Latest Version: 21.0

Question: 1

You need to design the vehicle images storage solution.
What should you recommend?

A. Azure Media Services
B. Azure Premium Storage account
C. Azure Redis Cache
D. Azure Cosmos DB

Answer: B

Explanation:
Premium Storage stores data on the latest technology Solid State Drives (SSDs) whereas Standard Storage stores data on Hard Disk Drives (HDDs). Premium Storage is designed for Azure Virtual Machine workloads which require consistent high IO performance and low latency in order to host IO intensive workloads like OLTP, Big Data, and Data Warehousing on platforms like SQL Server, MongoDB, Cassandra, and others. With Premium Storage, more customers will be able to lift-and-shift demanding enterprise applications to the cloud.
Scenario: Traffic sensors will occasionally capture an image of a vehicle for debugging purposes.
You must optimize performance of saving/storing vehicle images.
The impact of vehicle images on sensor data throughout must be minimized.
References:
https://azure.microsoft.com/es-es/blog/introducing-premium-storage-high-performance-storage-for-azure-virtual-machine-workloads/

Question: 2

You need to design a sharding strategy for the Planning Assistance database.
What should you recommend?

A. a list mapping shard map on the binary representation of the License Plate column
B. a range mapping shard map on the binary representation of the speed column
C. a list mapping shard map on the location column
D. a range mapping shard map on the time column

Answer: A

Explanation:
Explanation:
Data used for Planning Assistance must be stored in a sharded Azure SQL Database.

A shard typically contains items that fall within a specified range determined by one or more attributes of the data. These attributes form the shard key (sometimes referred to as the partition key). The shard key should be static. It shouldn't be based on data that might change.
References:
https://docs.microsoft.com/en-us/azure/architecture/patterns/sharding

Question: 3

HOTSPOT

You need to design the SensorData collection.
What should you recommend? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Setting	Value
Default consistency level	strong session eventual consistent prefix bounded staleness
Partition key property	Time Location Speed License plate Vehicle length

Answer:

Setting	Value
Default consistency level	strong session eventual consistent prefix bounded staleness
Partition key property	Time Location Speed License plate Vehicle length

Explanation:
Box 1: Eventual
Traffic data insertion rate must be maximized.
Sensor data must be stored in a Cosmos DB named treydata in a collection named SensorData
With Azure Cosmos DB, developers can choose from five well-defined consistency models on the consistency spectrum. From strongest to more relaxed, the models include strong, bounded staleness, session, consistent prefix, and eventual consistency.
Box 2: License plate
This solution reports on all data related to a specific vehicle license plate. The report must use data from the SensorData collection.
References:
https://docs.microsoft.com/en-us/azure/cosmos-db/consistency-levels

Question: 4

You need to recommend an Azure SQL Database pricing tier for Planning Assistance.
Which pricing tier should you recommend?

A. Business critical Azure SQL Database single database
B. General purpose Azure SQL Database Managed Instance
C. Business critical Azure SQL Database Managed Instance
D. General purpose Azure SQL Database single database

Answer: B

Explanation:
Azure resource costs must be minimized where possible.
Data used for Planning Assistance must be stored in a sharded Azure SQL Database.
The SLA for Planning Assistance is 70 percent, and multiday outages are permitted.

Question: 5

HOTSPOT
You need to design the Planning Assistance database.
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.

Statement	Yes	No
Including a clustered columnstore index in the design will benefit performance.	○	○
Including a nonclustered columnstore index in the design will benefit performance.	○	○
Including an index on the License Plate column will benefit performance.	○	○

Answer:

Statement	Yes	No
Including a clustered columnstore index in the design will benefit performance.	○	○
Including a nonclustered columnstore index in the design will benefit performance.	○	○
Including an index on the License Plate column will benefit performance.	○	○

Explanation:
Box 1: No
Data used for Planning Assistance must be stored in a sharded Azure SQL Database.
Box 2: Yes

Box 3: Yes
Planning Assistance database will include reports tracking the travel of a single vehicle