microsoft.com/en-us/azure/app-service/deploy-best-practices#use-deployment-slots>

Whenever possible, use deployment slots when deploying a new production build. When using a Standard App Service Plan tier or better, you can deploy your app to a staging environment, validate your changes, and do smoke tests. When you are ready, you can swap your staging a production slots. The swap operation warms up the necessary worker instances to match your production scale, thus eliminating downtime.

upvoted 6 times

 **Lazylinux** Most Recent 6 days, 19 hours ago

Selected Answer: C

Given Answer C is correct

upvoted 1 times

 **daniloaclima** 10 months ago

Selected Answer: C

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

upvoted 1 times

 **OPT_001122** 1 year, 2 months ago

Selected Answer: C

C. deployment slot

upvoted 1 times

 **diego_alejandro** 1 year, 6 months ago

Correct Answer C-Deployments Slots

upvoted 3 times

 **randomaccount123** 1 year, 6 months ago

Its wants deployment slots as the answer, but CI/CD would be the better way of doing it.

upvoted 3 times

 **Darkx** 1 year, 6 months ago

appeared on 11th Oct 2022

upvoted 5 times

 **Dinima** 1 year, 7 months ago

For me CI/CD could be the best option. you can test it when it's in an env.

upvoted 3 times

 **Sant25** 1 year, 7 months ago

It should be A. the Azure App Configuration service

upvoted 1 times

 **kay000001** 1 year, 7 months ago

Selected Answer: C

Answer is C - Deployment Slots

We are dealing with testing then deploying versions of Apps.

As per the Case Study:

Application Development Requirements:

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requireme

A staging instance of a new application version must be deployed to the application host before the new version is used in production.

After testing the new version, the staging version of the application will replace the production version.

upvoted 4 times

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App2 -

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Replicate files to an on-premises location.

Ensure that on-premises clients can read the files over the LAN by using the SMB protocol.

You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

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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.

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.

Question

You need to recommend an App Service architecture that meets the requirements for App1. The solution must minimize costs.

What should you recommend?

- A. one App Service Environment (ASE) per availability zone
- B. one App Service Environment (ASE) per region
- C. one App Service plan per region
- D. one App Service plan per availability zone

Correct Answer: B

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.

Note: The Azure App Service Environment v2 is an Azure App Service feature that provides a fully isolated and dedicated environment for securely running App

Service apps at high scale.

Customers can create multiple ASEs within a single Azure region or across multiple Azure regions. This flexibility makes ASEs ideal for horizontally scaling stateless application tiers in support of high requests per second (RPS) workloads.

Reference:

<https://docs.microsoft.com/en-us/azure/app-service/environment/intro>

Community vote distribution

C (86%)

14%

✉️  **GarryK**  1 year, 7 months ago

Selected Answer: C

No need for dedicated environment. So Azure Service Plan per region is enough.

upvoted 35 times

✉️  **NotMeAnyWay**  10 months ago

Selected Answer: C

C. one App Service plan per region

An App Service Environment (ASE, option B) is a premium Azure App Service hosting offering that provides fully isolated and dedicated environments for securely running App Service apps at high scale. While it does meet the requirements for App1, it's a costly option compare the App Service plan (option C).

On the other hand, an App Service plan (option C) represents a set of compute resources that you allocate to host your apps. You can host multiple apps in the same App Service plan, sharing the resources and thereby reducing costs.

For App1, which is planned to have three instances in each of two regions, it would be more cost-effective to use a single App Service plan per region. This would allow the multiple App1 instances in each region to share the resources of the single App Service plan.

upvoted 13 times

✉️  **Lazylinux**  6 days, 19 hours ago

Selected Answer: C

I would agree with C due to cost as both B and C can meet the requirements

upvoted 1 times

✉️  **BShelat** 4 months, 3 weeks ago

One App service plan per region should be enough if Contoso has only one application App1 or Contoso does not want isolation of App1 and App2 traffic with each other. Ideally both should be isolated and hence two virtual networks per region - each for one app. So App1 having its own virtual network in this ideal scenario, One ASE per region is better option than one app service plan per region.

upvoted 2 times

✉️  **ziggy1117** 4 months, 3 weeks ago

Selected Answer: C

C. One App Service Plan per region. To be exact, the Basic App Service Plan offers up to 3 dedicated instances for your app to run.
<https://learn.microsoft.com/en-us/azure/azure-resource-manager/management/azure-subscription-service-limits#app-service-limits>

upvoted 1 times

✉️  **xxavimr** 7 months, 3 weeks ago

Selected Answer: C

In my opinion for two reasons:

- With Premium App Service App is enough in terms of zone redundant. It is offered in P2 and P3.
- Comparing prices with ASE that is Isolated. ASE in zone redundant is charged with nine instances as minimum regardless of using 3 instances. So it is much expensive. See this link in pricing section (Zone redundant App Service Environment v3): <https://learn.microsoft.com/en-us/azure/app-service/environment/overview?source=recommendations>

upvoted 2 times

✉️  **Leocan** 7 months, 3 weeks ago

Selected Answer: C

Azure Service Plan per region is enough.

upvoted 2 times

✉️  **ATLTennis** 8 months, 2 weeks ago

what about this requirement:

Connections to App1 must be active-active load balanced between instances.

can App Service Plan handle that or we would need ASE to handle this requirement? I am leaning towards Answer B

upvoted 1 times

✉️  **Darkeh** 8 months, 3 weeks ago

Selected Answer: C

C - minimize cost, both C and B technically work, but B is more expensive

upvoted 1 times

✉  **alexander_panfilenok** 10 months, 1 week ago

So if the answer is "App Service Plan per region" and there should be 6 instances and there are 2 regions, Can anybody tell me what is the reason to have 3 instances of the same Web App sitting on the same App Service Plan?

upvoted 1 times

✉  **alexander_panfilenok** 10 months, 1 week ago

I have found the answer to my question. Some App Service Plans can be zone redundant. So I suppose the correct answer is C "Azure Service Plan per region"

upvoted 2 times

✉  **jeanmi312** 1 year ago

Selected Answer: B

In

<https://learn.microsoft.com/en-us/azure/app-service/overview-hosting-plans#should-i-put-an-app-in-a-new-plan-or-an-existing-plan>
Isolate your app into a new App Service plan when:

....

- The app needs resource in a different geographical region.

In

<https://learn.microsoft.com/en-us/azure/app-service/manage-move-across-regions>

App Service resources are region-specific and can't be moved across regions.

As per case study, data for one instance of App1 must be available to all instances of App1

So I would say B even if it's more expensive

upvoted 1 times

✉  **SedateBloggs** 1 year ago

Selected Answer: B

I did think C initially, but am angling towards B now (notwithstanding the cost requirement) The only additional thing that I would say should be considered should be the need for the data to be available to App1 across all regions and instances. App service plans are region specific. At <https://learn.microsoft.com/en-us/azure/app-service/environment/overview#virtual-network-support> its stated "If the App Service Environment virtual network is connected to another network, the apps in the App Service Environment can access resources in those extended networks. Does this not imply that the app can therefore access all data across all six instances? Not sure that having a separate app service plan in each region would allow that portion of the requirement stated

upvoted 2 times

✉  **curtmcgirt** 1 year, 1 month ago

Selected Answer: C

ASE is too much. ASP will do .

upvoted 1 times

✉  **memyself2** 1 year, 2 months ago

Selected Answer: C

This was a question was on my exam today (2/26/23) - Scored 844

I selected C, ASE seems like more than requested, if trying to keep it simple

upvoted 8 times

✉  **globy118** 1 year, 2 months ago

Exam Question 02/15/2023

upvoted 4 times

✉  **RandomNickname** 1 year, 3 months ago

Selected Answer: C

No need to ASE as far as the requirement go that I can see.

ASP should be fine, which also minimizes cost.

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

upvoted 2 times

✉  **OPT_001122** 1 year, 3 months ago

Selected Answer: C

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upvoted 1 times

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The solution must minimize development effort.

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.

Question

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:

Answer Area

Authenticate App1 by using:

A certificate
A system-assigned managed identity
A user-assigned managed identity

Authorize App1 to retrieve Key Vault secrets by using:

An access policy
A connected service
A private link
A role assignment

Correct Answer:

Answer Area

Authenticate App1 by using:

A certificate
A system-assigned managed identity
A user-assigned managed identity

Authorize App1 to retrieve Key Vault secrets by using:

An access policy
A connected service
A private link
A role assignment

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 system-assigned managed identity

No one knows the credentials of managed identities.

Managed Identities exist in two formats:

* System assigned: in this scenario, the identity is linked to a single Azure Resource, eg a Virtual Machine, a Logic App, a Storage Account, Web App, Function, so almost anything. Next, they also live with the Azure Resource, which means they get deleted when the Azure Resource gets deleted.

* User Assigned Managed Identity (incorrect for this question), which means that you first have to create it as a stand-alone Azure resource by itself, after which it can be linked to multiple Azure Resources.

Box 2: An access policy -

Set up an access policy for the system-assigned managed identity.

Note: Grant access -

The managed identity needs to be granted access to read the secret that we'll store in the Key Vault.

1. Navigate to your newly created Key Vault

2. Select Access Policy from the menu on the left side.

3. Select Add Access Policy

4. Etc.

Reference:

<https://devblogs.microsoft.com/devops/demystifying-service-principals-managed-identities/> <https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/tutorial-windows-vm-access-nonaad>

✉️  **kay000001** Highly Voted 1 year, 7 months ago

Drop Down 1:

A system-assigned managed identity.

Drop Down 2:

Role Assignment.

But I'm happy to be corrected. Thanks.

upvoted 37 times

✉️  **Snownoodles** 1 year, 7 months ago

Question 2: Both access policy and role assignment should work here

upvoted 4 times

✉️  **Snownoodles** 1 year, 7 months ago

I figured out why only "role assignment" is the correct answer.

"Services that require credentials must have the credentials tied to the service instance. The credentials must NOT be shared between services"

RBAC can assign permission to a specific secret, but the access policy assigns permissions for all secrets or keys, not as granular as RBAC

upvoted 16 times

✉️  **AzureJobsTillRetire** 1 year, 3 months ago

I created a key and a secret in a key vault and can confirm that you cannot do role assignment on a particular key or secret.

upvoted 3 times

✉️  **upwork** 1 year, 3 months ago

You need to select RBAC permission model first, then you can assign granular permissions to individual items.

upvoted 1 times

✉️  **AzureJobsTillRetire** 1 year, 3 months ago

What do you mean RBAC can assign permission to a specific secret? How? For the controls at key/secret level, Access Policy is more granular than RBAC.

upvoted 1 times

✉️  **JaQua** Highly Voted 1 year, 6 months ago

1. user assigned managed identity - share 1 identity among all 6 app services

2. access policy

upvoted 22 times

✉️  **Jay_2pt0** 1 year, 6 months ago

It specifies that "credentials must NOT be shared."

upvoted 6 times

✉️  **DeBoer** 1 year, 2 months ago

They must not be shared... between APP1 and APP2. But it says nothing about sharing between instances of the app. If we want to reduce admin overhead then this is actually better while still adhering to requirements,

upvoted 5 times

✉️  **m1dp** 8 months, 2 weeks ago

Services that require credentials must have the credentials tied to the service instance. The credentials must NOT be shared between services.

Credentials tied to the service instance. System assigned.

upvoted 4 times

✉️  **ubdubdoo** Most Recent 2 weeks, 6 days ago

If you need separate managed identities for each instance, you would have to use user-assigned managed identities instead of system-assigned. User-assigned identities are created as separate Azure resources that can then be assigned individually to each App Service instance as needed. A managed identity would be the same across instances. The "not sharing" between services is about separating Key Vaults or not using the same UI between two apps.

upvoted 1 times

✉️  **chair123** 1 month, 2 weeks ago

When I create a key vault I get to choose either RBAC or Access Policy. I think both are correct but which of them satisfy the security requirements?

"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.

Box1:

"Services that require credentials must have the credentials tied to the service instance. The credentials must NOT be shared between services." > system-assigned-managed identity

Box2: we can use either of RBAC or Access Policy. couldn't find a clue which one to choose of them.

upvoted 1 times

✉️  **chair123** 1 month, 2 weeks ago

in this RBAC article: <https://learn.microsoft.com/en-us/azure/key-vault/general/rbac-guide>

Also in the access policy article: https://learn.microsoft.com/en-us/azure/key-vault/general/assign-access-policy?WT.mc_id=Portal-Microsoft_Azure_KeyVault&tabs=azure-portal#:~:text=you%27re%20using%20a-,managed%20identity,-for%20the%20app

anyone can give me an insight on which one better would be great :D

upvoted 1 times

✉️  **BShelat** 4 months, 3 weeks ago

With given answers how following condition can be met?

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.

upvoted 1 times

✉️  **Paul_white** 5 months ago

To ensure that App1 can access the third-party credentials and access strings securely, you should:

Authenticate App1 by using: A system-assigned managed identity (Option B). A system-assigned managed identity is tied to your App Service and is automatically cleaned up when the service is deleted.

Authorize App1 to retrieve Key Vault secrets by using: An access policy (Option A). You can configure Azure Key Vault to allow your App Service to retrieve secrets using its system-assigned managed identity. This is done by adding an access policy in Key Vault that grants the necessary permissions (like Get and List) to the managed identity.

upvoted 3 times

✉️  **StixxNSnares** 5 months ago

I recommend the following solution:

System-assigned managed identity - This will allow app1 to use the Azure ad identity of the app service instance to access other Azure resources such as Key Vault.

Then to authorize App1 to retrieve key vault secrets, use access policy. This will grant App1 the necessary permissions to read the secrets from the Key Vault.

See this: <https://docs.microsoft.com/en-us/azure/app-service/overview-managed-identity>

<https://docs.microsoft.com/en-us/azure/key-vault/general/assign-access-policy-portal>

upvoted 1 times

✉️  **spotted** 5 months ago

If you use ChatGPT 4 now the answer became the following.

A system-assigned managed identity: This is an identity created by Azure for the App Service instance, which is tied to the lifecycle of this service and does not require the management of credentials.

A role assignment: Utilizing Azure role-based access control (RBAC), you can assign a specific role to the managed identity, like "Key Vault Secrets User", to retrieve secrets from the Key Vault.

Chat GPT 4 has now been updated to 2023 and its answer changed compared to a few months ago.

upvoted 2 times

✉️  **pabsinaz** 6 months, 2 weeks ago

Option 2 is role assignment is more granular. Here is how:

<https://learn-attachment.microsoft.com/api/attachments/193976-image.png?platform=QnA>

upvoted 1 times

✉️  **m1dp** 8 months, 2 weeks ago

Drop down 1: system-assigned MI. Literally states services cannot share the same identity.

Drop down 2: Role assignment. More granular than access policy.

upvoted 1 times

✉️  **stanl2** 8 months, 3 weeks ago

I think DD1 should be "A user-assigned managed identity". Here's why:

Requirements state: "App1 will have six instances: three in the East US Azure region and three in the West Europe Azure region." This means have two App Services (one per region), each with its own system identity.

Using user-managed identity, we can have a single MI to control the access.

DD2 should be: Role Assignment (as pointed out in other posts, it provides more granular access)

upvoted 1 times

✉️  **NotMeAnyWay** 10 months ago

Answer:

1. Authenticate App1 by using:

- B. A system-assigned managed identity

2. Authorize App1 to retrieve Key Vault secrets by using:

- A. An access policy

Explanation:

System-assigned managed identities are automatically managed by Azure, providing an identity for the Azure resource in Azure AD. This makes an ideal choice for authenticating App1.

The Key Vault Access Policy determines what permissions the identities have, like get, list, set, and delete rights for secrets, which is necessary for App1 to retrieve the secrets stored in the Key Vault, hence the selection of an Access Policy for authorization.

upvoted 6 times

✉️  **vali6969** 10 months ago

It's said here (<https://learn.microsoft.com/en-us/azure/key-vault/general/rbac-access-policy>) that access policies is the "legacy" mode to access key vault. It's not said that one is more granular than other one. <https://learn.microsoft.com/en-us/azure/key-vault/general/rbac-access-policy> for me that will be :

Drop Down 1: System-Assigned Managed Identity.

Drop Down 2: Role Assignment.

upvoted 2 times

✉️  **vali6969** 10 months ago

Sorry It's said too that Azure RBAC is built on Azure Resource Manager and provides FINE-GRAINED access management of Azure resources. And the scope can be an individual resource and the access policy is limited to key vault scope.

upvoted 1 times

✉️  **alexander_panfilenok** 10 months, 2 weeks ago

System Assigned Managed Identity + Role Assignment.

Just create the KeyVault and then go to settings -> access configuration. You will see that the RBAC is turned on by default and it is recommended. The Access Policy is turned off.

upvoted 5 times

 tunaparker 11 months, 1 week ago

For the second dropdown question, chatgpt-3 says:

For retrieving secrets from Azure Key Vault in your specific scenario, the recommended approach would be to use an access policy.

Access policies within Azure Key Vault are specifically designed to control and manage permissions for accessing secrets stored within the Key Vault. By adding an access policy for your App1 application, you can define the specific actions (such as "get" or "list") that the application can perform on the secrets stored in the Key Vault.

Role assignments, on the other hand, are used to grant broader access to Azure resources at a higher scope, such as a subscription or resource group. While role assignments can provide access to the Key Vault itself, they do not offer the same granular control over secret operations as access policies do.

Therefore, in the context of retrieving secrets from Azure Key Vault for your App1 application, the primary mechanism to use would be an access policy within the Key Vault. This allows you to grant the necessary permissions to your application to retrieve the secrets securely.

upvoted 2 times

 nitin_90 1 year, 1 month ago

About KV,

Whenever question about Authentication => Use RBAC / MI / SP
when about authorization => Use Access policy

upvoted 4 times

 upwork 1 year, 3 months ago

Tested in Azure. If we are asked to isolate access to individual items in a Key Vault, then RBAC model is the only solution.

upvoted 3 times

Topic 7 - Testlet 11

Question #1

Topic 7

Introductory Info

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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To start the 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 Hyper-V.

The IT department currently uses a separate Hyper-V environment to test updates to WebApp1.

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

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 to 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.

Question

HOTSPOT -

You are evaluating the components of the migration to Azure that require you to provision an Azure Storage account. For each of the following statements, select

Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

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

Correct Answer:

Answer Area

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

Box 1: No -

Online migration will work fine. It does not require an Azure Storage account.

Box 2: No -

Data for the web site can be migrated to Azure app service.

Box 3: Yes -

Scenario: Database metrics for the production instance of WebApp1 must be available for analysis so that database administrators can optimize the performance settings.

Reference:

<https://azure.microsoft.com/en-au/services/sql-server-stretch-database/>

✉️  **Greysi**  2 years, 4 months ago

Y,N,N - just another solution

1. SQL Migration:

Because onprem licenses must be used, whenever possible=> BYOL. Preferred SQL Migration in this case is uploading VHD from onprem Hyper-V-VM and create a new Azure VM
<https://docs.microsoft.com/en-us/azure/azure-sql/virtual-machines/windows/migrate-to-vm-from-sql-server#choose-a-migration-method>

2. WebApp: <https://docs.microsoft.com/en-us/azure/app-service/deploy-continuous-deployment?tabs=github>

Single point source: GitHub Repository can be configured as source for continous Deployment

3. Database metrics: <https://docs.microsoft.com/en-us/azure/azure-sql/database/monitor-tune-overview>

Also for SQL Server on Azure VMs it is possible to send metrics to 3 services:

- a) Log Analytics workspace in Azure Monitor
- b) Azure Event Hub
- c) Azure Storage

2 of 3 do not need a dedicated Azure Storage account.. It is not REQUIRED to create a storage account to fulfill requirements.

upvoted 63 times

✉️  **Nichols** 2 years, 2 months ago

The first question is N:

You can migrate to SQL MI without storage account

Azure Hybrid Benefit allows you to use SQL Server licenses with Software Assurance or qualifying subscription licenses to pay a reduced base rate* for these products and services for SQL Server on Azure:

vCPU-based service tiers of Azure SQL Database (excluding serverless).

Azure SQL Managed Instance.

SQL Server in Azure Virtual Machines.

SQL Server Integration Services.

*When you apply Azure Hybrid Benefit to your existing deployments, the base rate will be calculated beginning with when you select the benefit in the Azure portal. Credit will not be issued retroactively.

[https://azure.microsoft.com/en-us/pricing/hybrid-benefit-faq/#:~:text=Azure%20Hybrid%20Benefit%20allows%20you,SQL%20Database%20\(excluding%20serverless\).](https://azure.microsoft.com/en-us/pricing/hybrid-benefit-faq/#:~:text=Azure%20Hybrid%20Benefit%20allows%20you,SQL%20Database%20(excluding%20serverless).)

upvoted 4 times

✉️  **FrancisFerreira** 2 years, 1 month ago

Without storage account we can only do offline migrations, which means longer downtime. So, to minimize downtime as per requirement we do need a storage account.

upvoted 5 times

✉️  **chair123** 1 month, 2 weeks ago

in No. 3 , if you used (log analytics workspace, event hub,...etc.) they all require a storage account/container to save the logs and events in you got to save them in some storage account.

I think it's yes. Please let me know if i missed something

upvoted 1 times

✉️  **AberdeenAngus** 2 years ago

I don't see why we must migrate to SQL Server on Azure VM. The requirement to reuse on-prem licenses can be met with Azure Hybrid Benefit which works with SQL Managed Instance and SQL Database (vCore) too. As others have pointed out, if we go to SQL Managed Instance then we can meet the requirement to minimize downtime with the online migration method, which requires a storage account.

I can't see anything in <https://docs.microsoft.com/en-us/azure/azure-sql/database/monitor-tune-overview?view=azuresql> which says a storage account is always required so I'm also going YNN, but for slightly different reasons.

upvoted 3 times

✉️  **Shadoken** 1 year, 9 months ago

In this question we are supposing that we will use SQL Server on VM (IaaS). Although in previous questions we suppose we will use Azure SQL Databases with Long-term retention (PaaS).

If I understood, we can't use long-term backup retention in SQL Server VM.

Then we have to use IaaS database or PaaS database?

upvoted 1 times

✉️  **honzar** Highly Voted  1 year, 4 months ago

Appeared 2023/01/04 in the exam

upvoted 11 times

✉️  **MHguy** Most Recent  3 days, 2 hours ago

in the Exam April 2024

upvoted 2 times

✉️  **varinder82** 3 weeks, 5 days ago

Final Answer : N N Y

upvoted 1 times

✉️  **varinder82** 1 month ago

Final Answer: YYN

upvoted 1 times

✉️  **Paul_white** 5 months ago

1. **You must provision an Azure storage account for the SQL server database migration**: Yes. Azure Storage is often used as a staging area for migrations, including SQL Server databases.

2. **You must provision an Azure storage account for the web site content storage**: Yes. Azure Storage can be used to store static website content such as HTML, CSS, JavaScript, and image files.

3. **You must provision an Azure storage account for the Database metric monitoring**: No. Database metrics are typically monitored using A: Monitor and Log Analytics, not Azure Storage. However, logs and metrics could potentially be exported to Azure Storage for long-term retention or further analysis.

upvoted 1 times

✉️  **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 1 times

✉️  **Red0101** 7 months, 3 weeks ago

I think NO NO NO

You can use Azure Hybrid Benefits for the Azure SQL database too; the live migration with DMS does not require a storage account for Azure SQL Database

You are not forced to use a storage account for the content storage; you could simply upload it to the web app instances

You are not forced to use a storage account to store DB logs, in fact for the database engine telemetry, you need the log analytic workspace <https://learn.microsoft.com/en-us/azure/azure-sql/database/monitor-tune-overview?view=azuresql>

upvoted 2 times

✉️  **kodathedog** 5 months, 4 weeks ago

DMS requires a storage account for both online and offline migration, because that is where it gets the database backup files from to do the restore to the destination SQL database. See <https://learn.microsoft.com/en-us/azure/dms/tutorial-sql-server-managed-instance-online-ac>

upvoted 1 times

✉️  **yonie** 1 year ago

I think it is Yes No Yes

Same as question from az-304 - this question has been around for a long time.

<https://www.examtopics.com/discussions/microsoft/view/56780-exam-az-304-topic-13-question-4-discussion/>

upvoted 4 times

✉️  **sawanti** 8 months, 2 weeks ago

You can use Log Analytics Workspace to store the metrics, so it surely NO. Yes No No seems fine

upvoted 1 times

✉️  **upwork** 1 year, 3 months ago

SQL Server db migration does not require a storage account in some min.downtime scenarios and I would go with NO for the first point, but what about the existing backups? According to the case study "Database backups must be retained for a minimum of seven years to meet compliance requirements." so perhaps we already have a bunch of them.

upvoted 1 times

✉️  **OPT_001122** 1 year, 3 months ago

topic 7: Fabrikam-Question #1-Page-44
topic 7: Fabrikam-Question #2-Page-44
topic 9: Fabrikam-Question #1-Page-45
topic 9: Fabrikam-Question #2-Page-46
topic 9: Fabrikam-Question #3-Page-46
topic 11: Fabrikam-Question #1-Page-47
topic 16: Fabrikam-Question #1-Page-48

=====

Total = 7

upvoted 8 times

✉️  **RandomNickname** 1 year, 3 months ago

#1 Y. "database downtime must be minimized when databases are migrated."

Offline isn't applicable which doesn't need storage account.

Online migration required which needs storage account

<https://learn.microsoft.com/en-us/azure/dms/tutorial-sql-server-managed-instance-online#configure-migration-settings>

#2 Y. If this is as per the question is referring to ensure you have storage to render content then Y due to article reference below for static content, otherwise N

"Website content must be easily updated from a single point."

<https://learn.microsoft.com/en-us/azure/storage/blobs/storage-blob-static-website>

#3 N. No need for storage for metrics, these will be sent to other Azure services like log analytics

upvoted 6 times

✉️  **testtaker13** 1 year, 2 months ago

1. Y. Your link is under older tutorials. But it seems under Azure Data Studio the information is similar. Storage or SMB share is required.
<https://learn.microsoft.com/en-us/azure/dms/tutorial-sql-server-managed-instance-online-ads>

upvoted 2 times

✉️  **RandomNickname** 1 year, 2 months ago

Nice. Good spot.

Cheers

upvoted 1 times

✉️  **CineZorro824** 1 year, 4 months ago

1. SQL Migration: Y

because Database migration assistant requires a Storage Account to store the database backup files

2. Web app content: Y

Content needs to be updated from an easy to use single point. That's a storage account. I don't consider the available storage that's built into App Service as easily accessible or a 'single point'

3. Database metrics: N

Log Analytics workspace has its own storage, it doesn't require you to link your own storage account (although it's possible)

upvoted 3 times

✉️  **sondrex** 1 year, 6 months ago

Answer NO NO YES - are correct

upvoted 3 times

✉️  **MountainW** 1 year, 6 months ago

1. SQL migration. It request minimum downtime. Because of reusing the license requirement from other question with same situation, this migration uses SQL managed instance. There is no need of storage account to create a SQL MI.

- The migration entails establishing a network connection between SQL Server and SQL Managed Instance, and opening communication port
- Uses Always On availability group technology to replicate database near real-time, making an exact replica of the SQL Server database on SQL Managed Instance.

- The database can be used for read-only access on SQL Managed Instance while migration is in progress.

- Provides the best performance during migration with minimum downtime.

Managed Instance link is for customers who require the most performant minimum downtime migration.

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

upvoted 1 times

 **AubinBakana** 1 year, 9 months ago

They've not provided enough information on the database and application requirement to determine whether we want to do a lift & shift to an Azure VM, migrate to MI or SQL Database. So the suggestion that we must create a storage account is inaccurate - you have options where you can migrate without the need for a storage account. Hence, both first and second options have to be false.

Answer is: No, Yes.

upvoted 2 times

 **sapien45** 1 year, 10 months ago

YNN

Make sure to create the Azure Storage Account in the same region as the Azure Database Migration Service instance is created

upvoted 2 times

Question #2

Topic 7

Introductory Info

Case Study -

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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 Hyper-V.

The IT department currently uses a separate Hyper-V environment to test updates to WebApp1.

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

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 to 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.

Question

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

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).

Community vote distribution

A (100%)

 **andas2008** Highly Voted 2 years, 4 months ago

Selected Answer: A

correct answer

upvoted 18 times

 **Paulwryan** Highly Voted 2 years, 3 months ago

This appears to be correct:

<https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/identity/adds-extend-domain>

upvoted 7 times

 **Paulwryan** 2 years, 3 months ago

That is, deploy domain controllers in azure. do not move them, they are still needed on prem.

upvoted 6 times

 **erajendar** Most Recent 4 months, 3 weeks ago

Selected Answer: A

correct

upvoted 1 times

 **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 4 times

 **memyslef2** 1 year, 2 months ago

This was a question was on my exam today (2/26/23) - Scored 844

I agree with this answer

upvoted 4 times

 **RandomNickname** 1 year, 3 months ago

Selected Answer: A

A looks correct as per article and request

upvoted 1 times

 **honzar** 1 year, 4 months ago

Appeared 2023/01/04 in the exam

upvoted 3 times

 **randomaccount123** 1 year, 6 months ago

Never a good idea to move a DC to Azure. Better to always create a new one.

upvoted 3 times

 **rishisoft1** 1 month, 1 week ago

Its creating new one only, not moving the existing from on-premise.

upvoted 1 times

 **codefries** 1 year, 7 months ago

Shouldn't B instead of A?

As per requirement: Directory synchronization between Azure Active Directory (Azure AD) and corp.fabrikam.com must not be affected by a failure between Azure and the on-premises network.

upvoted 1 times

 **Dudulle** 1 year, 5 months ago

Nope because, in this case, users won't be able to authenticate in case of internet failure

upvoted 3 times

 **Dudulle** 1 year, 5 months ago

Since, as ALL DCs are in Azure, there are 0 left on-prem !

upvoted 1 times

 **AubinBakana** 1 year, 9 months ago

Selected Answer: A

Yes. This will ensure that when the London office AD DS is down, other branch offices have access to WebApp1.

upvoted 1 times

 **Teringzooi** 2 years ago

Selected Answer: A

Correct answer: A

<https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/identity/adds-extend-domain>

upvoted 1 times

 **Justin0020** 2 years, 1 month ago

Was in my exam on March. 10

upvoted 5 times

Topic 8 - Testlet 12

Question #1

Topic 8

Introductory Info

Case Study -

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Overview -

Litware, Inc. is a medium-sized finance company that has a main office in Boston.

Existing Environment -

Identity Environment -

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

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

The litware.com tenant has a Conditional Access policy named Capolicy1. Capolicy1 requires that when users manage the Azure subscription for a production environment by using the Azure portal, they must connect from a hybrid Azure AD-joined device.

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.

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

Name	Type	Configuration
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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

Planned Changes -

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 AD-joined 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 to management groups.

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.

▪

Question

HOTSPOT -

You plan to migrate App1 to Azure.

You need to recommend a high-availability solution for App1. The solution must meet the resiliency requirements.

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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Number of host groups:

1
2
3
6

Number of virtual machine scale sets:

0
1
3

Answer Area

Number of host groups:

1
2
3
6

Correct Answer:

Number of virtual machine scale sets:

0
1
3

Box 1: 3 -

Need three host groups to meet the third scenario requirement below.

Scenario: 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.

Box 2: 3 -

The availability setting of your host group should match your scale set.

* The host group and the scale set must be using the same availability zone.

* The fault domain count for the host group level should match the fault domain count for your scale set.

Reference:

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

 **techrat** Highly Voted 1 year ago

I am confident the answer is 3-3.

I had this question in my exam today, and I passed the exam with 979. In Design Infrastructure Solutions section, I got 100% correct.
upvoted 26 times

 **zenithcsa1** Highly Voted 1 year, 5 months ago

3-3

VMSS supports zone-redundant, while Dedicated Host does not. No-zone option of host group in Dedicated Host is not zone-redundant, it represents regional resource.

- You must create a host group in each zone.
- You must create a VMSS in each zone where the host group is deployed.

<https://learn.microsoft.com/en-us/azure/reliability/availability-zones-service-support#azure-services-with-availability-zone-support>
<https://learn.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts#virtual-machine-scale-set-support>

In addition, when a Host Groups is deployed in each zone, creating a zone-redundant VMSS is also not possible.

All tested with multiple hosts, FSv2 Type1.

upvoted 25 times

 **steel72** 1 year, 1 month ago

The host group and the scale set must be using the same availability zone.

<https://learn.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts#virtual-machine-scale-set-support>
upvoted 1 times

✉  **Ezio8423** Most Recent 1 year ago

Automatic VM placement needs to be enabled.

The availability setting of your host group should match your scale set.

A regional host group (created without specifying an availability zone) should be used for regional scale sets.

The host group and the scale set must be using the same availability zone.

The fault domain count for the host group level should match the fault domain count for your scale set. The Azure portal lets you specify max spreading for your scale set, which sets the fault domain count of 1.

Dedicated hosts should be created first, with sufficient capacity, and the same settings for scale set zones and fault domains.

The supported VM sizes for your dedicated hosts should match the one used for your scale set.

upvoted 3 times

✉  **globby118** 1 year, 2 months ago

Exam Question 02/15/2023

upvoted 3 times

✉  **GarryK** 1 year, 2 months ago

3-3

<https://learn.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts#groups-hosts-and-vms>

A host group is created in a single availability zone. Once created, all hosts will be placed within that zone. To achieve high availability across zones, you need to create multiple host groups (one per zone) and spread your hosts between them accordingly.

If you assign a host group to an availability zone, all VMs created on that host must be created in the same zone.

When creating a Virtual Machine Scale Set, you can specify an existing host group to have all of the VM instances created on dedicated hosts

upvoted 6 times

✉  **GarryK** 1 year, 2 months ago

The host group and the scale set must be using the same availability zone.

upvoted 1 times

✉  **OPT_001122** 1 year, 3 months ago

3 and 3

upvoted 1 times

✉  **FabrityDev** 1 year, 3 months ago

Based on <https://learn.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts#virtual-machine-scale-set-support> i would say it's 3-3
upvoted 2 times

✉  **RandomNickname** 1 year, 3 months ago

3-3 Looks correct as per article:

<https://learn.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts#groups-hosts-and-vms>

upvoted 1 times

✉  **Guest** 1 year, 4 months ago

Maybe this Testlet can be merged with Topic 5 - Testlet 1?

Case looks identical (questions are different)

upvoted 1 times

✉  **Ravi1383** 1 year, 5 months ago

what are the correct answer folks? what have changed on 10th Oct?

upvoted 2 times

✉  **Snownoodles** 1 year, 6 months ago

3-3

"If the VM is in an availability zone, it must be the same availability zone as the host group. The availability zone settings for the VM and the host group must match"

<https://learn.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts-how-to?tabs=portal>

upvoted 4 times

 **heero** 1 year, 7 months ago

should be

3

1

upvoted 5 times

 **ronsav80** 1 year, 7 months ago

I think based on <https://learn.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts> under "Virtual Machine Scale Set Support", it states "When creating a virtual machine scale set you can specify an existing host group to have all of the VM instances created on dedicated hosts." So based on this, I think this is 3-3

upvoted 9 times

 **Galron** 1 year, 6 months ago

1 scale set can span the 3 hosts in separate AZ's.

upvoted 2 times

 **ckyap** 1 year, 5 months ago

3 host in the same availability zone only, if you want to span across different zone, you need to create additional host group.<https://learn.microsoft.com/en-us/azure/virtual-machines/dedicated-hosts-how-to?tabs=portal#:~:text=Span%20across%20multiple%20availability%20zones.%20In%20this%20case%2C%20you%27re%20required%20to%20have%20a%20host%20group%20in%20each%20of%20the%20zones%20you%20wish%20to%20use>

upvoted 1 times

 **Galron** 1 year, 6 months ago

Recent changes on 10th Oct makes it 1 and 1. Will they update the answers?

unvoted 1 times

Question #2

Topic 8

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Case Study -

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▪

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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.

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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.

Question

HOTSPOT -

You plan to migrate App1 to Azure.

You need to recommend a storage solution for App1 that meets the security and compliance requirements.

Which type of storage should you recommend, and how should you recommend configuring the storage? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Storage account type:

Premium page blobs	
Premium file shares	
Standard general-purpose v2	

Configuration:

NFSv3	
Large file shares	
Hierarchical namespace	

Answer Area

Storage account type:

Premium page blobs
Premium file shares
Standard general-purpose v2

Correct Answer:

Configuration:

NFSv3
Large file shares
Hierarchical namespace

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: Hierarchical namespace -

Scenario: Plan: Migrate App1 to Azure virtual machines.

Azure Data Lake Storage Gen2 implements an access control model that supports both Azure role-based access control (Azure RBAC) and POSIX-like access control lists (ACLs).

Data Lake Storage Gen2 and the Network File System (NFS) 3.0 protocol both require a storage account with a hierarchical namespace enabled.

Reference:

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

✉  **WickedMJ** Highly Voted 1 year, 6 months ago

> Storage account type: " Standard general-purpose v2 "
> Configuration: " Hierarchical namespace "
upvoted 35 times

✉  **yuhji** 1 year, 2 months ago

Using only hierarchical namespaces does not support ACLs.
Therefore, NFS must be used.
Azure BLOB storage now supports the new NFS v3.0.
<https://learn.microsoft.com/en-us/azure/storage/blobs/network-file-system-protocol-support>
<https://learn.microsoft.com/en-us/azure/storage/blobs/network-file-system-protocol-support-how-to>
upvoted 3 times

✉  **techrat** Highly Voted 1 year ago

I think the given answer is correct. I had this question on my exam today, I passed exam with 979. my answer to this question is Standard general-purpose v2
Hierarchical namespace
upvoted 18 times

⊕  **globy118** Most Recent 1 year, 2 months ago

Exam Question 02/15/2023

upvoted 6 times

⊕  **RandomNickname** 1 year, 3 months ago

Given answer looks good

upvoted 3 times

⊕  **adamp54** 1 year, 6 months ago

ACLs are not supported with NFSv3 according to:

"The only way to secure the data in your account is by using a VNet and other network security settings. Any other tool used to secure data including account key authorization, Azure Active Directory (AD) security, and access control lists (ACLs) are not yet supported in accounts that have the NFS 3.0 protocol support enabled on them"

<https://learn.microsoft.com/en-us/azure/storage/blobs/network-file-system-protocol-support>

Enabling hierarchical namespace is the right answer :

"Azure Data Lake Storage Gen2 implements an access control model that supports both Azure role-based access control (Azure RBAC) and POSIX-like access control lists (ACLs)."

<https://learn.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-access-control>

upvoted 4 times

⊕  **MountainW** 1 year, 6 months ago

If the request is to migrate the third party storage solution which support ACL to Azure, I think the answer is Premium file shares and NFSv3. Because the App is running on Linux, NFS makes more sense to me. Standard general purpose v2 does not support NFS.

upvoted 1 times

⊕  **FabrytDev** 1 year, 3 months ago

"Azure Data Lake Storage Gen2 implements an access control model that supports both Azure role-based access control (Azure RBAC) and POSIX-like access control lists (ACLs)"

Data Lake means hierarchical namespace. Besides if you want to use NFSv3 you have to have hierarchical namespaces enabled anyway. In any scenario hierarchical namespaces are correct.

<https://learn.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-access-control>

upvoted 2 times

⊕  **np2021** 1 year, 2 months ago

The data is not allowed to be on shared hardware tho, as per the requirements.

upvoted 1 times

⊕  **bobrina** 1 year, 6 months ago

> Storage account type: " Standard general-purpose v2 "

> Configuration: " NFSv3 "

Source App1 are in a linux server

upvoted 2 times

⊕  **FabrytDev** 1 year, 3 months ago

"Azure Data Lake Storage Gen2 implements an access control model that supports both Azure role-based access control (Azure RBAC) and POSIX-like access control lists (ACLs)"

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<https://learn.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-access-control>

upvoted 6 times

⊕  **MountainW** 1 year, 6 months ago

1. Storage account type: " Standard general-purpose v2 "

Standard general purpose v2 does not support NFS. So 2 is not NFSV3

<https://learn.microsoft.com/en-us/azure/storage/blobs/network-file-system-protocol-support>

upvoted 2 times

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Identity Environment -

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

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

The litware.com tenant has a Conditional Access policy named Capolicy1. Capolicy1 requires that when users manage the Azure subscription for a production environment by using the Azure portal, they must connect from a hybrid Azure AD-joined device.

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

Planned Changes -

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 AD-joined 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 to management groups.

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.

-

Question

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

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>

Community vote distribution

D (100%)

 **WickedMJ**  1 year, 6 months ago

Selected Answer: D

D. a private endpoint
upvoted 16 times

 **SindhulM**  7 months, 1 week ago

Can this be achieved with the private endpoint.?
On-premises users and services must be able to access the Azure Storage account that will host the data in App1.
upvoted 1 times

 **sumaju** 5 months, 3 weeks ago

If the on-prem is connected via expressroute or VPN, then it is possible.
upvoted 1 times

 **zellick** 1 year, 2 months ago

Question #4

Topic 8

Introductory Info

Case Study -

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To start the case study -

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Overview -

Litware, Inc. is a medium-sized finance company that has a main office in Boston.

Existing Environment -

Identity Environment -

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

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

The litware.com tenant has a Conditional Access policy named Capolicy1. Capolicy1 requires that when users manage the Azure subscription for a production environment by using the Azure portal, they must connect from a hybrid Azure AD-joined device.

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

Planned Changes -

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 AD-joined 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 to management groups.

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.

Question

You need to implement the Azure RBAC role assignments for the Network Contributor role. The solution must meet the authentication and authorization requirements.

What is the minimum number of assignments that you must use?

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

Correct Answer: B

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.

Community vote distribution

B (89%)

11%

 darren888 Highly Voted 1 year, 5 months ago

Selected Answer: B

Litware has two Azure tenants. One tenant with 10 subscriptions and one tenant with five subscriptions. We can organize the subscriptions of two tenants in a management group each and assign users to the Network Contributor role or to Role1 at the management group level.

upvoted 24 times

 mschgs1t Highly Voted 1 year, 3 months ago

Selected Answer: B

two tenants two MG

upvoted 7 times

 alexespejoch Most Recent 9 months, 2 weeks ago

Selected Answer: A

2 tareas:

- Permiso de lectura para los blobs
- Permiso de lectura para archivos en Azure Storage

upvoted 1 times

 globy118 1 year, 2 months ago

Exam Question 02/15/2023

upvoted 5 times

 **lolo13698** 1 year, 6 months ago

Selected Answer: B

i would say B.2 as root management group is created by default in a Tenant and we have 2 Tenants here. But as they are not mentionning management group it could also be 15 assignment (one per subscription)
upvoted 2 times

 **Mltytskr** 1 year, 4 months ago

The authentication and authorization requirements state: "RBAC roles must be applied to management groups," so I think you were correct with B.

upvoted 4 times

 **ayadmawla** 4 months ago

Yes but the question is asking for the "minimum "

upvoted 1 times

 **WickedMJ** 1 year, 6 months ago

Selected Answer: B

B. 2
<https://www.cert2brain.com/Server/Demo.aspx?exam=AZ-304>
upvoted 2 times

 **ezfix** 1 year, 7 months ago

E - 15) There are 2 Tenants with 15 total subscriptions. Medium size company with only 1 office. I can't find anything in the use case stating that they have enabled management groups, or anything mentioning a "Tenant Root Group". The RBAC for network contributor would be assigned at the "Tenant Root Group" if management groups were enabled. Otherwise, they would assign it at the next best thing, the 15 subscriptions.

upvoted 4 times

 **Mltytskr** 1 year, 4 months ago

It can't be E because the authentication and authorization requirements state: "RBAC roles must be applied to management groups," so it should be B.

upvoted 1 times

 **ronsav80** 1 year, 6 months ago

Per <https://learn.microsoft.com/en-us/azure/governance/management-groups/overview#root-management-group-for-each-directory> ... "Each directory is given a single top-level management group called the root management group. The root management group is built into the hierarchy to have all management groups and subscriptions fold up to it. This root management group allows for global policies and Azure role assignments to be applied at the directory level". So from this, a root MG exists for every Azure tenant/directory, so we would only need RBAC assignments to each root MG

upvoted 8 times

 **cj00** 1 year, 7 months ago

Selected Answer: B

2 tenants, so 2x management groups to assign to
upvoted 2 times

 **ronsav80** 1 year, 7 months ago

Since this states that "Litware has a second Azure AD tenant named dev.litware.com", a tenant is a security boundary, so corp.litware.com AAD tenant has no access to dev.litware.com AAD tenant. Hence, need 2 RBAC roles (one in each tenant)

upvoted 3 times

 **mlounge** 1 year, 7 months ago

Selected Answer: B

The network contains an Active Directory forest named litware.com that is linked to an Azure Active Directory (Azure AD) tenant named litware.com.

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

upvoted 3 times

 **jellybiscuit** 1 year, 7 months ago

Selected Answer: A

Where would 2 come from? Two domains? Two Tenant's?

You can put both the domains into one Tenant with one management group, where you would assign your role.

upvoted 2 times

 **mufflon** 1 year, 7 months ago

Are you suggesting a multi tenant solution?

upvoted 1 times

 **KarVaid** 1 year, 7 months ago

Selected Answer: A

This should be A. The access should be applied at the root management group level to ensure that it gets applied at all levels.

upvoted 2 times

 **lolo13698** 1 year, 6 months ago

Yes, buts there are 2 tenants, so one root management group per tenant. So answer B.

upvoted 2 times

 **KarVaid** 1 year, 7 months ago

This should be A. The access should be applied at the root management group level to ensure that it gets applied at all levels.

upvoted 1 times

 **FabrytDev** 1 year, 3 months ago

"Management groups give you enterprise-grade management at scale no matter what type of subscriptions you might have. However, all subscriptions within a single management group must trust the same Azure Active Directory (Azure AD) tenant."

Therefore you cannot have a management group that spans AAD tenants and that's why it cannot be A.

<https://learn.microsoft.com/en-us/azure/governance/management-groups/overview>

upvoted 2 times

Question #5

Topic 8

Introductory Info

Case Study -

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Overview -

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Existing Environment -

Identity Environment -

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On-Premises Environment -

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Planned Changes and Requirements

Planned Changes -

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Resiliency Requirements -

Litware identifies the following resiliency requirements:

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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.

Question

DRAG DROP -

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

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

Select and Place:

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

Correct Answer:

Actions	Answer Area
	Create an Azure policy definition that uses the deployIfNotExists effect.
<p>Create an Azure policy definition that uses the Modify effect</p> 	Create an Azure policy assignment.
 <p>Create a user-assigned managed identity.</p>	Invoke a remediation task.

Step 1: Create an Azure policy definition that uses the deployIfNotExists

The first step is to define the roles that deployIfNotExists and modify needs in the policy definition to successfully deploy the content of your included template.

Step 2: Create an Azure policy assignment

When creating an assignment using the portal, Azure Policy both generates the managed identity and grants it the roles defined in roleDefinitionIds.

Step 3: Invoke a remediation task.

Resources that are non-compliant to a deployIfNotExists or modify policy can be put into a compliant state through Remediation. Remediation is accomplished by instructing Azure Policy to run the deployIfNotExists effect or the modify operations of the assigned policy on your existing resources and subscriptions, whether that assignment is to a management group, a subscription, a resource group, or an individual resource. During evaluation, the policy assignment with deployIfNotExists or modify effects determines if there are non-compliant resources or subscriptions. When non-compliant resources or subscriptions are found, the details are provided on the Remediation page.

Reference:

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

Topic 9 - Testlet 2

Create an Azure policy definition that uses the deploymentExists effect and specifies TDE as a required setting.
Create an Azure policy definition and assign the policy definition to the desired scope (e.g., subscription/resource group).

Question #1

Topic 9

Introductory Info

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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 Hyper-V.

The IT department currently uses a separate Hyper-V environment to test updates to WebApp1.

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

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 to 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.

Question

HOTSPOT -

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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Minimum number of Azure AD tenants:

0
1
2
3
4

Minimum number of custom domains to add:

0
1
2
3
4

Minimum number of conditional access policies to create:

0
1
2
3
4

Correct Answer:

Answer Area

Minimum number of Azure AD tenants:

0
1
2
3
4

Minimum number of custom domains to add:

0
1
2
3
4

Minimum number of conditional access policies to create:

0
1
2
3
4

Box 1: 1 -

One single Azure AD tenant is needed as only the Corp tenant is migrated.

Box 2: 1 -

Box 3: 2 -

One conditional access policy for Multi-Factor Authentication (MFA) will be used for administrative access, and a second conditional access policy in order to prevent external access.

Reference:

<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/howto-conditional-access-policy-location>

<https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/howto-conditional-access-policy-admin-mfa>

 **RandomNickname** Highly Voted 1 year, 3 months ago

Given answer looks correct, 1-1-2.

1=1:Single tenant creation required only due to RD restrictions implemented.

2=1:Need to add custom domain due to default .onmicrosoft.com domain on tenant creation

3=2 Two policies required, can't have multiple actions to block + allow on single conditional access policies.

One required for admin MFA, second to block external access as per requirements.

upvoted 25 times

✉️  **ronsav80** Highly Voted 1 year, 7 months ago

I think it is 1-1-1 as you can include locations in "Conditions" section of a Conditional Access Policy (and "Grant with MFA" in the Access Cor section)

upvoted 24 times

✉️  **mikenyga** 1 year, 5 months ago

All >ADMINISTRATIVE< only access to the Azure portal must be secured by using multi-factor authentication (MFA). So 1 policy for location and 2 for MFA. 1-1-2

upvoted 16 times

✉️  **MHguy** Most Recent 3 days, 2 hours ago

in the Exam April 2024

upvoted 3 times

✉️  **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 2 times

✉️  **sawanti** 8 months, 2 weeks ago

I would say:

1 - only one AD should be migrated, everyone agrees on that

1 - onmicrosoft is default domain, need to add new domain, everyone agrees

0 - If you go to Azure AD -> Security -> Identity Protection -> MFA, you can choose who should use MFA. You don't need to create a conditional access for that. Location - I believe it should be done automatically

upvoted 2 times

✉️  **dave22339** 10 months ago

"Company information including policies, templates, and data must be inaccessible to anyone outside the company." Ok, now i see what they are saying. You can only access company data if you are in one of the four offices. That would require another conditional access policy. But it's poorly worded. Initially i read that as meaning you can't access company data unless you have a company identity. Maybe the question seems less ambiguous when we all worked in an office.

upvoted 4 times

✉️  **Bertmeister** 10 months, 3 weeks ago

2-1-1

Minimum Number of Azure AD Tenants:

Fabrikam already has two Active Directory forests: corp.fabrikam.com and rd.fabrikam.com. These forests can be synchronized with Azure AD separate tenants.

Therefore, the minimum number of Azure AD tenants required would be 2.

Minimum Number of Custom Domains to Add:

Fabrikam wants users to authenticate using their corp.fabrikam.com UPN identity.

For this, you need to add a custom domain to Azure AD that matches the domain used in the on-premises Active Directory forest (corp.fabrikam.com).

Therefore, the minimum number of custom domains to add would be 1.

Minimum Number of Conditional Access Policies to Create:

Fabrikam has a requirement to ensure that users always authenticate using their corp.fabrikam.com UPN identity.

You can create a conditional access policy in Azure AD to enforce this requirement. The policy can be configured to only allow authentication from the corp.fabrikam.com domain and deny access from other domains.

Therefore, the minimum number of conditional access policies to create would be 1.

upvoted 1 times

✉️  **sawanti** 8 months, 2 weeks ago

They do NOT want to move rd to the cloud... So it's 1

upvoted 2 times

✉️  **OPT_001122** 1 year, 2 months ago

ans is 1-1-2

upvoted 3 times

✉️  **honzar** 1 year, 4 months ago

Appeared 2023/01/04 in the exam

upvoted 11 times

✉️  **CineZorro824** 1 year, 4 months ago

On Conditional Access policies:

The case says "Company information ... must be inaccessible to anyone outside the company." The question is what is meant "outside the company": not on the company network? In that case the second conditional access policy makes sense.

If they just mean external users (non-employees), then you can solve this in a better way than with conditional access.

upvoted 3 times

✉️  **jp_mcgee** 1 year, 5 months ago

0 Custom Domains since contoso.com should be the primary domain name

<https://learn.microsoft.com/en-us/azure/active-directory/enterprise-users/domains-manage#set-the-primary-domain-name-for-your-azure-ad-organization>

upvoted 1 times

✉️  **Grimstad** 1 year, 4 months ago

Not true. In your link the user has already added a custom domain. "Every new Azure AD tenant comes with an initial domain name, <domainname>.onmicrosoft.com. You can't change or delete the initial domain name, but you can add your organization's names. Adding custom domain names helps you to create user names that are familiar to your users, such as alain@contoso.com."

upvoted 1 times

✉️  **Samko635** 1 year, 6 months ago

2 policies should be correct for the last box. Security defaults are used to enable MFA for ALL users, not just admins. And preventing users from accessing the portal outside the company network needs a separate policy as the policy action cannot be more than 1 per policy, unlike scope

upvoted 7 times

✉️  **Fidel_104** 2 months ago

I agree with MFA, but I don't see a conditional access policy condition in the docs that might be directly applicable to deny external access to company resources. Conditional access policies are to enforce MFA, filter by location, device, user-risk, and a few other edge cases. Therefore I'd go for 1-1-1.

Here is a list in the docs:

<https://learn.microsoft.com/en-us/entra/identity/conditional-access/concept-conditional-access-conditions>

upvoted 1 times

✉️  **existingname** 1 year, 6 months ago

1 tenant, as dev will stay on prep

1 custom domain, so users can login with their UPN

0 CA, MFA for adios is already enabled by Security defaults.

upvoted 1 times

✉️  **Borman** 1 year, 3 months ago

There did you see a mention about security defaults? They could be on CA already, it is not clear.

upvoted 1 times

✉️  **Davin0406** 1 year, 7 months ago

I'm confused of the 3rd box...maybe 1?

upvoted 1 times

✉️  **jellybiscuit** 1 year, 7 months ago

Regarding conditional access policies, I could answer 0, or 1. I can't imagine where 2 came from.

0 - If I enable security defaults, I create zero policies and I accomplish the task admin task.

1 - If I configure a new policy for just the admins (without enabling security defaults)

Preventing public access to your dev/test environment would be handled through your app service. <https://learn.microsoft.com/en-us/azure/service/app-service-ip-restrictions>

But maybe I'm missing something.

upvoted 12 times

Question #2

Topic 9

Introductory Info

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 Hyper-V.

The IT department currently uses a separate Hyper-V environment to test updates to WebApp1.

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

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 to 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.

Question

You need to recommend a notification solution for the IT Support distribution group.

What should you include in the recommendation?

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

Correct Answer: D

An email distribution group named IT Support must be notified of any issues relating to the directory synchronization services.

Note: You can configure the Azure AD Connect Health service to send email notifications when alerts indicate that your identity infrastructure is not healthy. This occurs when an alert is generated, and when it is resolved.

The screenshot shows the Azure Active Directory Connect (Sync) Alerts blade. At the top, there are three main tabs: Time Range, Notifications (which is highlighted with a red box), and Settings. Below the tabs, there is a message: "You can provide feedback by doing a right click on any alert." A search bar labeled "Find..." is present. The main area displays two sections: ACTIVE ALERTS and RESOLVED ALERTS. The ACTIVE ALERTS section lists one alert: "Azure AD Connect Sync Service is not running" (Type: Error, Scope: FABVM03). The RESOLVED ALERTS section shows "No items for this." On the right side, there is a "Notification" section with a "fabtoso.onmicrosoft.com" header, a "Save" button, and a "Discard" button. It also includes a switch for "OFF" and "ON" and a checkbox for "Notify All Global Administrators". Below that, there is a "ADDITIONAL EMAIL RECIPIENTS" section with two entries: "varun@fabtoso.com" and "idadmins@fabtoso.com".

Reference:

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

Community vote distribution

D (100%)

 **WickedMJ** Highly Voted 1 year, 6 months ago

Selected Answer: D

Azure AD Connect Health

upvoted 12 times

 **zellick** Highly Voted 1 year, 2 months ago

Selected Answer: D

D is the answer.

<https://learn.microsoft.com/en-us/azure/active-directory/hybrid/whatis-azure-ad-connect#what-is-azure-ad-connect-health>

Azure Active Directory (Azure AD) Connect Health provides robust monitoring of your on-premises identity infrastructure. It enables you to maintain a reliable connection to Microsoft 365 and Microsoft Online Services. This reliability is achieved by providing monitoring capabilities for your key identity components. Also, it makes the key data points about these components easily accessible.

upvoted 6 times

 **MHguy** Most Recent 3 days, 2 hours ago

in the Exam April 2024

upvoted 1 times

 **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 3 times

 **honzar** 1 year, 4 months ago

Appeared 2023/01/04 in the exam

upvoted 4 times

 **Alanckhhh** 1 year, 4 months ago

Selected Answer: D

Correct, D

upvoted 3 times

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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 -

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As one of its first projects, the company plans to establish a hybrid identity model, facilitating an upcoming Microsoft 365 deployment.

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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:

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Administrators must be able to 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.

Question

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

Scenario: Database backups must be retained for a minimum of seven years to meet compliance requirements.

Many applications have regulatory, compliance, or other business purposes that require you to retain database backups beyond the 7-35 days provided by Azure

SQL Database and Azure SQL Managed Instance automatic backups. By using the long-term retention (LTR) feature, you can store specified SQL Database and

SQL Managed Instance full backups in Azure Blob storage with configured redundancy for up to 10 years. LTR backups can then be restored as a new database.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-sql/database/long-term-retention-overview>

Community vote distribution

A (100%)

 **Eltooth** Highly Voted 2 years, 4 months ago

Selected Answer: A

Correct answer - A

upvoted 20 times

✉  **jklim** 2 years, 2 months ago
<https://docs.microsoft.com/en-us/azure/azure-sql/database/long-term-retention-overview>

CORRECT - A
upvoted 10 times

✉  **wsrudmen**  2 years, 1 month ago
You can process by elimination:
Site recovery and geo-replication are out of scope

We can think that automatic backup can be sufficient but Microsoft recommendation for Long Term Retention is to use LTR feature:
<https://docs.microsoft.com/en-us/azure/azure-sql/database/automated-backups-overview?tabs=single-database>

Then A is correct
upvoted 13 times

✉  **Lazylinux**  5 days, 9 hours ago

Selected Answer: A
Given Answer A is correct
I thought Automatic backup were sufficient but BILL GATES said otherwise LTR
<https://learn.microsoft.com/en-us/azure/azure-sql/database/automated-backups-overview?view=azuresql>
I guess you configure it in the auto backup!!
upvoted 1 times

✉  **babakeyfgir** 5 months, 1 week ago

it was a exam Question
upvoted 2 times

✉  **malcubierre** 6 months, 1 week ago

Selected Answer: A
Not B .-> Is backup recovery, not retention
Not C -> from 1 to 35 days (<https://learn.microsoft.com/en-us/azure/azure-sql/database/long-term-retention-overview?view=azuresql>)
Not D -> This is recovery, not backup
upvoted 3 times

✉  **zelick** 1 year, 2 months ago

Selected Answer: A
A is the answer.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/long-term-retention-overview?view=azuresql>
Many applications have regulatory, compliance, or other business purposes that require you to retain database backups beyond the 7-35 day provided by Azure SQL Database and Azure SQL Managed Instance automatic backups. By using the long-term retention (LTR) feature, you can store specified SQL Database and SQL Managed Instance full backups in Azure Blob storage with configured redundancy for up to 10 years. Backups can then be restored as a new database.

upvoted 4 times

✉  **honzar** 1 year, 4 months ago

Appeared 2023/01/04 in the exam
upvoted 5 times

✉  **Gor** 1 year, 11 months ago

Selected Answer: A
Correct answer: A
<https://docs.microsoft.com/en-us/azure/azure-sql/database/long-term-retention-overview?view=azuresql>
upvoted 1 times

✉  **Teringzooi** 2 years ago

Selected Answer: A
Correct answer: A
<https://docs.microsoft.com/en-us/azure/azure-sql/database/long-term-retention-overview?view=azuresql>
upvoted 1 times

✉  **Justin0020** 2 years, 1 month ago

Was in my exam on March. 10
upvoted 5 times

 **Paulwryan** 2 years, 3 months ago

It is not clear that idea is that the customer migrates to Azure SQL Database. Assuming that is the idea then answer is correct. Otherwise, long term retention policy is not available to SQL on Azure VM. But I can't see answer that fits if SQL remains hosted on a VM.

upvoted 4 times

 **DoolyMilly** 2 years, 2 months ago

I agree, one of the requirements is to leverage licensing, the company has SA, they could use hybrid licensing for their SQL. This suggests me they migrate the SQL instance as a VM, I'd say Azure VM backup (if it was a possible answer!)

upvoted 2 times

 **Mr_wippy** 2 years ago

I'm not a DBA by any means.

But as per the following article, you can use hybrid benefits for V-CORE based SQL databases (and can be done without any downtime). So, Answer A should be correct.

<https://docs.microsoft.com/en-us/azure/azure-sql/azure-hybrid-benefit?view=azuresql&tabs=azure-portal>

upvoted 4 times

Topic 10 - Testlet 3

Question #1

Topic 10

Introductory Info

Case Study -

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Overview -

Contoso, Ltd. is a research company that has a main office in Montreal.

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:

Connections to App1 must pass through a web application firewall (WAF).

Connections to App1 must be active-active load balanced between instances.

All connections to App1 from North America must be directed to the East US region. All other connections must be directed to the West Europe region.

Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location.

Requirements: App2 -

App2 will be a .NET app hosted in App Service that requires a Windows runtime. 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.

You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

A staging instance of a new application version must be deployed to the application host before the new version is used in production.

After testing the new version, the staging version of the application will replace the production version.

The switch to the new application version from staging to production must occur without any downtime of the application.

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.

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.

Question

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:

Answer Area

Service:

Azure AD Identity Governance
Azure AD Identity Protection
Azure AD Privilege Access Management (PIM)
Azure Automation

Feature:

Access packages
Access reviews
Approvals
Runbooks

Answer Area

Service:

Azure AD Identity Governance
Azure AD Identity Protection
Azure AD Privilege Access Management (PIM)
Azure Automation

Correct Answer:

Feature:

Access packages
Access reviews
Approvals
Runbooks

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: Azure AD Identity Governance

Incorrect:

Not PIM: Life Cycle Requirements must be met.

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>

✉️  **jellybiscuit** Highly Voted 1 year, 7 months ago

correct

Azure AD Identity Governance

Access reviews

upvoted 28 times

✉️  **key000001** Highly Voted 1 year, 7 months ago

1. Azure AD Identity Governance

2. Access reviews

upvoted 13 times

✉️  **Lazylinux** Most Recent 5 days, 9 hours ago

Given answer is correct based on

<https://learn.microsoft.com/en-us/entra/id-governance/identity-governance-overview>

upvoted 1 times

✉️  **joesatriani** 7 months, 1 week ago

What is different? <https://www.examtopics.com/discussions/microsoft/view/67629-exam-az-305-topic-7-question-1-discussion/>

upvoted 1 times

✉️  **NotMeAnyWay** 10 months ago

Answer:

Service:

A. Azure AD Identity Governance

Feature:

B. Access reviews

Explanation:

Azure AD Identity Governance service allows organizations to manage, control, and monitor access to resources, which is necessary for the management of Fabrikam users' access to resources.

Access reviews is a feature of Azure AD Identity Governance that allows for periodic review of access permissions, fulfilling the requirement for the monthly review of Fabrikam users' access permissions to App1.

upvoted 5 times

✉️  **leoletopic** 1 year, 4 months ago

I think this is also the reason do not choose PIM

<https://learn.microsoft.com/en-us/azure/active-directory/governance/create-access-review>

upvoted 1 times

✉️  **sawanti** 8 months, 2 weeks ago

PIM is about access reviews for administrators only, not basic users

upvoted 2 times

✉️  **Fidel_104** 2 months ago

Well, I think the correct way to look at this is that Azure AD (now Entra) ID Governance is the product, which has multiple tiers (per license) and both Access Reviews and PIM are features. But I agree that the correct answer is Access Reviews.

Here is the features by licence comparison: <https://learn.microsoft.com/en-us/entra/id-governance/licensing-fundamentals>

upvoted 1 times

✉️  **CineZorro824** 1 year, 4 months ago

Correct. Azure AD Identity Governance. Access reviews.

I initially thought the first one was PIM, but that's for reviewing other types of access.

<https://learn.microsoft.com/en-us/azure/active-directory/governance/create-access-review>

upvoted 1 times

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Overview -

Contoso, Ltd. is a research company that has a main office in Montreal.

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:

Connections to App1 must pass through a web application firewall (WAF).

Connections to App1 must be active-active load balanced between instances.

All connections to App1 from North America must be directed to the East US region. All other connections must be directed to the West Europe region.

Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location.

Requirements: App2 -

App2 will be a .NET app hosted in App Service that requires a Windows runtime. 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.

You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

A staging instance of a new application version must be deployed to the application host before the new version is used in production.

After testing the new version, the staging version of the application will replace the production version.

The switch to the new application version from staging to production must occur without any downtime of the application.

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.

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.

Question

What should you recommend to meet the monitoring requirements for App2?

- A. VM insights
- B. Azure Application Insights
- C. Microsoft Sentinel
- D. Container insights

Correct Answer: B

Scenario: You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Unified cross-component transaction diagnostics.

The unified diagnostics experience automatically correlates server-side telemetry from across all your Application Insights monitored components into a single view. It doesn't matter if you have multiple resources. Application Insights detects the underlying relationship and allows you to easily diagnose the application component, dependency, or exception that caused a transaction slowdown or failure.

Note: Components are independently deployable parts of your distributed/microservices application. Developers and operations teams have code-level visibility or access to telemetry generated by these application components.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-monitor/app/transaction-diagnostics>

Community vote distribution

B (100%)

 **kay000001**  1 year, 7 months ago

Selected Answer: B

B. Azure Application Insights
upvoted 11 times

 **zelliCK**  1 year, 2 months ago

Selected Answer: B

B is the answer.

<https://learn.microsoft.com/en-us/azure/azure-monitor/app/app-insights-overview?tabs=net>

Application Insights is an extension of Azure Monitor and provides Application Performance Monitoring (also known as "APM") features. APM tools are useful to monitor applications from development, through test, and into production in the following ways:

- Proactively understand how an application is performing.
- Reactively review application execution data to determine the cause of an incident.

upvoted 5 times

 **ubdubdoo**  2 weeks, 5 days ago

you need to update the code to include the insights SDK. not sure how that aligns with "no code changes", but its the only option that works.

upvoted 1 times

Topic 11 - Testlet 4

~~Can't be A -> VM Insight as it is not running on a VM~~

Question #1

Topic 11

Introductory Info

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 Hyper-V.

The IT department currently uses a separate Hyper-V environment to test updates to WebApp1.

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

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 to 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.

Question

You need to recommend a data storage strategy for WebApp1.

What should you include in the recommendation?

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

Correct Answer: D

The use of WebApp1 is unpredictable. At peak times, users often report delays. At other times, many resources for WebApp1 are underutilized. Database metrics for the production instance of WebApp1 must be available for analysis so that database administrators can optimize the performance settings.

Note: A virtual core (vCore) represents a logical CPU and offers you the option to choose between generations of hardware and the physical characteristics of the hardware (for example, the number of cores, the memory, and the storage size). The vCore-based purchasing model gives you flexibility, control, transparency of individual resource consumption, and a straightforward way to translate on-premises workload requirements to the cloud. This model optimizes price, and allows you to choose compute, memory, and storage resources based on your workload needs.

Incorrect:

Not C: Azure SQL Database elastic pools are a simple, cost-effective solution for managing and scaling multiple databases, not for a single database.

Reference:

<https://docs.microsoft.com/en-us/azure/azure-sql/database/service-tiers-sql-database-vcore>

Community vote distribution

D (79%)

C (16%)

5%

 **jellybiscuit**  1 year, 7 months ago

vCore-based Azure SQL database -- because the case states they want to use Azure Hybrid Benefit licensing. You cannot utilize that with the DTU model.

upvoted 27 times

 **go4adil**  1 day, 7 hours ago

Correct Answer: D

Purchasing Model: vCore-based

Service Tier: General Purpose or Hyperscale

Compute Tier: Serverless

Scenarios well suited for serverless compute

Single databases with intermittent, unpredictable usage patterns interspersed with periods of inactivity, and lower average compute utilization over time.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/serverless-tier-overview?view=azuresql&tabs=general-purpose>

upvoted 1 times

 **chair123** 1 month, 2 weeks ago

Anyone to save us here with consistent answers for this case study? answers are confusing!

upvoted 1 times

 **ayadmawla** 4 months ago

Selected Answer: C

Two issues

- use of own licenses wherever possible is available for sql elastic pool. See SQL Database Hybrid Benefits Calculator (drop down database t elastic pool) <https://azure.microsoft.com/en-gb/pricing/hybrid-benefit/#features>

- unpredictable usage pattern which necessitates an elastic pool

Just my two pennies

upvoted 2 times

 **ayadmawla** 4 months ago

Of course the problem is that elastic pool is meant to pool resources amongst many databases and not a single one. So in order to deal w the second issue of unpredictability we can go for vCore with Dynamic scaling - see: <https://learn.microsoft.com/en-us/azure/azure-sql/database/single-database-scale?view=azuresql&tabs=azure-portal>

So I am changing my answer to D

upvoted 2 times

👤 **ziggy1117** 4 months, 3 weeks ago

Selected Answer: D

D. vCore-based SQL

Requirement: Use existing on-premises licenses whenever possible

You can only apply the Azure Hybrid licensing model when you choose a vCore-based purchasing model and the provisioned compute tier for your Azure SQL Database. Azure Hybrid Benefit isn't available for service tiers under the DTU-based purchasing model or for the serverless compute tier.

upvoted 2 times

👤 **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 2 times

👤 **xxavimr** 7 months, 3 weeks ago

Selected Answer: A

In my opinion is A because of the migration. It has to be ONLINE. As Far as I know we have several tool to migrate DB. DMA, ADS, DMS and Azure Migrate. DMA only supports OFFLINE, ADS supports ONLINE and OFFLINE but does not work with Azure SQL DB, DMS supports ONLINE and OFFLINE but for Azure SQL DB only OFFLINE and Azure Migrate normally uses ADS or DMS depending on requirements.

To make the long story short, it cannot be Azure SQL DB. It could be Azure SQL MI but I do not see that option. So it is SQL in Azure VM.

upvoted 1 times

👤 **sawanti** 8 months, 2 weeks ago

Selected Answer: C

Why the hell you choose D? You can use Azure Hybrid Benefit for Azure SQL Database elastic pool + they have high and low utilization scenarios, hence elastic pool will be the best option. Answer C IMHO is correct

upvoted 1 times

👤 **sjb666** 1 year ago

Selected Answer: D

D because of Azure Hybrid Benefit licensing requirement

upvoted 2 times

👤 **pkkalra** 1 year, 2 months ago

Selected Answer: D

Hyperscale service tier is available for single databases that are using the vCore-based purchasing model.

Rapid scale out and scale up options are available for unpredictable load.

A Hyperscale database grows as needed - and you're billed only for the capacity you use. For read-intensive workloads, the Hyperscale service tier provides rapid scale-out by provisioning additional replicas as needed for offloading read workloads.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/service-tier-hyperscale?view=azuresql>

upvoted 1 times

👤 **RandomNickname** 1 year, 3 months ago

Selected Answer: D

Given answer looks correct as per article, which discusses auto-scale with serverless compute tier

<https://learn.microsoft.com/en-us/azure/azure-sql/database/service-tiers-sql-database-vcore?view=azuresql>

upvoted 2 times

👤 **honzar** 1 year, 4 months ago

Appeared 2023/01/04 in the exam

upvoted 4 times

👤 **Snownoodles** 1 year, 6 months ago

Selected Answer: D

Hybrid benefit - vCore-Based Azure SQL Database

upvoted 3 times

👤 **WickedMJ** 1 year, 6 months ago

Selected Answer: D

vCore-based Azure SQL database

upvoted 1 times

- ✉  **ezfix** 1 year, 7 months ago
C. Elastic Pool. Perfectly matches the description of the answer listed. The use case also mentioned databases plural being migrated and unpredictable usage. Also you can setup regional auto failover groups for SQL Database and Elastic Pools, so that would cover the geo-redundancy requirement. <https://learn.microsoft.com/en-us/azure/azure-sql/database/elastic-pool-overview?view=azuresql>
upvoted 2 times
- ✉  **FabrityDev** 1 year, 3 months ago
Elastic Pool makes sense only when you have multiple databases.
upvoted 2 times
- ✉  **Jay_2pt0** 1 year, 6 months ago
I certainly would agree with you if multiple databases, but I'm not seeing that reference.
upvoted 5 times
- ✉  **kodathedog** 5 months, 3 weeks ago
It does state in the case study blurb : "To avoid disrupting customer access, database downtime must be minimized when *databases* migrated." Because it says "databases", I think Elastic Pools is a viable option here.
upvoted 1 times
- ✉  **HTEC** 1 year, 7 months ago
Why not A? "To avoid disrupting customer access, database downtime must be minimized when databases are migrated."
upvoted 1 times
- ✉  **scottn26** 1 year, 6 months ago
I think there is always a preference to migrate to a cloud native solution rather than VMs. There is a migration tool within SQL Server to Azure SQL Database which wouldn't take any longer than migrating the VM from on-premises (using Migrate, for example)
upvoted 2 times
- ✉  **kay000001** 1 year, 7 months ago
Selected Answer: D
D. a vCore-based Azure SQL database
upvoted 4 times

Topic 12 - Testlet 5

Question #1

Topic 12

Introductory Info

Case Study -

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Overview -

Litware, Inc. is a medium-sized finance company that has a main office in Boston.

Existing Environment -

Identity Environment -

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

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

The litware.com tenant has a Conditional Access policy named Capolicy1. Capolicy1 requires that when users manage the Azure subscription for a production environment by using the Azure portal, they must connect from a hybrid Azure AD-joined device.

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

Planned Changes -

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 AD-joined 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 to management groups.

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.

▪

Question

HOTSPOT -

You plan to migrate DB1 and DB2 to Azure.

You need to ensure that the Azure database and the service tier meet the resiliency and business requirements.

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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Database:

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

Service tier:

- Hyperscale
- Business Critical
- General Purpose

Correct Answer:

Answer Area

Database:

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

Service tier:

- Hyperscale
- Business Critical
- General Purpose

Box 1: An Azure SQL Database elastic pool

Scenario:

* 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.

* Litware identifies the following business requirements:

Minimize administrative effort.

Minimize costs.

Box 2: Business Critical

 **WickedMJ**  1 year, 6 months ago

> Database: "An Azure SQL Database elastic pool"

> Service Tier: "Business Critical"

Reference & explanations:

<https://www.examtopics.com/discussions/microsoft/view/68044-exam-az-305-topic-9-question-1-discussion/>

upvoted 23 times

 **tfulanchan** 1 year, 3 months ago

The reference you provided suggests that "SQL Managed Instance" is the answer

upvoted 5 times

 **techrat** Highly Voted 1 year ago

The given answer is correct:

1. Azure SQL Database elastic pool
2. Business Critical

I had this case study on my exam today, and I passed it with 979

upvoted 11 times

 **BShelat** Most Recent 4 months, 2 weeks ago

Today (14-DEC-2023) I took the AZ-305 exam and passed. Thanks to Examtopics and all members who participated in discussing AZ-305 Questionnaire and answers. This site has helped me greatly. Majority questions I had in the exam are in this set. I had Litware Test case in the exam. Thanks.

upvoted 9 times

 **joesatriani** 7 months, 1 week ago

What is different? <https://www.examtopics.com/discussions/microsoft/view/68044-exam-az-305-topic-9-question-1-discussion/>

upvoted 1 times

 **Darkeh** 8 months, 3 weeks ago

Elastic and Business Critical for both questions... you should never use preview in prod, so you cannot choose managed instance!

upvoted 3 times

 **NotMeAnyWay** 10 months ago

1. Database: c. An Azure SQL Database elastic pool
2. Service tier: b. Business Critical

Explanation:

An Azure SQL Database Elastic Pool is a shared resource model that enables higher resource utilization efficiency. It allows multiple databases to share the same resources, which will be beneficial in this case where there are two databases, DB1 and DB2, to be migrated.

Business Critical service tier provides high availability and low latency, and it is fully managed, which aligns with the business requirement to minimize administrative effort and the technical requirement to maintain availability if two availability zones fail. As you pointed out, the zone redundancy is still in preview for Managed Instances which can't guarantee the desired level of stability and reliability.

upvoted 9 times

 **firedog2023** 10 months, 2 weeks ago

any thoughts on this please as zone redundancy is not supported for Azure SQL General Purpose. This would make it the most cost effective option above business critical.

<https://techcommunity.microsoft.com/t5/azure-sql-blog/zone-redundancy-for-azure-sql-database-general-purpose-tier/ba-p/3280376>
upvoted 1 times

 **Tr619899** 11 months, 2 weeks ago

1. Azure SQL Managed Instance for the database
2. Business Critical service tier

Azure SQL Managed Instance provides automatic failover within an availability zone and can be configured with auto-failover groups for cross-region disaster recovery. The Business Critical service tier provides high availability with several readable secondary replicas and fast failover within an availability zone. This configuration meets Litware's requirements for maintaining availability if two availability zones in the local Azure region fail, failing over automatically, and minimizing I/O latency.

An Azure SQL Database Elastic Pool is a cost-effective solution for managing and scaling multiple databases that have varying and unpredictable resource demands. However, based on the information provided in the case study, it does not appear to be the best option for meeting Litware's resiliency requirements for DB1 and DB2. Azure SQL Managed Instance would be a better choice for meeting these requirements.

upvoted 4 times

✉  **zellck** 1 year, 2 months ago

1. Azure SQL DB elastic pool
2. Business Critical

<https://learn.microsoft.com/en-us/azure/azure-sql/database/service-tiers-sql-database-vcore?view=azuresql#when-to-choose-this-service-tier>
The Business Critical service tier is designed for applications that require low-latency responses from the underlying SSD storage (1-2 ms in average), faster recovery if the underlying infrastructure fails, or need to off-load reports, analytics, and read-only queries to the free of charge readable secondary replica of the primary database.

The key reasons why you should choose Business Critical service tier instead of General Purpose tier are:

- Low I/O latency requirements – workloads that need a consistently fast response from the storage layer (1-2 milliseconds in average) should use Business Critical tier.

upvoted 3 times

✉  **zellck** 1 year, 2 months ago

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell#premium-and-business-critical-service-tier-zone-redundant-availability>

With the introduction of Azure Availability Zones, SQL Database can place different replicas of the Business Critical database to different availability zones in the same region. To eliminate a single point of failure, the control ring is also duplicated across multiple zones as three gateway rings (GW). The routing to a specific gateway ring is controlled by Azure Traffic Manager (ATM). Because the zone-redundant configuration in the Premium or Business Critical service tiers doesn't create additional database redundancy, you can enable it at no extra cost. By selecting a zone-redundant configuration, you can make your Premium or Business Critical databases resilient to a much larger set of failures, including catastrophic datacenter outages, without any changes to the application logic.

upvoted 2 times

✉  **_fvt** 1 year, 2 months ago

Database: "An Azure SQL Database elastic pool"

- Zone Redundancy still in Preview for Managed Instance so it's a no go
- You could have deployed two Azure Databases but here it is written "A SINGLE" so it's not working as you have two databases to migrate

Service Tier: "Business Critical"

- as you need to minimize I/O latency

upvoted 2 times

✉  **testgm** 1 year, 2 months ago

Answer:

Database: SQL Managed Instances

Service Tier: Business Critical

SQL Managed Instance now supports zone redundancy

upvoted 1 times

✉  **np2021** 1 year, 2 months ago

As at today, documentation still says its in PREVIEW only on BusCritical tier. I think its been raised before its not reliable as answer.

upvoted 1 times

✉  **fodocel235** 5 months ago

Today MI & Business Critical is General Available. MI & General Purpose is now in Public Preview.

Answer is MI Business Critical. It's cheaper than SQL Database Elastic Pool.

<https://learn.microsoft.com/en-us/azure/azure-sql/managed-instance/high-availability-sla?view=azuresql>

upvoted 3 times

✉  **dagomo** 1 year, 2 months ago

Hello guys,

I guess should be the following:

- > Database: "AZURE SQL MANAGED INSTANCE" - it can provide AUTO-FAILOVER
- > Service Tier: "Business Critical"

upvoted 1 times

✉  **Lu5ck** 1 year, 2 months ago

The scenario ask for availability zone and I wanted to opt for MI Business Critical but zone redundant feature is in preview. Single Azure SQL Database doesn't make sense because we got two databases.

So the only option is actually elastic pool. So the answer is correct.

upvoted 1 times

pkkalra 1 year, 3 months ago

Single Azure SQL Database
Business Critical

A single azure sql db for each db would meet the requirements.

You can't use an elastic pool unless you are aware of the load pattern of each db to make it worthwhile to use elastic db. There is no indication the question to hint pool will be useful.

also there is no indication in the answer that single azure db has to be for both dbs. It can a single db for each - db1 and db2. Therefore Multi in question doesn't rule out a single azure db as potential answer.

upvoted 2 times

RandomNickname 1 year, 3 months ago

SQL MI with Business critical seems to meet the resiliency and business requirement.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

<https://techcommunity.microsoft.com/t5/azure-sql-blog/zone-redundancy-for-azure-sql-managed-instance-business-critical/ba-p/3677646>

upvoted 2 times

OPT_001122 1 year, 3 months ago

Database: "An Azure SQL Database elastic pool!"

Service Tier: "Business Critical"

Reason as per my understanding -

Zone-redundant configuration is not available in SQL Managed Instances

Scenario:

* 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.

upvoted 2 times

gabmancuso 1 year ago

You are wrong in 2023... it seems ZRS is available and you can see how here: <https://techcommunity.microsoft.com/t5/azure-sql-blog/zone-redundancy-for-azure-sql-managed-instance-business-critical/ba-p/3677646#:~:text=1%20Step%201%3A%20Select%20Configure%20Managed%20Instance%20in,of%20the%20compatible%20redundancy%20options%20for%20backup%20storage%3A>

upvoted 1 times

StixxNSnare 5 months ago

Correct it is MI

<https://learn.microsoft.com/en-us/azure/reliability/migrate-sql-managed-instance?tabs=portal>

upvoted 1 times

rpalanivel83 1 year, 3 months ago

Answer:

Database : "Azure SQL Managed Instance"

Service Tier: "Business Critical"

Refer the benefits and Service tier sections here

<https://learn.microsoft.com/en-us/azure/azure-sql/managed-instance/sql-managed-instance-paas-overview?view=azuresql>

upvoted 2 times

Topic 13 - Testlet 6

Question #1

Topic 13

Introductory Info

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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To start the case study -

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

Overview -

Contoso, Ltd. is a research company that has a main office in Montreal.

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:

Connections to App1 must pass through a web application firewall (WAF).

Connections to App1 must be active-active load balanced between instances.

All connections to App1 from North America must be directed to the East US region. All other connections must be directed to the West Europe region.

Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location.

Requirements: App2 -

App2 will be a .NET app hosted in App Service that requires a Windows runtime. 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.

You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

A staging instance of a new application version must be deployed to the application host before the new version is used in production.

After testing the new version, the staging version of the application will replace the production version.

The switch to the new application version from staging to production must occur without any downtime of the application.

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.

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.

Question

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:

Services

Azure Blob Storage

Azure Data Box

Azure Data Box Gateway

Azure Data Lake Storage

Azure File Sync

Azure Files

Answer Area

Azure subscription:

Service

On-premises network:

Service

Correct Answer:

Services

Azure Blob Storage

Azure Data Box

Azure Data Box Gateway

Azure Data Lake Storage

Answer Area

Azure subscription:

Azure Files

On-premises network:

Azure File Sync

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>

✉️  **airmancompsci** Highly Voted 1 year, 4 months ago

Took the AZ-305 on 12/7 and passed with a 935 only using this question bank (I have the Contributor access). I did not use AZ-304 or any other question bank.

I had this specific case study actually, in case knowing that helps anyone.

upvoted 43 times

✉️  **OPT_001122** 1 year, 3 months ago

Thanks for mentioning this!!!

upvoted 4 times

✉️  **WickedMJ** Highly Voted 1 year, 6 months ago

> Azure Subscription: "Azure Files"

> On-premises network: "Azure File Sync"

Reference:

<https://www.examtopics.com/discussions/microsoft/view/67817-exam-az-305-topic-8-question-1-discussion/>

upvoted 12 times

✉️  **NotMeAnyWay** Most Recent 10 months ago

Answer:

Azure subscription:

- Azure Files

On-Premises network:

- Azure File Sync

Explanation:

Azure Files would be suitable for saving files to an Azure Storage account as mentioned in the requirements for App2.

Azure File Sync will sync the Azure Files to the on-premises location, ensuring that on-premises clients can read the files over the LAN using the SMB protocol, which is also a requirement for App2. It extends on-premises systems into Azure storage while maintaining a local cache of the data on-premises.

upvoted 5 times

Question #2

Topic 13

Introductory Info

Case Study -

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statements. If the case study has an All Information tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the Question button to return to the question.

Overview -

Contoso, Ltd. is a research company that has a main office in Montreal.

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:

Connections to App1 must pass through a web application firewall (WAF).

Connections to App1 must be active-active load balanced between instances.

All connections to App1 from North America must be directed to the East US region. All other connections must be directed to the West Europe region.

Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location.

Requirements: App2 -

App2 will be a .NET app hosted in App Service that requires a Windows runtime. 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.

You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

A staging instance of a new application version must be deployed to the application host before the new version is used in production.

After testing the new version, the staging version of the application will replace the production version.

The switch to the new application version from staging to production must occur without any downtime of the application.

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.

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.

Question

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 Storage account that uses geo-zone-redundant storage (GZRS)

Correct Answer: A

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 multi-region 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 geo-replication 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>

Community vote distribution

A (100%)

 **WickedMJ**  1 year, 6 months ago

Selected Answer: A

A. an Azure Cosmos DB that uses multi-region writes

Reference

<https://www.examtopics.com/discussions/microsoft/view/69314-exam-az-305-topic-8-question-2-discussion/>

upvoted 12 times

 **NotMeAnyWay**  10 months ago

Selected Answer: A

A. an Azure Cosmos DB that uses multi-region writes

Explanation:

The data requirements for App1 specify that each instance will write data to a data store in the same availability zone, and that data written by any App1 instance must be visible to all App1 instances.

Azure Cosmos DB with multi-region writes is a globally distributed database service. It allows you to read and write data (with automatic failover) in the region closest to the users, providing both low latency and high availability. This meets the requirements of App1, as it ensures that data written by any instance is visible to all instances regardless of the region.

Azure Data Lake and Azure Storage with GZRS do not natively support this type of active-active data replication across multiple regions.
upvoted 7 times

 **Lazylinux**  5 days, 7 hours ago

Selected Answer: A

Given Answer A is correct

However it is very unclear requirement i.e. NO where in the data requirements specifies that write and read are required instantaneously (Sync repl or multi-writes) by other App instances and hence B and C are either correct since Async replication is NOT rejected in the requirements ; if you have to chose between B or C then B due to its more advance features and capability

I guess it is A because only of the multi-writes (Multi-Master) as for Global/regional presence - B and C provide that too

upvoted 1 times

 **OPT_001122** 1 year, 3 months ago

Selected Answer: A

A. an Azure Cosmos DB that uses multi-region writes

Topic 14 - Testlet 7

Question #1

Topic 14

Introductory Info

Case Study -

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Overview -

Contoso, Ltd. is a research company that has a main office in Montreal.

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:

Connections to App1 must pass through a web application firewall (WAF).

Connections to App1 must be active-active load balanced between instances.

All connections to App1 from North America must be directed to the East US region. All other connections must be directed to the West Europe region.

Every hour, you will run a maintenance task by invoking a PowerShell script that copies files from all the App1 instances. The PowerShell script will run from a central location.

Requirements: App2 -

App2 will be a .NET app hosted in App Service that requires a Windows runtime. 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.

You need to monitor App2 to analyze how long it takes to perform different transactions within the application. The solution must not require changes to the application code.

Application Development Requirements

Application developers will constantly develop new versions of App1 and App2. The development process must meet the following requirements:

A staging instance of a new application version must be deployed to the application host before the new version is used in production.

After testing the new version, the staging version of the application will replace the production version.

The switch to the new application version from staging to production must occur without any downtime of the application.

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.

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.

Question

HOTSPOT -

You are evaluating whether to use Azure Traffic Manager and Azure Application Gateway to meet the connection requirements for App1.

What is the minimum numbers of instances required for each service? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Azure Traffic Manager:

1
2
3
6

Azure Application Gateway:

1
2
3
6

Answer Area

Azure Traffic Manager:

1
2
3
6

Correct Answer:

Azure Application Gateway:

1
2
3
6

Box 1: 1 -

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

¤ Connections to App1 must be active-active load balanced between instances.

¤ All connections to App1 from North America must be directed to the East US region. All other connections must be directed to the West Europe region.

App1 will have six instances: three in the East US Azure region and three in the West Europe Azure region.

Note: 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.

Box 2: 2 -

For production workloads, run at least two gateway instances.

A single Application Gateway deployment can run multiple instances of the gateway.

Use one Application Gateway in East US Region, and one in the West Europe region.

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/high-availability/reference-architecture-traffic-manager-application-gateway>

✉️  **WickedMJ** Highly Voted 1 year, 6 months ago

> Azure Traffic Manager: " 1 "
> Azure Application Gateway: " 2 "
upvoted 31 times

✉️  **Dudulle** Highly Voted 1 year, 5 months ago

1
2
of course since:
- traffic mgr is global
- app GW is regional

2 regions imply: 1 TM and 2 app GW
upvoted 20 times

✉️  **Lazylinux** Most Recent 5 days, 7 hours ago

Given answer is correct.
AZ traffic manager is Global and DNS layer 7 based and hence can accommodate for both regions US and Europe
and App GWY is regional and also Layer 7 and hence need 2 i.e one for US and Europe and is WAF enabled
upvoted 2 times

✉️  **johnD16** 1 year, 1 month ago

Showed in exam 18.03.2023. correct
passed 940/1000
upvoted 7 times

✉️  **RandomNickname** 1 year, 3 months ago

Given answer is correct
upvoted 2 times

✉️  **heero** 1 year, 7 months ago

should be
2
1
upvoted 1 times

✉️  **ronsav80** 1 year, 7 months ago

From <https://learn.microsoft.com/en-us/azure/architecture/high-availability/reference-architecture-traffic-manager-application-gateway> , th
has 1 traffic manager (for DNS responses) and 2 app gateways, so 1-2 seems right
upvoted 9 times

✉️  **StixxNSnares** 5 months ago

You are confusing the people with your answer. The correct one is 1,2
upvoted 1 times

Topic 15 - Testlet 8

Question #1

Topic 15

Introductory Info

Case Study -

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Overview -

Litware, Inc. is a medium-sized finance company that has a main office in Boston.

Existing Environment -

Identity Environment -

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

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

The litware.com tenant has a Conditional Access policy named Capolicy1. Capolicy1 requires that when users manage the Azure subscription for a production environment by using the Azure portal, they must connect from a hybrid Azure AD-joined device.

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

Planned Changes -

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 AD-joined 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 to management groups.

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.

-

Question

HOTSPOT -

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

Hot Area:

Answer Area

Database:

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

Service tier:

Hyperscale
Business Critical
General Purpose

Answer Area

Database:

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

Correct Answer:

Service tier:

Hyperscale
Business Critical
General Purpose

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 geo-replication 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>

✉️  **GarryK** Highly Voted 1 year, 7 months ago

Elastic Pool.

Managed instance does not support zone redundancy

Zone-redundant configuration is not available in SQL Managed Instance. In SQL Database this feature is only available when the Gen5 hardware is selected.

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

upvoted 40 times

✉️  **DeBoer** 1 year, 2 months ago

We're talking about 2 DBs, so a single DB won't cut it. Managed Instances support zone redundancy in preview - so that's not something we'd want in production yet. Only option left: elastic pool. Makes sense since we're using 2 DBs.

Regarding the tier:

General Purpose fits the bill for zone redundancy - you can turn on Zone Redundancy in GP. However... they also want high IOPS (requirement 3). So that means Business Critical or Hyperscale (500 IOPS per vCore with 7,000 maximum IOPS in GP, 8,000 IOPS per vCore with 200,000 maximum in BC and Hyperscale has 327,680 IOPS with max local SSD).

I'm not sure if you can use Hyperscale with elastic pools (portal won't let me select it in my lab), so I'd go for Business Critical.

upvoted 11 times

✉️  **StixxNSnares** 5 months ago

Update - MI now supports ZR

<https://learn.microsoft.com/en-us/azure/reliability/migrate-sql-managed-instance?tabs=portal>

upvoted 4 times

✉️  **GarryK** 1 year, 2 months ago

Updating my comment: now the feature is in preview, but for production and reduce administrative effort, I would still go with elastic pool:

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

This feature is currently in Preview for SQL Managed Instance. In SQL Database, when using the Business Critical tier, zone-redundant configuration is only available when the standard-series (Gen5) hardware is selected. For up-to-date information about the regions that support zone-redundant databases, see Services support by region.

upvoted 6 times

✉️  **joesatriani** Highly Voted 7 months, 1 week ago

The following answer is right.

Database: An Azure SQL Database elastic pool

Service Tier: Business Critical

upvoted 5 times

✉  **kodjoa2024** Most Recent 1 month, 1 week ago

Elastic pool because the cost should be minimum. MI will be more expensive
upvoted 2 times

✉  **joesatriani** 7 months, 1 week ago

This is the same question. <https://www.examtopics.com/discussions/microsoft/view/82084-exam-az-305-topic-12-question-1-discussion/>
upvoted 3 times

✉  **Darkeh** 8 months, 3 weeks ago

Elastic pool / business critical for both of the case study questions purely due to the redundancy requirement. You should NEVER use preview prod!
upvoted 5 times

✉  **bd1234** 1 year, 2 months ago

1.SQL Managed Instance
2. Business Critical service tier
"Zone-redundant configuration is currently in preview for SQL Managed Instance, and only available for the Business Critical service tier."
<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>
upvoted 2 times

✉  **dagomo** 1 year, 2 months ago

Hello guys,
I guess is correct, should be the following:
> Database: "AZURE SQL MANAGED INSTANCE" - it can provide AUTO-FAILOVER
> Service Tier: "Business Critical"
upvoted 3 times

✉  **OPT_001122** 1 year, 3 months ago

Question #1-Page47 - this question looks similar
for this question the answer is Elastic Pool now Why Single Azure SQL Database here?

I think GarryK is correct
upvoted 1 times

✉  **pkkalra** 1 year, 3 months ago

Single Azure SQL Database
Business Critical

Indeed a repeated question IMHO

A single azure sql db for each db would meet the requirements.

You can't use an elastic pool unless you are aware of the load pattern of each db to make it worthwhile to use elastic db. There is no indication the question to hint pool will be useful.

also there is no indication in the answer that single azure db has to be for both dbs. It can a single db for each - db1 and db2. Therefore Multi in question doesn't rule out a single azure db as potential answer.

upvoted 3 times

✉  **EXzw** 1 year, 1 month ago

in most of the answer it use Azure SQL Database. only this question it use "A Single Azure SQL Database". so I don't think it imply 1 SQL I for each.
upvoted 1 times

✉  **Madball** 1 year, 3 months ago

SQL Managed Instance does support zone redundancy, however you need to choose Gen5 hardware, so it all depends on when this question was released. One of the business requirements is to minimize cost, so elastic pool would be the preferred choice to minimize cost, however would work too.

upvoted 2 times

✉  **Madball** 1 year, 3 months ago

Additional comments, General Purpose has zone redundancy on elastic pool too, so the answer should be Elastic Pool and General Purpose.
upvoted 3 times

✉️  **Ghosh** 1 year, 4 months ago

Yes, Azure SQL Managed Instance supports Zone Redundancy. Zone Redundancy is a feature that provides additional resiliency and availability for Azure SQL Managed Instance by replicating the data to a secondary region within the same geography. This allows you to maintain availability in the event of a region-wide failure or disaster.

To enable Zone Redundancy for your Azure SQL Managed Instance, you can specify the zone redundancy option when you create the instance. You can also enable or disable this feature later on by modifying the instance's properties.

It's important to note that Zone Redundancy is only available for Azure SQL Managed Instance in the General Purpose and Business Critical service tiers. It is not available for the Hyperscale service tier.

upvoted 2 times

✉️  **[Removed]** 1 year, 3 months ago

I think you are getting confused.

"Zone Redundancy is a feature that provides additional resiliency and availability for Azure SQL Managed Instance by replicating the data to a secondary region within the same geography" - Wrong.

See below correction:

Zone Redundancy is a feature that provides additional resiliency and availability for Azure SQL Managed Instance by replicating the data across multiple physical locations within an Azure region.

Note - "Physical Locations"

Meaning, your data is replicated to other availability zones within the same region. Hence "ZONE" Redundancy.

An availability zone consists of one or more data centers (physical locations).

upvoted 4 times

✉️  **RandomNickname** 1 year, 4 months ago

Agree with others.

Elastic Pool

Multi DB so not Azure SQL and as per below not SQL MI either

Business Critical

<https://learn.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla?view=azuresql&tabs=azure-powershell>

From above URL;

Premium and Business Critical service tier zone redundant availability

This feature is not available in SQL Managed Instance. In SQL Database, when using the Business Critical tier, zone-redundant configuration is only available when the standard-series (Gen5) hardware is selected. For up to date information about the regions that support zone-redundant databases, see Services support by region.

upvoted 4 times

✉️  **RandomNickname** 1 year, 3 months ago

Correction.

After a further look given answer looks correct.

SQL MI does support zone redundancy.

<https://techcommunity.microsoft.com/t5/azure-sql-blog/zone-redundancy-for-azure-sql-managed-instance-business-critical/ba-p/3677641>

upvoted 3 times

✉️  **testtaker13** 1 year, 2 months ago

According to official docs <https://learn.microsoft.com/en-us/azure/azure-sql/database/features-comparison?view=azuresql#platform-capabilities> it is still in Preview. This means it is not official for the general public. Also I doubt that the test questions are updated on monthly basis for the latest feature updates. Not sure though, question is a bit tricky.

upvoted 2 times

✉️  **RandomNickname** 1 year, 2 months ago

Great point regarding preview mode, and the frequency of when the questions are updated.

There are usually assumptions with Microsoft.

I think I'll see which way the wind blows on the big day if this crops up :)

upvoted 2 times

✉️  **Fidel_104** 1 month, 3 weeks ago

As of today, zone-redundant config is generally available for the Business Critical tier:

"Zone-redundant configuration is in public preview for the General Purpose service tier and generally (sic) available for the Business Critical service tier."

Source: <https://learn.microsoft.com/en-us/azure/azure-sql/managed-instance/high-availability-sla?view=azuresql-mi&preserve-view=true>

upvoted 1 times

✉️  **Ravi1383** 1 year, 5 months ago

Questions is when DB1 and Db2 are already migrated to Azure! The given answers are correct and it's not a repeated question.

upvoted 2 times

✉️  **A_GEE** 1 year, 5 months ago

The zone redundant availability is not available for SQL Managed Instance. So one of the requirements is not met

upvoted 2 times

✉️  **A_GEE** 1 year, 5 months ago

Repeat questions

upvoted 3 times

Topic 16 - Testlet 9

Introductory Info

Case Study -

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

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

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

To start the case study -

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

Overview -

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 Hyper-V.

The IT department currently uses a separate Hyper-V environment to test updates to WebApp1.

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

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 to authenticate to the Azure portal by using their corp.fabrikam.com credentials.

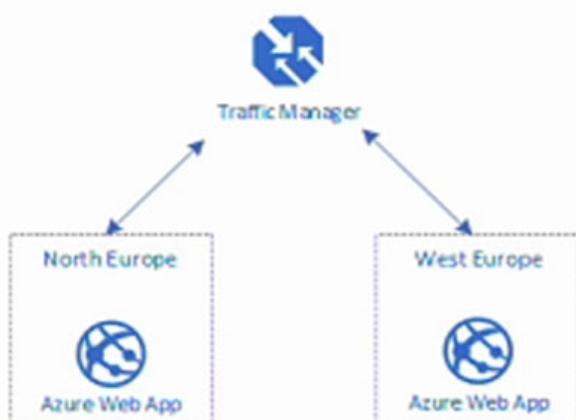
All administrative access to the Azure portal must be secured by using multi-factor authentication (MFA).

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

Question

HOTSPOT -

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



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

NOTE: Each correct selection is worth one point.

Hot Area:

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"/>
Correct Answer: The design supports autoscaling.	<input type="radio"/>	<input checked="" type="radio"/>
The design requires a manual configuration if an Azure region fails.	<input type="radio"/>	<input checked="" type="radio"/>

Box 1: Yes -
Any new deployments to Azure must be redundant in case an Azure region fails.
Traffic Manager is resilient to failure, including the failure of an entire Azure region.

Box 2: No -
Traffic Manager provides load balancing, but not auto-scaling.

Box 3: No -
Automatic failover using Azure Traffic Manager: when you have complex architectures and multiple sets of resources capable of performing the same function, you can configure Azure Traffic Manager (based on DNS) to check the health of your resources and route the traffic from the non-healthy resource to the healthy resource.

Reference:
<https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-overview> <https://docs.microsoft.com/en-us/azure/networking/disaster-recovery-dns-traffic-manager>

✉  **ezfix** Highly Voted 1 year, 7 months ago

Should be Y,Y,N

(Yes) Traffic manager distributes load to two sites (redundancy). (Yes) The graphic clearly shows an "Azure Web App", which is production. By default, production web apps support auto scale. (No) Azure Traffic manager does automatic failover, so no manual configuration is necessary

upvoted 59 times

✉  **Bartolo** Highly Voted 1 year, 7 months ago

YYN

"In this way, the App Service plan is the scale unit of the App Service apps. If the plan is configured to run five VM instances, then all apps in 1 plan run on all five instances. If the plan is configured for autoscaling, then all apps in the plan are scaled out together based on the autoscale settings."

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

upvoted 10 times

✉  **Galron** 1 year, 6 months ago

YYN, with Std Web App plan you get autoscale vertical and horizontal.

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

<https://azure.microsoft.com/en-us/pricing/details/app-service/windows/>

upvoted 3 times

✉  **Lazylinux** Most Recent 5 days, 6 hours ago

I will go for YYN

1- Y - Yep all requirements are met

2- Y - All app service STD and onwards support auto-scaling

3- N - Because Traffic Manager DNS-based traffic load balancer => using Endpoints, in this case of type Azure and target type App services, then routing method in this case you could use either weighted or priority - preferably weighted with 1 and 1 hence equal workload and if one fails then routed to the other, if priority is used then 1 and 2 assigned but one assigned 1 will do all work and if fails then other region kicks in, course other routing methods are performance, subnet, Multivalue, Geographic - really more info required to chose the correct one

upvoted 1 times

✉  **manemanevski123** 1 month, 3 weeks ago

Y,Y,N

Autoscale now is working for webapps <https://learn.microsoft.com/nl-nl/azure/app-service/manage-automatic-scaling?tabs=azure-portal>

upvoted 1 times

✉️  **SDewan** 2 months, 1 week ago

Y, N,N

Auto scaling is only supported in Premium, also it is a preview feature (Feb 2024)

upvoted 1 times

✉️  **ziggy1117** 4 months, 3 weeks ago

Y,Y,N

"Whenever possible, solutions must be deployed to Azure by using the Standard pricing tier of Azure App Service."

- Standard Plan supports auto-scaling up to 10 instances.

upvoted 1 times

✉️  **babakeyfgir** 5 months, 1 week ago

it was a exam Question

upvoted 2 times

✉️  **jojorabbit2021** 8 months, 2 weeks ago

YNN , let's end the discussion guys:

1. Y for obvious reasons I can't bother explaining

2. N autoscaling web apps are in preview mode so you absolutely should not use this in production as of August 2023, PERIOD!

3. N it will auto fail-over same behavior as with AWS route 53

upvoted 3 times

✉️  **sawanti** 8 months, 2 weeks ago

Should be Y N N:

Y - Redundancy is okay, we have two regions

N - Azure Web App means nothing. There are different plans in Azure App Plan. Plans Standard and above provides autoscale. Basic plan does not. We can't assume they have Standard or Premium plan.

No - No auto failover

upvoted 1 times

✉️  **rishisoft1** 1 month, 1 week ago

Its std plan -- Standard pricing tier of Azure App Service. given in the case study. And it supports autoscaling

upvoted 1 times

✉️  **xRiot007** 1 month, 2 weeks ago

"We can't assume they have Standard or Premium plan" - you don't need to.

You just need to read the actual problem and you will find out you are told specifically to deploy using Standard whenever possible.

upvoted 1 times

✉️  **marcellov** 7 months ago

Yes, we can assume it is Standard plan.

"Whenever possible, solutions must be deployed to Azure by using the Standard pricing tier of Azure App Service."

upvoted 3 times

✉️  **sawanti** 8 months, 2 weeks ago

By third I meant that it should automatically failover

upvoted 1 times

✉️  **InvalidNickname** 9 months ago

This Case Study was in Exam Aug 5th, 2023. For all questions go through the discussions. I got only 1 question from outside. Only 1 case study

upvoted 5 times

✉️  **yonie** 1 year ago

I think YYN

Same question as AZ-304

<https://www.examtopics.com/discussions/microsoft/view/49469-exam-az-304-topic-13-question-2-discussion/>

And the answer provided is YYN and all comment sections agrees.

So the problem is with the wording of the question? We all agree TM doesn't provide auto scale and webapp does, so its a question of whether you are looking at the design as a whole or only at TM. I am inclined towards design as a whole.

upvoted 1 times

✉️  **AdventureChick** 7 months, 1 week ago

All 3 statements specifically state "The design ... blah". The entire picture = the design. No problem here, and it's not ""a question of whether you look at the design as a whole or only TM".

upvoted 1 times

 **Rogercampos** 1 year, 1 month ago

gentlemen I have counted the questions of this dump, from the first of the topic 1 to the last of T16 - 1 There are 202 questions and not 209, moderator at least tell the questions.

upvoted 4 times

 **abxc** 1 year, 2 months ago

It should YYN.

Statement is asking if design supports autoscaling not if traffic manager supports it and in design they have Azure webapp that support autoscale.

upvoted 1 times

 **RandomNickname** 1 year, 3 months ago

Y,Y,N.

1:Y - Traffic manager regional redundancy

2: Y - Sure traffic manager doesn't offer auto-scaling but Azure web app does offer Auto-scaling.
<https://learn.microsoft.com/en-us/azure/azure-monitor/autoscale/autoscale-get-started>

3: N - Traffic manager auto fails over.

upvoted 4 times

 **dimsof** 1 year, 3 months ago

They are talking about the design though, and traffic manager doesn't support autoscale

upvoted 3 times

 **honzar** 1 year, 4 months ago

Appeared 2023/01/04 in the exam

upvoted 6 times

 **Ghoshy** 1 year, 4 months ago

The answer should be Y,Y,N . For Azure App Service, the requirement is talking about standard ones.

Yes, the Standard pricing tier of Azure App Service supports autoscaling. Autoscaling is a feature that automatically increases or decreases the number of instances of an app based on demand. This can help you to optimize the performance and cost of your app by ensuring that it has the right number of instances to handle the current workload.

To enable autoscaling for an Azure App Service app, you can use the Azure portal, Azure PowerShell, or the Azure CLI. You can specify the criteria that should trigger an increase or decrease in the number of instances, as well as the minimum and maximum number of instances that should be maintained. You can also specify the scale-out and scale-in rules, which determine how the number of instances should be changed in response to demand.

It's important to note that autoscaling is only available for the Standard and Premium pricing tiers of Azure App Service. It is not available for the Free, Shared, or Basic tiers.

upvoted 4 times

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