Question #42

You have 100 devices that write performance data to Azure Blob Storage.

You plan to store and analyze the performance data in an Azure SQL database.

You need to recommend a solution to continually copy the performance data to the Azure SQL database.

What should you include in the recommendation?

    A. Azure Data Factory

    B. Data Migration Assistant (DMA)

    C. Azure Data Box

    D. Azure Database Migration Service

Correct Answer: *A*

Community vote distribution

A (100%)

Question #43

You need to recommend a storage solution for the records of a mission critical application. The solution must provide a Service Level Agreement (SLA) for the latency of write operations and the throughput.

What should you include in the recommendation?

    A. Azure Data Lake Storage Gen2

    B. Azure Blob Storage

    C. Azure SQL

    D. Azure Cosmos DB

Correct Answer: *D*

Azure Cosmos DB is Microsoft's fast NoSQL database with open APIs for any scale. It offers turnkey global distribution across any number of Azure regions by transparently scaling and replicating your data wherever your users are. The service offers comprehensive 99.99% SLAs which covers the guarantees for throughput, consistency, availability and latency for the Azure Cosmos DB Database Accounts scoped to a single Azure region configured with any of the five

Consistency Levels or Database Accounts spanning multiple Azure regions, configured with any of the four relaxed Consistency Levels. Azure Cosmos DB allows configuring multiple Azure regions as writable endpoints for a Database Account. In this configuration, Azure Cosmos DB offers 99.999% SLA for both read and write availability.

Reference:

https://azure.microsoft.com/en-us/support/legal/sla/cosmos-db/v1_3/

Community vote distribution

D (100%)

You are planning a storage solution. The solution must meet the following requirements:

☞ Support at least 500 requests per second.

☞ Support a large image, video, and audio streams.

Which type of Azure Storage account should you provision?

    A. standard general-purpose v2

    B. premium block blobs

    C. premium page blobs

    D. premium file shares

Correct Answer: *B*

Use Azure Blobs if you want your application to support streaming and random access scenarios.

It's ideal for applications that require high transaction rates or consistent low-latency storage.

Incorrect:

Not A: Standard storage accounts has a default maximum request rate per storage account 20,000 requests per second1, but is not optimized for video and audio streams.

Not C: Page blobs is best suited for random reads and random writes.

Not D: FileStorage storage accounts (premium) has a maximum concurrent request rate of 100,000 IOPS.

Maximum file size is 4 TB, but is not optimized for video and audio streams.

Reference:

https://docs.microsoft.com/en-us/azure/storage/common/storage-introduction https://docs.microsoft.com/en-us/azure/storage/files/storage-files-scale-targets

Community vote distribution

                        B (57%)   A (43%)

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

☞ Ensures that applications can access the data by using a REST connection

☞ Hosts 20 independent tables of varying sizes and usage patterns

☞ Automatically replicates the data to a second Azure region

☞ Minimizes costs

What should you recommend?

    A. an Azure SQL Database elastic pool that uses active geo-replication

    B. tables in an Azure Storage account that use geo-redundant storage (GRS)

    C. tables in an Azure Storage account that use read-access geo-redundant storage (RA-GRS)

    D. an Azure SQL database that uses active geo-replication

Correct Answer: *B*

The Table service offers structured storage in the form of tables. The Table service API is a REST API for working with tables and the data that they contain.

Geo-redundant storage (GRS) has a lower cost than read-access geo-redundant storage (RA-GRS).

Reference:

https://docs.microsoft.com/en-us/rest/api/storageservices/table-service-rest-api https://docs.microsoft.com/en-us/azure/storage/common/geo-redundant-design

Community vote distribution

                        B (95%)   5%

HOTSPOT -

You are designing a software as a service (SaaS) application that will enable Azure Active Directory (Azure AD) users to create and publish online surveys. The

SaaS application will have a front-end web app and a back-end web API. The web app will rely on the web API to handle updates to customer surveys.

You need to design an authorization flow for the SaaS application. The solution must meet the following requirements:

✑ To access the back-end web API, the web app must authenticate by using OAuth 2 bearer tokens.

✑ The web app must authenticate by using the identities of individual users.

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

The access tokens will be generated by:

Azure AD
A web app
A web API

Authorization decisions will be performed by:

Azure AD
A web app
A web API

Answer Area

The access tokens will be generated by:

Azure AD
A web app
A web API

Correct Answer:

Authorization decisions will be performed by:

| |
|---|
| Azure AD |
| A web app |
| **A web API** |

Box 1: Azure AD -

The Azure AD server issues tokens (access & refresh token). See step 5 below in graphic.

OAuth 2.0 authentication with Azure Active Directory.

The OAuth 2.0 is the industry protocol for authorization. It allows a user to grant limited access to its protected resources. Designed to work specifically with

Hypertext Transfer Protocol (HTTP), OAuth separates the role of the client from the resource owner. The client requests access to the resources controlled by the resource owner and hosted by the resource server (here the Azure AD server). The resource server issues access tokens with the approval of the resource owner. The client uses the access tokens to access the protected resources hosted by the resource server.
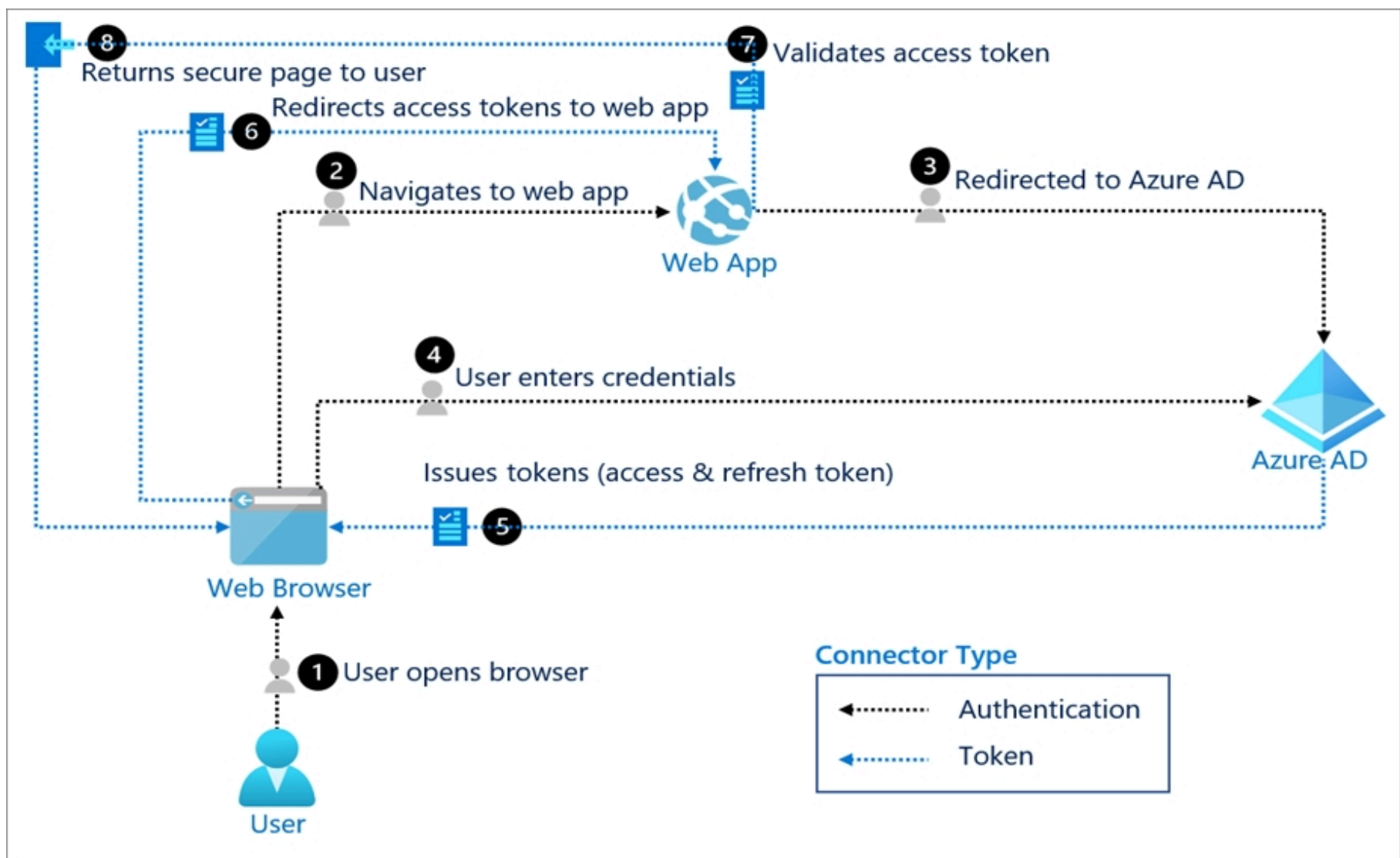
Box 2: A web API -

Delegated access is used.

The bearer token sent to the web API contains the user identity.

The web API makes authorization decisions based on the user identity.

Reference:

https://docs.microsoft.com/en-us/azure/active-directory/fundamentals/auth-oauth2 https://docs.microsoft.com/lb-lu/azure/architecture/multitenant-identity/web-api

HOTSPOT -

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

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

☞ Use Azure Blueprints to control governance across all the subscriptions and resource groups.

☞ Ensure that Blueprints-based configurations are consistent across all the subscriptions and resource groups.

☞ Minimize the number of blueprint definitions and assignments.

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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Level at which to define the blueprints: ▼

| The child management groups |
| The root management group |
| The subscriptions |

Level at which to create the blueprint assignments: ▼

| The child management groups |
| The root management group |
| The subscriptions |

Correct Answer:

Answer Area

Level at which to define the blueprints: ▼

| The child management groups |
| The root management group |
| The subscriptions |

Level at which to create the blueprint assignments: ▼

| The child management groups |
| The root management group |
| The subscriptions |

Box 1. The root management group

When creating a blueprint definition, you'll define where the blueprint is saved. Blueprints can be saved to a management group or subscription that you have

Contributor access to. If the location is a management group, the blueprint is available to assign to any child subscription of that 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.

Box 2. The root management group

Reference:

https://docs.microsoft.com/en-us/azure/governance/management-groups/overview https://docs.microsoft.com/en-us/azure/governance/blueprints/overview

DRAG DROP -

You are designing a virtual machine that will run Microsoft SQL Server and contain two data disks. The first data disk will store log files, and the second data disk will store data. Both disks are P40 managed disks.

You need to recommend a host caching method for each disk. The method must provide the best overall performance for the virtual machine while preserving the integrity of the SQL data and logs.

Which host caching method should you recommend for each disk? To answer, drag the appropriate methods to the correct disks. Each method 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:

Methods

| None |

| ReadOnly |

| ReadWrite |

Answer Area

Log: [Method]

Data: [Method]

Correct Answer:

Methods

| None |

| ReadOnly |

| ReadWrite |

Answer Area

Log: [None]

Data: [ReadOnly]

Box 1: None -

No data disk caching for the Log files.

Box 2: ReadOnly -

Guidelines to optimize performance for your SQL Server on Azure Virtual Machines (VMs) include:

Set host caching to read-only for data file disks.

Set host caching to none for log file disks.

Reference:

https://docs.microsoft.com/en-us/azure/azure-sql/virtual-machines/windows/performance-guidelines-best-practices-storage

You are designing a solution that calculates 3D geometry from height-map data.

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

☞ Performs calculations in Azure.

☞ Ensures that each node can communicate data to every other node.

☞ Maximizes the number of nodes to calculate multiple scenes as fast as possible.

Minimizes the amount of effort to implement the solution.

▪

Which two actions should you include in the recommendation? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

    A. Enable parallel file systems on Azure.

    B. Create a render farm that uses virtual machines.

    C. Create a render farm that uses virtual machine scale sets.

    D. Create a render farm that uses Azure Batch.

    E. Enable parallel task execution on compute nodes.

Correct Answer: *DE*

Multi-instance tasks allow you to run an Azure Batch task on multiple compute nodes simultaneously. These tasks enable high performance computing scenarios like Message Passing Interface (MPI) applications in Batch.

You configure compute nodes for parallel task execution at the pool level.

Azure Batch allows you to set task slots per node up to (4x) the number of node cores.

Reference:

https://docs.microsoft.com/en-us/azure/batch/batch-mpi

https://docs.microsoft.com/en-us/azure/batch/batch-parallel-node-tasks#enable-parallel-task-execution

Community vote distribution

DE (98%)

You have an on-premises application that consumes data from multiple databases. The application code references database tables by using a combination of the server, database, and table name.

You need to migrate the application data to Azure.

To which two services can you migrate the application data to achieve the goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

    A. SQL Server Stretch Database

    B. SQL Server on an Azure virtual machine

    C. Azure SQL Database

    D. Azure SQL Managed Instance

Correct Answer: *BD*

Cross-database queries are supported by SQL Server, for example on an Azure virtual machine, and also supported by an Azure SQL Managed Instance.

Reference:

https://techcommunity.microsoft.com/t5/azure-database-support-blog/cross-database-queries-between-azure-sql-database-and-managed/ba-p/2706670

Community vote distribution

BD (100%)

HOTSPOT -

You plan to migrate on-premises Microsoft SQL Server databases to Azure.

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

☞ Supports user-initiated backups

☞ Supports multiple automatically replicated instances across Azure regions

☞ Minimizes administrative effort to implement and maintain business continuity

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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Deployment solution: [▼]

Azure SQL Managed Instance
SQL Server on Azure Virtual Machines
An Azure SQL Database single database

Resiliency solution: [▼]

Auto-failover group
Active geo-replication
Zone-redundant deployment

Correct Answer:

Answer Area

Deployment solution: [▼]

Azure SQL Managed Instance
SQL Server on Azure Virtual Machines
An Azure SQL Database single database

Resiliency solution: [▼]

Auto-failover group
Active geo-replication
Zone-redundant deployment

Box 1: an Azure SQL database -

Incorrect answers:

User imitated backups are not supported by Azure SQL Managed instance.

Box 2: Active geo-replication -

Active geo-replication required to multiple automatically replicated instances across Azure regions.

You can manage Azure SQL Database security for geo-restore. SQL database cannot be used for geo-restore.

Incorrect:

Not SQL Server: Active geo-replication requires Azure SQL database.

Reference:

https://docs.microsoft.com/en-us/azure/azure-sql/database/active-geo-replication-overview

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 Business Critical

    D. Azure SQL Database Serverless

Correct Answer: *D*

Azure SQL Database Serverless meets the requirements and is less expensive than Azure SQL Database Business Critical.

Note: General Purpose service tier zone redundant availability.

Zone-redundant configuration for the general purpose service tier is offered for both serverless and provisioned compute.

This configuration utilizes Azure Availability Zones ג€‰to replicate databases across multiple physical locations within an Azure region.ג€‰By selecting zone-redundancy, you can make yourג€‰new and existing serverless and provisioned generalג€‰purpose single databases and elastic pools resilient to a much larger set of failures, including catastrophic datacenter outages, without any changes of the application logic.

Incorrect:

Not A, not B: Zone-redundant configuration is not available in SQL Managed Instance.

Not C: Azure SQL Database Business Critical is more expensive than Azure SQL Database Serverless.

Note: Premium and Business Critical service tiers use the Premium availability model, which integrates compute resources (sqlservr.exe process) and storage

(locally attached SSD) on a single node. High availability is achieved by replicating both compute and storage to additional nodes creating a three to four-node cluster.

Reference:

https://docs.microsoft.com/en-us/azure/azure-sql/database/high-availability-sla

Community vote distribution

           D (88%)   12%

You have an Azure web app that uses an Azure key vault named KeyVault1 in the West US Azure region.

You are designing a disaster recovery plan for KeyVault1.

You plan to back up the keys in KeyVault1.

You need to identify to where you can restore the backup.

What should you identify?

  A. any region worldwide

  B. the same region only

  C. KeyVault1 only

  D. the same geography only

Correct Answer: *D*

Using the backup and restore commands has two limitations:

* You can't back up a key vault in one geography and restore it into another geography.

* The backup command backs up all versions of each secret.

Incorrect:

Not A: Azure Key Vault does not allow you to move a key vault from one region to another. You can, however, create a key vault in the new region, manually copy each individual key, secret, or certificate from your existing key vault to the new key vault, and then remove the original key vault.

Reference:

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

Community vote distribution

D (100%)