

DP-201 Dumps

Designing an Azure Data Solution

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NEW QUESTION 1

- (Exam Topic 1)

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.	<input type="radio"/>	<input type="radio"/>
Including a nonclustered columnstore index in the design will benefit performance.	<input type="radio"/>	<input type="radio"/>
Including an index on the License Plate column will benefit performance.	<input type="radio"/>	<input type="radio"/>

- A. Mastered
- B. Not Mastered

Answer: A

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

NEW QUESTION 2

- (Exam Topic 1)

STION NO: 5 HOTSPOT

You need to design the authentication and authorization methods for sensors.

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

NOTE: Each correct selection is worth one point.

Requirement	Method
Authentication	<div> <input type="text"/> <div> ▼ </div> <div> HMAC header Resource Token Azure Managed Identity Storage account connection string </div> </div>
Authorization	<div> <input type="text"/> <div> ▼ </div> <div> Custom RBAC role Cosmos DB user Azure Active Directory user IoT device identity </div> </div>

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Sensor data must be stored in a Cosmos DB named treydata in a collection named SensorData Sensors must have permission only to add items to the SensorData collection

Box 1: Resource Token

Resource tokens provide access to the application resources within a Cosmos DB database.

Enable clients to read, write, and delete resources in the Cosmos DB account according to the permissions they've been granted.

Box 2: Cosmos DB user

You can use a resource token (by creating Cosmos DB users and permissions) when you want to provide access to resources in your Cosmos DB account to a client that cannot be trusted with the master key.

References:

<https://docs.microsoft.com/en-us/azure/cosmos-db/secure-access-to-data>

NEW QUESTION 3

- (Exam Topic 1)

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:

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>

NEW QUESTION 4

- (Exam Topic 2)

You need to recommend a solution for storing customer data. What should you recommend?

- A. Azure SQL Data Warehouse
- B. Azure Stream Analytics
- C. Azure Databricks
- D. Azure SQL Database

Answer: C

Explanation:

From the scenario:

Customer data must be analyzed using managed Spark clusters.

All cloud data must be encrypted at rest and in transit. The solution must support: parallel processing of customer data.

References:

<https://www.microsoft.com/developerblog/2019/01/18/running-parallel-apache-spark-notebook-workloads-on-a>

NEW QUESTION 5

- (Exam Topic 2)

You need to recommend a solution for storing the image tagging data. What should you recommend?

- A. Azure File Storage
- B. Azure Cosmos DB
- C. Azure Blob Storage
- D. Azure SQL Database
- E. Azure SQL Data Warehouse

Answer: C

Explanation:

Image data must be stored in a single data store at minimum cost.

Note: Azure Blob storage is Microsoft's object storage solution for the cloud. Blob storage is optimized for storing massive amounts of unstructured data.

Unstructured data is data that does not adhere to a particular data model or definition, such as text or binary data.

Blob storage is designed for:

- ▶ Serving images or documents directly to a browser.
- ▶ Storing files for distributed access.
- ▶ Streaming video and audio.
- ▶ Writing to log files.
- ▶ Storing data for backup and restore, disaster recovery, and archiving.
- ▶ Storing data for analysis by an on-premises or Azure-hosted service.

References:

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blobs-introduction>

NEW QUESTION 6

- (Exam Topic 2)

You plan to use an Azure SQL data warehouse to store the customer data. You need to recommend a disaster recovery solution for the data warehouse. What should you include in the recommendation?

- A. AzCopy
- B. Read-only replicas
- C. AdlCopy
- D. Geo-Redundant backups

Answer: D

Explanation:

References:

<https://docs.microsoft.com/en-us/azure/sql-data-warehouse/backup-and-restore>

NEW QUESTION 7

- (Exam Topic 2)

You need to design the solution for analyzing customer data. What should you recommend?

- A. Azure Databricks
- B. Azure Data Lake Storage
- C. Azure SQL Data Warehouse

- D. Azure Cognitive Services
- E. Azure Batch

Answer: A

Explanation:

Customer data must be analyzed using managed Spark clusters. You create spark clusters through Azure Databricks. References:
<https://docs.microsoft.com/en-us/azure/azure-databricks/quickstart-create-databricks-workspace-portal>

NEW QUESTION 8

- (Exam Topic 2)

You need to design the image processing and storage solutions.

What should you recommend? To answer, select the appropriate configuration in the answer area. NOTE: Each correct selection is worth one point.

Answer Area

Solution component	Tool
Image processing	<div><div>Azure HDInsight</div><div>Azure Databricks</div><div>Azure Batch</div><div>Azure Cognitive Services</div></div>
data storage for tagging data	<div><div>Azure Blob Storage</div><div>Azure Table Storage</div><div>Azure Cosmos DB</div><div>Azure SQL Database</div></div>

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

References:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/batch-processing> <https://docs.microsoft.com/en-us/azure/sql-database/sql-database-service-tier-hyperscale>

NEW QUESTION 9

- (Exam Topic 3)

You plan to use Azure SQL Database to support a line of business app.

You need to identify sensitive data that is stored in the database and monitor access to the data. Which three actions should you recommend? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Enable Data Discovery and Classification.
- B. Implement Transparent Data Encryption (TDE).
- C. Enable Auditing.
- D. Run Vulnerability Assessment.
- E. Use Advanced Threat Protection.

Answer: CDE

NEW QUESTION 10

- (Exam Topic 3)

A company stores sensitive information about customers and employees in Azure SQL Database. You need to ensure that the sensitive data remains encrypted in transit and at rest.

What should you recommend?

- A. Transparent Data Encryption
- B. Always Encrypted with secure enclaves
- C. Azure Disk Encryption
- D. SQL Server AlwaysOn

Answer: B

Explanation:

References:

<https://cloudblogs.microsoft.com/sqlserver/2018/12/17/confidential-computing-using-always-encrypted-withsec>

NEW QUESTION 10

- (Exam Topic 3)

You need to recommend an Azure SQL Database service tier. What should you recommend?

- A. Business Critical
- B. General Purpose
- C. Premium
- D. Standard
- E. Basic

Answer: C

Explanation:

The data engineers must set the SQL Data Warehouse compute resources to consume 300 DWUs. Note: There are three architectural models that are used in Azure SQL Database:

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

NEW QUESTION 15

- (Exam Topic 3)

You are designing an Azure SQL Data Warehouse for a financial services company. Azure Active Directory will be used to authenticate the users.

You need to ensure that the following security requirements are met:

- Department managers must be able to create new database.
- The IT department must assign users to databases.
- Permissions granted must be minimized.

Which role memberships should you recommend? To answer, drag the appropriate roles to the correct groups. Each role 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.

Roles

dbmanager

loginmanager

dc_admin

db_securityadmin

db_owner

db_accessadmin

Group

Department managers

IT

Role

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Box 1: dbmanager

Members of the dbmanager role can create new databases. Box 2: db_accessadmin

Members of the db_accessadmin fixed database role can add or remove access to the database for Windows logins, Windows groups, and SQL Server logins.

References:

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-manage-logins>

NEW QUESTION 17

- (Exam Topic 4)

A company purchases IoT devices to monitor manufacturing machinery. The company uses an IoT appliance to communicate with the IoT devices.

The company must be able to monitor the devices in real-time. You need to design the solution.

What should you recommend?

- A. Azure Stream Analytics cloud job using Azure PowerShell
- B. Azure Analysis Services using Azure Portal
- C. Azure Data Factory instance using Azure Portal
- D. Azure Analysis Services using Azure PowerShell

Answer: D

NEW QUESTION 21

- (Exam 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.

A company is developing a solution to manage inventory data for a group of automotive repair shops. The solution will use Azure SQL Data Warehouse as the data store.

Shops will upload data every 10 days.

Data corruption checks must run each time data is uploaded. If corruption is detected, the corrupted data must be removed.

You need to ensure that upload processes and data corruption checks do not impact reporting and analytics processes that use the data warehouse.

Proposed solution: Configure database-level auditing in Azure SQL Data Warehouse and set retention to 10 days.

Does the solution meet the goal?

- A. Yes
- B. No

Answer: B

Explanation:

Instead, create a user-defined restore point before data is uploaded. Delete the restore point after data corruption checks complete.

References:

<https://docs.microsoft.com/en-us/azure/sql-data-warehouse/backup-and-restore>

NEW QUESTION 26

- (Exam Topic 4)

You are designing a data processing solution that will implement the lambda architecture pattern. The solution will use Spark running on HDInsight for data processing.

You need to recommend a data storage technology for the solution.

Which two technologies should you recommend? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Azure Cosmos DB
- B. Azure Service Bus
- C. Azure Storage Queue
- D. Apache Cassandra
- E. Kafka HDInsight

Answer: AE

Explanation:

To implement a lambda architecture on Azure, you can combine the following technologies to accelerate realtime big data analytics:

Azure Cosmos DB, the industry's first globally distributed, multi-model database service.

Apache Spark for Azure HDInsight, a processing framework that runs large-scale data analytics applications

Azure Cosmos DB change feed, which streams new data to the batch layer for HDInsight to process The Spark to Azure Cosmos DB Connector

E: You can use Apache Spark to stream data into or out of Apache Kafka on HDInsight using DStreams. References:

<https://docs.microsoft.com/en-us/azure/cosmos-db/lambda-architecture>

NEW QUESTION 29

- (Exam Topic 4)

You are designing a recovery strategy for your Azure SQL Databases.

The recovery strategy must use default automated backup settings. The solution must include a Point-in time restore recovery strategy.

You need to recommend which backups to use and the order in which to restore backups.

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

NOTE: Each correct selection is worth one point.

Restore order	Backup type
first	<div><div></div><div>full weekly backup</div><div>full daily backup</div><div>differential weekly backup</div><div>differential daily backup</div></div>
second	<div><div></div><div>full daily backup</div><div>differential backup from the last 12 hours</div><div>all differential backups since the last full backup</div><div>all log backups since the last full backup</div></div>
third	<div><div></div><div>all log backups since the last differential backup</div><div>differential backup from the last 12 hours</div><div>all differential backups since the last full backup</div><div>all log backups since the last full backup</div></div>

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

All Basic, Standard, and Premium databases are protected by automatic backups. Full backups are taken every week, differential backups every day, and log backups every 5 minutes.

References:

<https://azure.microsoft.com/sv-se/blog/azure-sql-database-point-in-time-restore/>

NEW QUESTION 33

- (Exam Topic 4)

You are designing an Azure SQL Data Warehouse. You plan to load millions of rows of data into the data warehouse each day.

You must ensure that staging tables are optimized for data loading. You need to design the staging tables.

What type of tables should you recommend?

- A. Round-robin distributed table
- B. Hash-distributed table
- C. Replicated table
- D. External table

Answer: A

Explanation:

To achieve the fastest loading speed for moving data into a data warehouse table, load data into a staging table. Define the staging table as a heap and use round-robin for the distribution option.

References:

<https://docs.microsoft.com/en-us/azure/sql-data-warehouse/guidance-for-loading-data>

NEW QUESTION 37

- (Exam Topic 4)

You are designing an Azure Databricks interactive cluster.

You need to ensure that the cluster meets the following requirements: Enable auto-termination

Retain cluster configuration indefinitely after cluster termination. What should you recommend?

- A. Start the cluster after it is terminated.
- B. Pin the cluster
- C. Clone the cluster after it is terminated.
- D. Terminate the cluster manually at process completion.

Answer: B

Explanation:

To keep an interactive cluster configuration even after it has been terminated for more than 30 days, an administrator can pin a cluster to the cluster list.

References:

<https://docs.azuredatabricks.net/user-guide/clusters/terminate.html>

NEW QUESTION 42

- (Exam Topic 4)

You are designing a data processing solution that will run as a Spark job on an HDInsight cluster. The solution will be used to provide near real-time information about online ordering for a retailer.

The solution must include a page on the company intranet that displays summary information. The summary information page must meet the following requirements:

- Display a summary of sales to date grouped by product categories, price range, and review scope.
- Display sales summary information including total sales, sales as compared to one day ago and sales as compared to one year ago.
- Reflect information for new orders as quickly as possible. You need to recommend a design for the solution.

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

Use case	Technology
Data abstraction	<div><div></div><div>Resilient Distributed Dataset (RDD)</div><div>Dataset</div><div>DataFrame</div></div>
Data format	<div><div></div><div>Avro</div><div>parquet</div></div>

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Box 1: DataFrame

DataFrames

Best choice in most situations.

Provides query optimization through Catalyst. Whole-stage code generation.

Direct memory access.

Low garbage collection (GC) overhead.

Not as developer-friendly as DataSets, as there are no compile-time checks or domain object programming. Box 2: parquet

The best format for performance is parquet with snappy compression, which is the default in Spark 2.x. Parquet stores data in columnar format, and is highly optimized in Spark.

NEW QUESTION 44

- (Exam Topic 4)

You are designing an Azure Databricks cluster that runs user-defined local processes. You need to recommend a cluster configuration that meets the following requirements:

- Minimize query latency.
- Reduce overall costs.
- Maximize the number of users that can run queries on the cluster at the same time. Which cluster type should you recommend?

- A. Standard with Autoscaling
- B. High Concurrency with Auto Termination
- C. High Concurrency with Autoscaling
- D. Standard with Auto Termination

Answer: C

Explanation:

High Concurrency clusters allow multiple users to run queries on the cluster at the same time, while minimizing query latency. Autoscaling clusters can reduce overall costs compared to a statically-sized cluster.

References:

<https://docs.azuredatabricks.net/user-guide/clusters/create.html> <https://docs.azuredatabricks.net/user-guide/clusters/high-concurrency.html#high-concurrency>

<https://docs.azuredatabricks.net/user-guide/clusters/terminate.html> <https://docs.azuredatabricks.net/user-guide/clusters/sizing.html#enable-and-configure-autoscaling>

NEW QUESTION 48

- (Exam Topic 4)

You need to design the storage for the telemetry capture system. What storage solution should you use in the design?

- A. Azure Databricks
- B. Azure SQL Data Warehouse
- C. Azure Cosmos DB

Answer: C

NEW QUESTION 52

- (Exam Topic 4)

You are designing an application. You plan to use Azure SQL Database to support the application.

The application will extract data from the Azure SQL Database and create text documents. The text documents will be placed into a cloud-based storage solution.

The text storage solution must be accessible from an SMB network share.

You need to recommend a data storage solution for the text documents. Which Azure data storage type should you recommend?

- A. Queue
- B. Files
- C. Blob
- D. Table

Answer: B

Explanation:

Azure Files enables you to set up highly available network file shares that can be accessed by using the standard Server Message Block (SMB) protocol.

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-introduction> <https://docs.microsoft.com/en-us/azure/storage/tables/table-storage-overview>

NEW QUESTION 54

- (Exam Topic 4)

A company has locations in North America and Europe. The company uses Azure SQL Database to support business apps.

Employees must be able to access the app data in case of a region-wide outage. A multi-region availability solution is needed with the following requirements:

- ▶ Read-access to data in a secondary region must be available only in case of an outage of the primary region.
- ▶ The Azure SQL Database compute and storage layers must be integrated and replicated together.

You need to design the multi-region high availability solution.

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

NOTE: Each correct selection is worth one point.

Option	Value
Service tier	<div><div></div><div>Basic</div><div>Standard</div><div>General</div><div>Premium</div></div>
Redundancy type	<div><div></div><div>SQL Sync</div><div>Zone-redundancy</div><div>Geo-redundant storage</div></div>

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Box 1: Standard

The following table describes the types of storage accounts and their capabilities:

Storage account type	Supported services	Supported performance tiers	Supported access tiers	Replication options	Deployment model ¹
General-purpose V2	Blob, File, Queue, Table, and Disk	Standard, Premium ⁵	Hot, Cool, Archive ³	LRS, ZRS ⁴ , GRS, RA-GRS	Resource Manager
General-purpose V1	Blob, File, Queue, Table, and Disk	Standard, Premium ⁵	N/A	LRS, GRS, RA-GRS	Resource Manager, Classic

Box 2: Geo-redundant storage

If your storage account has GRS enabled, then your data is durable even in the case of a complete regional outage or a disaster in which the primary region isn't recoverable.

Note: If you opt for GRS, you have two related options to choose from:

GRS replicates your data to another data center in a secondary region, but that data is available to be read only if Microsoft initiates a failover from the primary to secondary region.

Read-access geo-redundant storage (RA-GRS) is based on GRS. RA-GRS replicates your data to another data center in a secondary region, and also provides you with the option to read from the secondary region. With RA-GRS, you can read from the secondary region regardless of whether Microsoft initiates a failover from the primary to secondary region.

Scenario	LRS	ZRS	GRS	RA-GRS
Node unavailability within a data center	Yes	Yes	Yes	Yes
An entire data center (zonal or non-zonal) becomes unavailable	No	Yes	Yes	Yes
A region-wide outage	No	No	Yes	Yes

References:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-introduction> <https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy-grs>

NEW QUESTION 55

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