



Exam Questions DP-203

Data Engineering on Microsoft Azure



NEW QUESTION 1

- (Exam Topic 1)

You need to ensure that the Twitter feed data can be analyzed in the dedicated SQL pool. The solution must meet the customer sentiment analytics requirements. Which three Transaction-SQL DDL commands should you run in sequence? To answer, move the appropriate commands from the list of commands to the answer area and arrange them in the correct order.

NOTE: More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

Commands

Answer Area

CREATE	EXTERNAL	DATA SOURCE
CREATE	EXTERNAL	FILE FORMAT
CREATE	EXTERNAL	TABLE
CREATE	EXTERNAL	TABLE AS SELECT
CREATE	DATABASE	SCOPED CREDENTIAL

A. Mastered

B. Not Mastered

Answer: A

Explanation:

Scenario: Allow Contoso users to use PolyBase in an Azure Synapse Analytics dedicated SQL pool to query the content of the data records that host the Twitter feeds. Data must be protected by using row-level security (RLS). The users must be authenticated by using their own Azure AD credentials.

Box 1: CREATE EXTERNAL DATA SOURCE

External data sources are used to connect to storage accounts. Box 2: CREATE EXTERNAL FILE FORMAT

CREATE EXTERNAL FILE FORMAT creates an external file format object that defines external data stored in Azure Blob Storage or Azure Data Lake Storage. Creating an external file format is a prerequisite for creating an external table.

Box 3: CREATE EXTERNAL TABLE AS SELECT

When used in conjunction with the CREATE TABLE AS SELECT statement, selecting from an external table imports data into a table within the SQL pool. In addition to the COPY statement, external tables are useful for loading data.

Reference:

https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/develop-tables-external-tables

NEW QUESTION 2

- (Exam Topic 1)

You need to design a data storage structure for the product sales transactions. The solution must meet the sales transaction dataset requirements. 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.

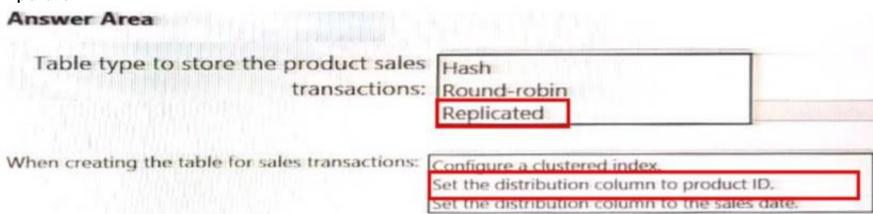
Answer Area Table type to store the product sales Hash transactions: Round-robin Replicated When creating the table for sales transactions: Configure a clustered index. Set the distribution column to product ID. Set the distribution column to the sales date.

A. Mastered

B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 3

- (Exam Topic 1)

You need to implement an Azure Synapse Analytics database object for storing the sales transactions data. The solution must meet the sales transaction dataset



requirements.

What solution must meet the sales transaction dataset requirements.

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

Answer Area

Transact-SQL DDL command to use:

CREATE EXTERNAL TABLE CREATE TABLE

CREATE VIEW

Partitioning option to use in the WITH clause of the DDL

statement:

FORMAT OPTIONS FORMAT TYPE

RANGE LEFT FOR VALUES RANGE RIGHT FOR VALUES

A. Mastered

B. Not Mastered

Answer: A

Explanation:

Answer Area

Transact-SQL DDL command to use:

CREATE EXTERNAL TABLE CREATE TABLE

CREATE VIEW

Partitioning option to use in the WITH clause of the DDL FORMAT_OPTIONS

statement: FORMAT TYPE

RANGE LEFT FOR VALUES RANGE RIGHT FOR VALUES

NEW QUESTION 4

- (Exam Topic 2)

What should you do to improve high availability of the real-time data processing solution?

- A. Deploy identical Azure Stream Analytics jobs to paired regions in Azure.
- B. Deploy a High Concurrency Databricks cluster.
- C. Deploy an Azure Stream Analytics job and use an Azure Automation runbook to check the status of the job and to start the job if it stops.
- D. Set Data Lake Storage to use geo-redundant storage (GRS).

Answer: A

Explanation:

Guarantee Stream Analytics job reliability during service updates

Part of being a fully managed service is the capability to introduce new service functionality and improvements at a rapid pace. As a result, Stream Analytics can have a service update deploy on a weekly (or more frequent) basis. No matter how much testing is done there is still a risk that an existing, running job may break due to the introduction of a bug. If you are running mission critical jobs, these risks need to be avoided. You can reduce this risk by following Azure's paired region model.

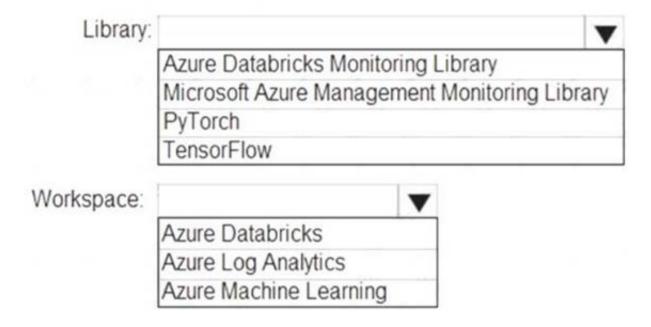
Scenario: The application development team will create an Azure event hub to receive real-time sales data, including store number, date, time, product ID, customer loyalty number, price, and discount amount, from the point of sale (POS) system and output the data to data storage in Azure

https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-job-reliability

NEW QUESTION 5

You need to collect application metrics, streaming query events, and application log messages for an Azure Databrick cluster. Which type of library and workspace should you implement? To answer, select the appropriate options in the answer area.





A. Mastered

B. Not Mastered

Answer: A

Explanation:

You can send application logs and metrics from Azure Databricks to a Log Analytics workspace. It uses the Azure Databricks Monitoring Library, which is available on GitHub.

References:

https://docs.microsoft.com/en-us/azure/architecture/databricks-monitoring/application-logs

NEW QUESTION 6

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool.

You need to ensure that data in the pool is encrypted at rest. The solution must NOT require modifying applications that query the data. What should you do?

- A. Enable encryption at rest for the Azure Data Lake Storage Gen2 account.
- B. Enable Transparent Data Encryption (TDE) for the pool.
- C. Use a customer-managed key to enable double encryption for the Azure Synapse workspace.
- D. Create an Azure key vault in the Azure subscription grant access to the pool.

Answer: B

Explanation:

Transparent Data Encryption (TDE) helps protect against the threat of malicious activity by encrypting and decrypting your data at rest. When you encrypt your database, associated backups and transaction log files are encrypted without requiring any changes to your applications. TDE encrypts the storage of an entire database by using a symmetric key called the database encryption key.

Reference:

https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-overviewmana

NEW QUESTION 7

- (Exam Topic 3)

You have a table named SalesFact in an enterprise data warehouse in Azure Synapse Analytics. SalesFact contains sales data from the past 36 months and has the following characteristics:

- Is partitioned by month
- Contains one billion rows
- Has clustered columnstore indexes

At the beginning of each month, you need to remove data from SalesFact that is older than 36 months as quickly as possible.

Which three actions should you perform in sequence in a stored procedure? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Actions Answer Area

Switch the partition containing the stale data from SalesFact to SalesFact_Work.

Truncate the partition containing the stale data.

Drop the SalesFact_Work table.

Create an empty table named SalesFact_Work that has the same schema as SalesFact.

Execute a DELETE statement where the value in the Date column is more than 36 months ago.

Copy the data to a new table by using CREATE TABLE AS SELECT (CTAS).

A. Mastered

B. Not Mastered

Answer: A

Explanation:

Step 1: Create an empty table named SalesFact_work that has the same schema as SalesFact. Step 2: Switch the partition containing the stale data from SalesFact to SalesFact_Work.

SQL Data Warehouse supports partition splitting, merging, and switching. To switch partitions between two tables, you must ensure that the partitions align on their respective boundaries and that the table definitions match.

Loading data into partitions with partition switching is a convenient way stage new data in a table that is not visible to users the switch in the new data.

Step 3: Drop the SalesFact_Work table. Reference:

https://docs.microsoft.com/en-us/azure/sql-data-warehouse/sql-data-warehouse-tables-partition

NEW QUESTION 8

- (Exam Topic 3)

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 scenario, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure Storage account that contains 100 GB of files. The files contain text and numerical values. 75% of the rows contain description data that has an average length of 1.1 MB.

You plan to copy the data from the storage account to an enterprise data warehouse in Azure Synapse Analytics.

You need to prepare the files to ensure that the data copies quickly. Solution: You convert the files to compressed delimited text files. Does this meet the goal?

A. Yes

B. No

Answer: A

Explanation:

All file formats have different performance characteristics. For the fastest load, use compressed delimited text files.

Reference:

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

NEW QUESTION 9

- (Exam Topic 3)

You are monitoring an Azure Stream Analytics job.

The Backlogged Input Events count has been 20 for the last hour. You need to reduce the Backlogged Input Events count. What should you do?

- A. Drop late arriving events from the job.
- B. Add an Azure Storage account to the job.
- C. Increase the streaming units for the job.
- D. Stop the job.

Answer: C

Explanation:

General symptoms of the job hitting system resource limits include:

If the backlog event metric keeps increasing, it's an indicator that the system resource is constrained (either because of output sink throttling, or high CPU). Note: Backlogged Input Events: Number of input events that are backlogged. A non-zero value for this metric implies that your job isn't able to keep up with the number of incoming events. If this value is slowly increasing or consistently non-zero, you should scale out your job: adjust Streaming Units.

https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-scale-jobs https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analyticsmonitoring



NEW QUESTION 10

- (Exam Topic 3)

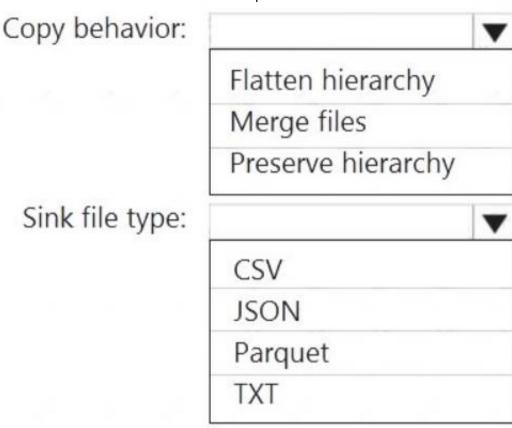
You use Azure Data Factory to prepare data to be queried by Azure Synapse Analytics serverless SQL pools. Files are initially ingested into an Azure Data Lake Storage Gen2 account as 10 small JSON files. Each file contains the same data attributes and data from a subsidiary of your company.

You need to move the files to a different folder and transform the data to meet the following requirements: Provide the fastest possible query times.

Automatically infer the schema from the underlying files.

How should you configure the Data Factory copy activity? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.



A. Mastered B. Not Mastered

Answer: A

Explanation:

Box 1: Preserver herarchy

Compared to the flat namespace on Blob storage, the hierarchical namespace greatly improves the performance of directory management operations, which improves overall job performance.

Box 2: Parquet

Azure Data Factory parquet format is supported for Azure Data Lake Storage Gen2. Parquet supports the schema property.

Reference:

https://docs.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-introduction https://docs.microsoft.com/en-us/azure/data-factory/format-parquet

NEW QUESTION 10

- (Exam Topic 3)

You need to schedule an Azure Data Factory pipeline to execute when a new file arrives in an Azure Data Lake Storage Gen2 container. Which type of trigger should you use?

A. on-demand

B. tumbling window

C. schedule

D. event

Answer: D

Explanation:

Event-driven architecture (EDA) is a common data integration pattern that involves production, detection, consumption, and reaction to events. Data integration scenarios often require Data Factory customers to trigger pipelines based on events happening in storage account, such as the arrival or deletion of a file in Azure Blob Storage account.

Reference:

https://docs.microsoft.com/en-us/azure/data-factory/how-to-create-event-trigger

NEW QUESTION 14

- (Exam Topic 3)

You have a Microsoft SQL Server database that uses a third normal form schema.

You plan to migrate the data in the database to a star schema in an A? Vire Synapse Analytics dedicated SQI pool.

You need to design the dimension tables. The solution must optimize read operations.

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

Transform data for the dimension tables by: For the primary key columns in the dimension New IDENTITY columns tables, use: A new computed column The business key column from the source sys

A. Mastered B. Not Mastered

Answer: A

Explanation:

Answer Area

Transform data for the dimension tables by: For the primary key columns in the dimension

New IDENTITY columns tables, use: A new computed column

The business key column from the source sys.

NEW QUESTION 17

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool that contains a table named Table1.

You have files that are ingested and loaded into an Azure Data Lake Storage Gen2 container named container1.

You plan to insert data from the files into Table1 and azure Data Lake Storage Gen2 container named container1.

You plan to insert data from the files into Table1 and transform the data. Each row of data in the files will produce one row in the serving layer of Table1.

You need to ensure that when the source data files are loaded to container1, the DateTime is stored as an additional column in Table1.

Solution: You use a dedicated SQL pool to create an external table that has a additional DateTime column. Does this meet the goal?

A. Yes B. No

Answer: A

NEW QUESTION 20

- (Exam Topic 3)

You are designing a statistical analysis solution that will use custom proprietary1 Python functions on near real-time data from Azure Event Hubs.

You need to recommend which Azure service to use to perform the statistical analysis. The solution must minimize latency.

What should you recommend?

A. Azure Stream Analytics

B. Azure SQL Database

C. Azure Databricks

D. Azure Synapse Analytics

Answer: A

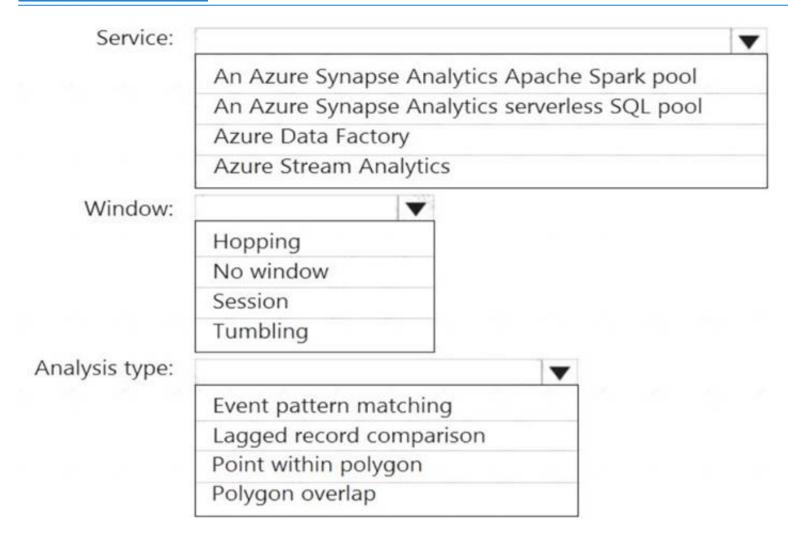
NEW QUESTION 24

- (Exam Topic 3)

You are designing a monitoring solution for a fleet of 500 vehicles. Each vehicle has a GPS tracking device that sends data to an Azure event hub once per

You have a CSV file in an Azure Data Lake Storage Gen2 container. The file maintains the expected geographical area in which each vehicle should be. You need to ensure that when a GPS position is outside the expected area, a message is added to another event hub for processing within 30 seconds. The solution must minimize cost.

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



A. Mastered B. Not Mastered

Answer: A

Explanation:

Box 1: Azure Stream Analytics Box 2: Hopping

Hopping window functions hop forward in time by a fixed period. It may be easy to think of them as Tumbling windows that can overlap and be emitted more often than the window size. Events can belong to more than one Hopping window result set. To make a Hopping window the same as a Tumbling window, specify the hop size to be the same as the window size.

Box 3: Point within polygon Reference:

https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-window-functions

NEW QUESTION 25

- (Exam Topic 3)

You are designing a solution that will copy Parquet files stored in an Azure Blob storage account to an Azure Data Lake Storage Gen2 account.

The data will be loaded daily to the data lake and will use a folder structure of {Year}/{Month}/{Day}/.

You need to design a daily Azure Data Factory data load to minimize the data transfer between the two accounts.

Which two configurations should you include in the design? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Delete the files in the destination before loading new data.
- B. Filter by the last modified date of the source files.
- C. Delete the source files after they are copied.
- D. Specify a file naming pattern for the destination.

Answer: BC

Explanation:

Reference:

https://docs.microsoft.com/en-us/azure/data-factory/connector-azure-data-lake-storage

NEW QUESTION 30

- (Exam Topic 3)

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

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

You are designing an Azure Stream Analytics solution that will analyze Twitter data.

You need to count the tweets in each 10-second window. The solution must ensure that each tweet is counted only once.

Does this meet the goal?

A. Yes B. No

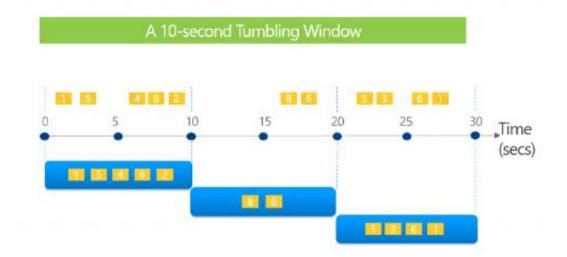
Answer: A

Explanation:

Tumbling windows are a series of fixed-sized, non-overlapping and contiguous time intervals. The following diagram illustrates a stream with a series of events and how they are mapped into 10-second tumbling windows.



Tell me the count of tweets per time zone every 10 seconds



SELECT TimeZone, COUNT(*) AS Count FROM TwitterStream TIMESTAMP BY CreatedAt GROUP BY TimeZone, TumblingWindow(second, 10)

Reference:

https://docs.microsoft.com/en-us/stream-analytics-query/tumbling-window-azure-stream-analytics

NEW QUESTION 34

- (Exam Topic 3)

You have an Azure Databricks workspace named workspace1 in the Standard pricing tier.

You need to configure workspace1 to support autoscaling all-purpose clusters. The solution must meet the following requirements:

- Automatically scale down workers when the cluster is underutilized for three minutes.
- ⋗ Minimize the time it takes to scale to the maximum number of workers.
- Minimize costs.

What should you do first?

- A. Enable container services for workspace1.
- B. Upgrade workspace1 to the Premium pricing tier.
- C. Set Cluster Mode to High Concurrency.
- D. Create a cluster policy in workspace1.

Answer: B

Explanation:

For clusters running Databricks Runtime 6.4 and above, optimized autoscaling is used by all-purpose clusters in the Premium plan Optimized autoscaling:

Scales up from min to max in 2 steps.

Can scale down even if the cluster is not idle by looking at shuffle file state. Scales down based on a percentage of current nodes.

On job clusters, scales down if the cluster is underutilized over the last 40 seconds.

On all-purpose clusters, scales down if the cluster is underutilized over the last 150 seconds.

The spark.databricks.aggressiveWindowDownS Spark configuration property specifies in seconds how often a cluster makes down-scaling decisions. Increasing the value causes a cluster to scale down more slowly. The maximum value is 600.

Note: Standard autoscaling

Starts with adding 8 nodes. Thereafter, scales up exponentially, but can take many steps to reach the max. You can customize the first step by setting the spark.databricks.autoscaling.standardFirstStepUp Spark configuration property.

Scales down only when the cluster is completely idle and it has been underutilized for the last 10 minutes. Scales down exponentially, starting with 1 node. Reference:

NEW QUESTION 37

- (Exam Topic 3)

You have an Azure subscription that contains the following resources:

- * An Azure Active Directory (Azure AD) tenant that contains a security group named Group1.
- * An Azure Synapse Analytics SQL pool named Pool1.

You need to control the access of Group1 to specific columns and rows in a table in Pool1

Which Transact-SQL commands should you use? To answer, select the appropriate options in the answer area. NOTE: Each appropriate options in the answer area.



Answer Area

To control access to the columns: CREATE CRYPTOGRAPHIC PROVIDER CREATE PARTITION FUNCTION CREATE SECURITY POLICY GRANT

To control access to the rows: CREATE CRYPTOGRAPHIC PROVIDER REATE PARTITION FUNCTION CREATE SECURITY POLICY GRANT

A. Mastered B. Not Mastered

Answer: A

Explanation:

Answer Area

To control access to the columns: CREATE CRYPTOGRAPHIC PROVIDER CREATE PARTITION FUNCTION CREATE SECURITY POLICY

To control access to the rows:

CREATE CRYPTOGRAPHIC PROVIDER CREATE PARTITION FUNCTION CREATE SECURITY POLICY GRANT

NEW QUESTION 41

- (Exam Topic 3)

You plan to implement an Azure Data Lake Gen2 storage account.

You need to ensure that the data lake will remain available if a data center fails in the primary Azure region. The solution must minimize costs. Which type of replication should you use for the storage account?

A. geo-redundant storage (GRS)

- B. zone-redundant storage (ZRS)
- C. locally-redundant storage (LRS)
- D. geo-zone-redundant storage (GZRS)

Answer: A

Explanation:

Geo-redundant storage (GRS) copies your data synchronously three times within a single physical location in the primary region using LRS. It then copies your data asynchronously to a single physical location in the secondary region.

Reference:

https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy

NEW QUESTION 46

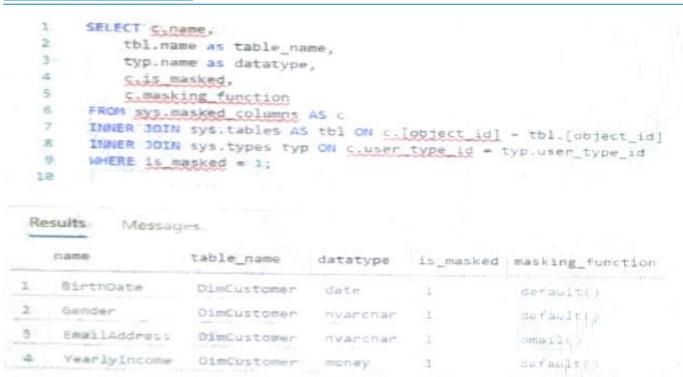
- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool that contains the users shown in the following table.

Name	Role Server admin	
User1		
User2	db_datareader	

User1 executes a query on the database, and the query returns the results shown in the following exhibit.

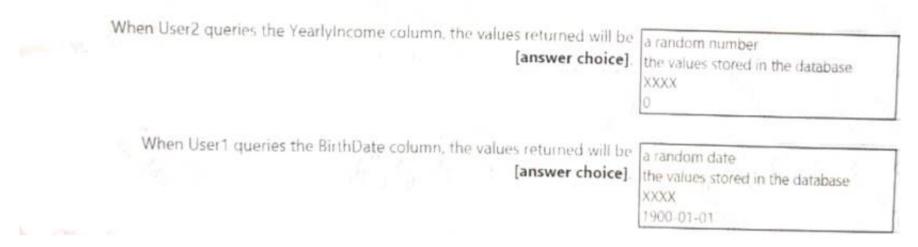




User1 is the only user who has access to the unmasked data.

Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the graphic.

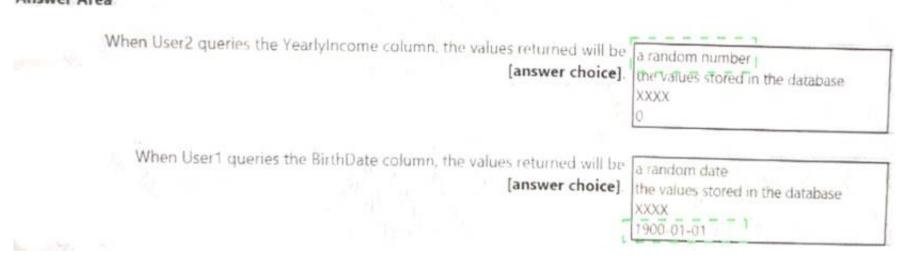
Answer Area



A. MasteredB. Not Mastered

Answer: A

Explanation: Answer Area



NEW QUESTION 49

- (Exam Topic 3)

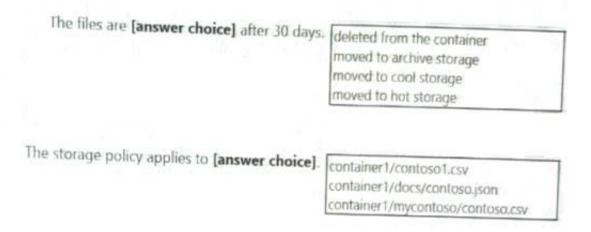
You store files in an Azure Data Lake Storage Gen2 container. The container has the storage policy shown in the following exhibit.



```
"rules"; [
    "enabled": true,
    'name": "contosorule",
     type": "Lifecycle",
     definition": {
       actions": {
         version": {
           delete": {
             'daysAfterCreationGreaterThan": 60
         baseBlob": {
           "tierTaCool": {
              'daysAfterModificationGreaterThan": 30
        filters": {
          blobTypes": [
           "blockBlob"
          prefixMatch": [
           "container1/contoso"
```

Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the graphic. NOTE: Each correct selection Is worth one point.

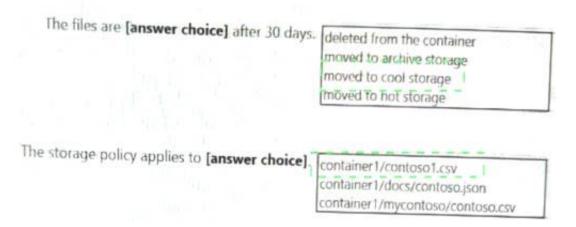
Answer Area



A. MasteredB. Not Mastered

Answer: A

Explanation: Answer Area



NEW QUESTION 51

- (Exam Topic 3)

You have an Azure subscription that contains a logical Microsoft SQL server named Server1. Server1 hosts an Azure Synapse Analytics SQL dedicated pool named Pool1.

You need to recommend a Transparent Data Encryption (TDE) solution for Server1. The solution must meet the following requirements:

Track the usage of encryption keys.

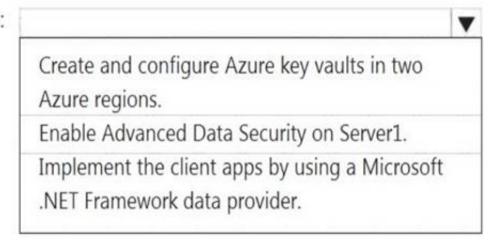
Maintain the access of client apps to Pool1 in the event of an Azure datacenter outage that affects the availability of the encryption keys. What should you include in the recommendation? To answer, select the appropriate options in the answer area.



To track encryption key usage:

Always Encrypted TDE with customer-managed keys TDE with platform-managed keys

To maintain client app access in the event of a datacenter outage:



A. Mastered B. Not Mastered

Answer: A

Explanation:

Box 1: TDE with customer-managed keys

Customer-managed keys are stored in the Azure Key Vault. You can monitor how and when your key vaults are accessed, and by whom. You can do this by enabling logging for Azure Key Vault, which saves information in an Azure storage account that you provide.

Box 2: Create and configure Azure key vaults in two Azure regions

The contents of your key vault are replicated within the region and to a secondary region at least 150 miles away, but within the same geography to maintain high durability of your keys and secrets.

Reference:

https://docs.microsoft.com/en-us/azure/synapse-analytics/security/workspaces-encryption https://docs.microsoft.com/en-us/azure/key-vault/general/logging

NEW QUESTION 55

- (Exam Topic 3)

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.

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You plan to create an Azure Databricks workspace that has a tiered structure. The workspace will contain the following three workloads:

- A workload for data engineers who will use Python and SQL.
- A workload for jobs that will run notebooks that use Python, Scala, and SOL.
- A workload that data scientists will use to perform ad hoc analysis in Scala and R.

The enterprise architecture team at your company identifies the following standards for Databricks environments:

- The data engineers must share a cluster.
- The job cluster will be managed by using a request process whereby data scientists and data engineers provide packaged notebooks for deployment to the cluster.
- All the data scientists must be assigned their own cluster that terminates automatically after 120 minutes of inactivity. Currently, there are three data scientists. You need to create the Databricks clusters for the workloads.

Solution: You create a Standard cluster for each data scientist, a High Concurrency cluster for the data engineers, and a High Concurrency cluster for the jobs. Does this meet the goal?

A. Yes B. No

Answer: A

Explanation:

We need a High Concurrency cluster for the data engineers and the jobs. Note:

Standard clusters are recommended for a single user. Standard can run workloads developed in any language: Python, R, Scala, and SQL.

A high concurrency cluster is a managed cloud resource. The key benefits of high concurrency clusters are that they provide Apache Spark-native fine-grained sharing for maximum resource utilization and minimum query latencies.

Reference: https://docs.azuredatabricks.net/clusters/configure.html

NEW QUESTION 57

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool that contains a large fact table. The table contains 50 columns and 5 billion rows and is a heap. Most queries against the table aggregate values from approximately 100 million rows and return only two columns.

You discover that the queries against the fact table are very slow. Which type of index should you add to provide the fastest query times?

A. nonclustered columnstore



B. clustered columnstore

C. nonclustered

D. clustered

Answer: B

Explanation:

Clustered columnstore indexes are one of the most efficient ways you can store your data in dedicated SQL pool.

Columnstore tables won't benefit a query unless the table has more than 60 million rows. Reference:

https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/best-practices-dedicated-sql-pool

NEW QUESTION 61

- (Exam Topic 3)

You have an Azure data factory.

You need to examine the pipeline failures from the last 60 days. What should you use?

A. the Activity log blade for the Data Factory resource

B. the Monitor & Manage app in Data Factory

C. the Resource health blade for the Data Factory resource

D. Azure Monitor

Answer: D

Explanation:

Data Factory stores pipeline-run data for only 45 days. Use Azure Monitor if you want to keep that data for a longer time.

Reference:

https://docs.microsoft.com/en-us/azure/data-factory/monitor-using-azure-monitor

NEW QUESTION 65

- (Exam Topic 3)

You are designing an Azure Stream Analytics job to process incoming events from sensors in retail environments.

You need to process the events to produce a running average of shopper counts during the previous 15 minutes, calculated at five-minute intervals. Which type of window should you use?

A. snapshot

B. tumbling

C. hopping

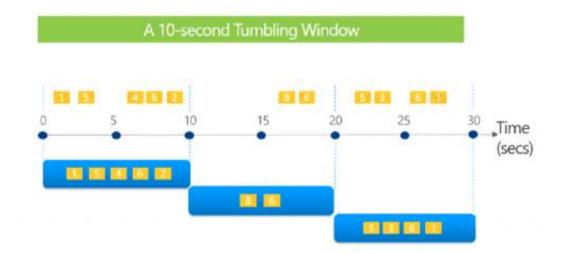
D. sliding

Answer: B

Explanation:

Tumbling windows are a series of fixed-sized, non-overlapping and contiguous time intervals. The following diagram illustrates a stream with a series of events and how they are mapped into 10-second tumbling windows.

Tell me the count of tweets per time zone every 10 seconds



SELECT TimeZone, COUNT(*) AS Count
FROM TwitterStream TIMESTAMP BY CreatedAt
GROUP BY TimeZone, TumblingWindow(second, 10)

Reference:

https://docs.microsoft.com/en-us/stream-analytics-query/tumbling-window-azure-stream-analytics

NEW QUESTION 68

- (Exam Topic 3)

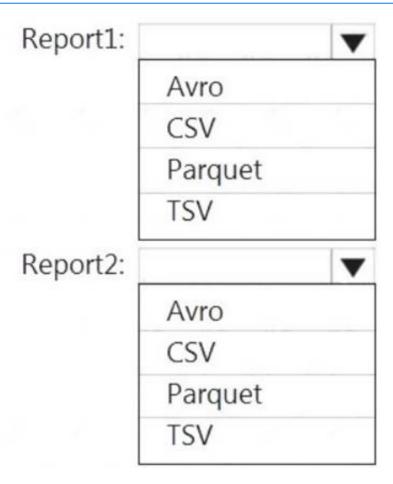
You are planning the deployment of Azure Data Lake Storage Gen2. You have the following two reports that will access the data lake:

- Report1: Reads three columns from a file that contains 50 columns.
- Report2: Queries a single record based on a timestamp.

You need to recommend in which format to store the data in the data lake to support the reports. The solution must minimize read times.

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





A. Mastered B. Not Mastered

Answer: A

Explanation:

Report1: CSV

CSV: The destination writes records as delimited data. Report2: AVRO

AVRO supports timestamps.

Not Parquet, TSV: Not options for Azure Data Lake Storage Gen2. Reference:

https://streamsets.com/documentation/datacollector/latest/help/datacollector/UserGuide/Destinations/ADLS-G2

NEW QUESTION 72

- (Exam Topic 3)

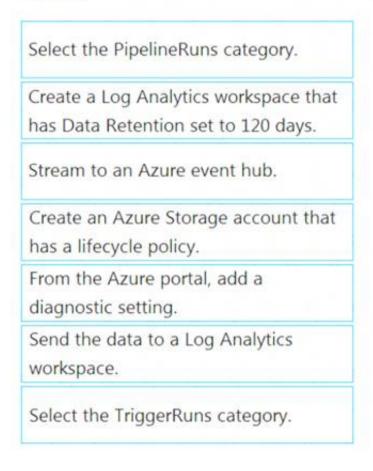
You have an Azure data factory.

You need to ensure that pipeline-run data is retained for 120 days. The solution must ensure that you can query the data by using the Kusto query language. Which four 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.

NOTE: More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

Actions

Answer Area



A. Mastered B. Not Mastered

Answer: A

Explanation:

Step 1: Create an Azure Storage account that has a lifecycle policy

To automate common data management tasks, Microsoft created a solution based on Azure Data Factory. The service, Data Lifecycle Management, makes frequently accessed data available and archives or purges other data according to retention policies. Teams across the company use the service to reduce storage costs, improve app performance, and comply with data retention policies.

Step 2: Create a Log Analytics workspace that has Data Retention set to 120 days.

Data Factory stores pipeline-run data for only 45 days. Use Azure Monitor if you want to keep that data for a longer time. With Monitor, you can route diagnostic logs for analysis to multiple different targets, such as a Storage Account: Save your diagnostic logs to a storage account for auditing or manual inspection. You can use the diagnostic settings to specify the retention time in days.

Step 3: From Azure Portal, add a diagnostic setting. Step 4: Send the data to a log Analytics workspace,

Event Hub: A pipeline that transfers events from services to Azure Data Explorer. Keeping Azure Data Factory metrics and pipeline-run data.

Configure diagnostic settings and workspace.

Create or add diagnostic settings for your data factory.

- In the portal, go to Monitor. Select Settings > Diagnostic settings.
- Select the data factory for which you want to set a diagnostic setting.
- If no settings exist on the selected data factory, you're prompted to create a setting. Select Turn on diagnostics.
- Give your setting a name, select Send to Log Analytics, and then select a workspace from Log Analytics Workspace.
- Select Save. Reference:

https://docs.microsoft.com/en-us/azure/data-factory/monitor-using-azure-monitor

NEW QUESTION 77

- (Exam Topic 3)

You are designing an inventory updates table in an Azure Synapse Analytics dedicated SQL pool. The table will have a clustered columnstore index and will include the following columns:

- EventDate: 1 million per day
- EventTypeID: 10 million per event type
- WarehouseID: 100 million per warehouse
- ProductCategoryTypeiD: 25 million per product category type You identify the following usage patterns:

Analyst will most commonly analyze transactions for a warehouse.

Queries will summarize by product category type, date, and/or inventory event type. You need to recommend a partition strategy for the table to minimize query times. On which column should you recommend partitioning the table?

- A. ProductCategoryTypeID
- B. EventDate
- C. WarehouseID
- D. EventTypeID

Answer: D

NEW QUESTION 80

- (Exam Topic 3)

You are designing an enterprise data warehouse in Azure Synapse Analytics that will contain a table named Customers. Customers will contain credit card information.

You need to recommend a solution to provide salespeople with the ability to view all the entries in Customers. The solution must prevent all the salespeople from viewing or inferring the credit card information.

What should you include in the recommendation?

- A. data masking
- B. Always Encrypted
- C. column-level security
- D. row-level security

Answer: A

Explanation:

SQL Database dynamic data masking limits sensitive data exposure by masking it to non-privileged users. The Credit card masking method exposes the last four digits of the designated fields and adds a constant string as a prefix in the form of a credit card.

Example: XXXX-XXXX-XXXX-1234

Reference:

https://docs.microsoft.com/en-us/azure/sql-database/sql-database-dynamic-data-masking-get-started

NEW QUESTION 85

- (Exam Topic 3)

You are designing a fact table named FactPurchase in an Azure Synapse Analytics dedicated SQL pool. The table contains purchases from suppliers for a retail store. FactPurchase will contain the following columns.



Name	Data type	Nullable
PurchaseKey	Bigint	No
DateKey	Int	No
SupplierKey	Int	No
StockItemKey	Int	No
PurchaseOrderID	Int	Yes
OrderedQuantity	Int	No
OrderedOuters	Int	No
ReceivedOuters	Int	No
Package	Nvarchar(50)	No
IsOrderFinalized	Bit	No
LineageKey	Int	No

FactPurchase will have 1 million rows of data added daily and will contain three years of data. Transact-SQL queries similar to the following query will be executed daily.

SELECT

SupplierKey, StockItemKey, COUNT(*) FROM FactPurchase

WHERE DateKey >= 20210101 AND DateKey <= 20210131

GROUP By SupplierKey, StockItemKey

Which table distribution will minimize query times?

A. round-robin

- B. replicated
- C. hash-distributed on DateKey
- D. hash-distributed on PurchaseKey

Answer: D

Explanation:

Hash-distributed tables improve query performance on large fact tables, and are the focus of this article. Round-robin tables are useful for improving loading speed.

Reference:

https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-tables-distribu

NEW QUESTION 89

- (Exam Topic 3)

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

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

You are designing an Azure Stream Analytics solution that will analyze Twitter data.

You need to count the tweets in each 10-second window. The solution must ensure that each tweet is counted only once.

Solution: You use a hopping window that uses a hop size of 5 seconds and a window size 10 seconds. Does this meet the goal?

A. Yes

B. No

Answer: B

Explanation:

Instead use a tumbling window. Tumbling windows are a series of fixed-sized, non-overlapping and contiguous time intervals. Reference:

https://docs.microsoft.com/en-us/stream-analytics-query/tumbling-window-azure-stream-analytics

NEW QUESTION 94

- (Exam Topic 3)

You have an Azure Active Directory (Azure AD) tenant that contains a security group named Group1. You have an Azure Synapse Analytics dedicated SQL pool named dw1 that contains a schema named schema1.

You need to grant Group1 read-only permissions to all the tables and views in schema1. The solution must use the principle of least privilege.

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.

NOTE: More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.



Actions **Answer Area**

Create a database role named Role1 and grant Role1 SELECT permissions to schema1.

Create a database role named Role1 and grant Role1 SELECT permissions to dw1.

Assign the Azure role-based access control (Azure RBAC) Reader role for dw1 to Group1.

Create a database user in dw1 that represents Group1 and uses the FROM EXTERNAL PROVIDER clause.

Assign Role1 to the Group1 database user.

A. Mastered

B. Not Mastered

Answer: A

Explanation:

Step 1: Create a database role named Role1 and grant Role1 SELECT permissions to schema You need to grant Group1 read-only permissions to all the tables and views in schema1.

Place one or more database users into a database role and then assign permissions to the database role. Step 2: Assign Rol1 to the Group database user Step 3: Assign the Azure role-based access control (Azure RBAC) Reader role for dw1 to Group1 Reference:

https://docs.microsoft.com/en-us/azure/data-share/how-to-share-from-sql

NEW QUESTION 99

- (Exam Topic 3)

You have an enterprise data warehouse in Azure Synapse Analytics named DW1 on a server named Server1. You need to verify whether the size of the transaction log file for each distribution of DW1 is smaller than 160 GB. What should you do?

- A. On the master database, execute a query against the sys.dm_pdw_nodes_os_performance_counters dynamic management view.
- B. From Azure Monitor in the Azure portal, execute a query against the logs of DW1.
- C. On DW1, execute a query against the sys.database_files dynamic management view.
- D. Execute a query against the logs of DW1 by using the Get-Az Operational Insight Search Result Power Shell cmdlet.

Answer: A

Explanation:

The following query returns the transaction log size on each distribution. If one of the log files is reaching 160 GB, you should consider scaling up your instance or limiting your transaction size.

-- Transaction log size SELECT

instance_name as distribution_db, cntr_value*1.0/1048576 as log_file_size_used_GB, pdw_node_id

FROM sys.dm_pdw_nodes_os_performance_counters WHERE

instance_name like 'Distribution_%'

AND counter name = 'Log File(s) Used Size (KB)' References:

https://docs.microsoft.com/en-us/azure/sql-data-warehouse/sql-data-warehouse-manage-monitor

NEW QUESTION 101

- (Exam Topic 3)

You have an Azure Data Lake Storage Gen2 container that contains 100 TB of data.

You need to ensure that the data in the container is available for read workloads in a secondary region if an outage occurs in the primary region. The solution must minimize costs.

Which type of data redundancy should you use?

A. zone-redundant storage (ZRS)

- B. read-access geo-redundant storage (RA-GRS)
- C. locally-redundant storage (LRS)
- D. geo-redundant storage (GRS)

Answer: C

NEW QUESTION 105

- (Exam Topic 3)

You are building an Azure Analytics guery that will receive input data from Azure IoT Hub and write the results to Azure Blob storage.

You need to calculate the difference in readings per sensor per hour.

How should you complete the query? To answer, select the appropriate options in the answer area.



SELECT sensorId, growth = reading -(reading) OVER (PARTITION BY sensorId ▼ (hour, 1)) LAG LIMIT DURATION LAST OFFSET LEAD WHEN

FROM input

A. Mastered

B. Not Mastered

Answer: A

Explanation:

Box 1: LAG

The LAG analytic operator allows one to look up a "previous" event in an event stream, within certain constraints. It is very useful for computing the rate of growth of a variable, detecting when a variable crosses a threshold, or when a condition starts or stops being true.

Box 2: LIMIT DURATION

Example: Compute the rate of growth, per sensor: SELECT sensorld,

growth = reading

LAG(reading) OVER (PARTITION BY sensorId LIMIT DURATION(hour, 1)) FROM input

Reference:

https://docs.microsoft.com/en-us/stream-analytics-query/lag-azure-stream-analytics

NEW QUESTION 110

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL Pool1. Pool1 contains a partitioned fact table named dbo. Sales and a staging table named stg. Sales that has the matching table and partition definitions.

You need to overwrite the content of the first partition in dbo. Sales with the content of the same partition in stg. Sales. The solution must minimize load times. What should you do?

- A. Switch the first partition from dbo. Sales to stg. Sales.
- B. Switch the first partition from stg. Sales to db
- C. Sales.
- D. Update dbo.Sales from stg.Sales.
- E. Insert the data from stg.Sales into dbo.Sales.

Answer: D

NEW QUESTION 112

- (Exam Topic 3)

You are designing the folder structure for an Azure Data Lake Storage Gen2 container.

Users will query data by using a variety of services including Azure Databricks and Azure Synapse Analytics serverless SQL pools. The data will be secured by subject area. Most queries will include data from the current year or current month.

Which folder structure should you recommend to support fast queries and simplified folder security?

- A. /{SubjectArea}/{DataSource}/{DD}/{MM}/{YYYY}/{FileData} {YYYY} {MM} {DD}.csv
- B. /{DD}/{MM}/{YYYY}/{SubjectArea}/{DataSource}/{FileData}_{YYYY}_{MM}_{DD}.csv
- C. /{YYYY}/{MM}/{DD}/{SubjectArea}/{DataSource}/{FileData} {YYYY} {MM} {DD}.csv
- D. /{SubjectArea}/{DataSource}/{YYYY}/{MM}/{DD}/{FileData}_{YYYY}_{MM}_{DD}.csv

Answer: D

Explanation:

There's an important reason to put the date at the end of the directory structure. If you want to lock down certain regions or subject matters to users/groups, then you can easily do so with the POSIX permissions. Otherwise, if there was a need to restrict a certain security group to viewing just the UK data or certain planes, with the date structure in front a separate permission would be required for numerous directories under every hour directory. Additionally, having the date structure in front would exponentially increase the number of directories as time went on.

Note: In IoT workloads, there can be a great deal of data being landed in the data store that spans across numerous products, devices, organizations, and customers. It's important to pre-plan the directory layout for organization, security, and efficient processing of the data for down-stream consumers. A general template to consider might be the following layout:

{Region}/{SubjectMatter(s)}/{vyvy}/{mm}/{dd}/{hh}/

NEW QUESTION 115

- (Exam Topic 3)

You are designing an Azure Stream Analytics solution that receives instant messaging data from an Azure event hub.

You need to ensure that the output from the Stream Analytics job counts the number of messages per time zone every 15 seconds.

How should you complete the Stream Analytics query? To answer, select the appropriate options in the answer area.



Answer Area

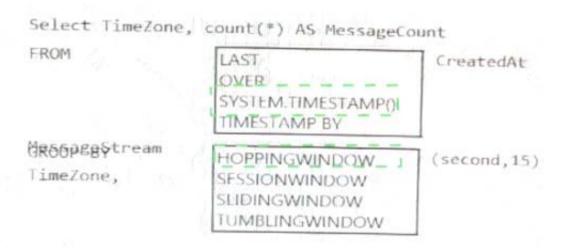
Select TimeZone, count(*) AS MessageCount FROM LAST CreatedAt OVER SYSTEM.TIMESTAMP() TIMESTAMP BY GROODERStream HOPPINGWINDOW (second, 15) TimeZone, SESSIONWINDOW SLIDINGWINDOW TUMBLINGWINDOW

A. Mastered B. Not Mastered

Answer: A

Explanation:

Answer Area



NEW QUESTION 120

- (Exam Topic 3)

You plan to ingest streaming social media data by using Azure Stream Analytics. The data will be stored in files in Azure Data Lake Storage, and then consumed by using Azure Datiabricks and PolyBase in Azure Synapse Analytics.

You need to recommend a Stream Analytics data output format to ensure that the queries from Databricks and PolyBase against the files encounter the fewest possible errors. The solution must ensure that the tiles can be queried quickly and that the data type information is retained. What should you recommend?

A. Parquet

B. Avro

C. CSV

D. JSON

Answer: B

Explanation:

The Avro format is great for data and message preservation. Avro schema with its support for evolution is essential for making the data robust for streaming architectures like Kafka, and with the metadata that schema provides, you can reason on the data. Having a schema provides robustness in providing meta-data about the data stored in Avro records which are self- documenting the data.References: http://cloudurable.com/blog/avro/index.html

NEW QUESTION 124

- (Exam Topic 3)

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

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

You are designing an Azure Stream Analytics solution that will analyze Twitter data.

You need to count the tweets in each 10-second window. The solution must ensure that each tweet is counted only once.

Solution: You use a session window that uses a timeout size of 10 seconds. Does this meet the goal?

A. Yes B. No

Answer: B

Explanation:

Instead use a tumbling window. Tumbling windows are a series of fixed-sized, non-overlapping and contiguous time intervals. Reference:

https://docs.microsoft.com/en-us/stream-analytics-query/tumbling-window-azure-stream-analytics



NEW QUESTION 128

- (Exam Topic 3)

You have an Azure Synapse Analytics job that uses Scala. You need to view the status of the job.

What should you do?

- A. From Azure Monitor, run a Kusto query against the AzureDiagnostics table.
- B. From Azure Monitor, run a Kusto query against the SparkLogying1 Event.CL table.
- C. From Synapse Studio, select the workspac
- D. From Monitor, select Apache Sparks applications.
- E. From Synapse Studio, select the workspac
- F. From Monitor, select SQL requests.

Answer: C

NEW QUESTION 131

- (Exam Topic 3)

You have an Azure event hub named retailhub that has 16 partitions. Transactions are posted to retailhub. Each transaction includes the transaction ID, the individual line items, and the payment details. The transaction ID is used as the partition key.

You are designing an Azure Stream Analytics job to identify potentially fraudulent transactions at a retail store. The job will use retailhub as the input. The job will output the transaction ID, the individual line items, the payment details, a fraud score, and a fraud indicator.

You plan to send the output to an Azure event hub named fraudhub.

You need to ensure that the fraud detection solution is highly scalable and processes transactions as quickly as possible.

Transaction ID

How should you structure the output of the Stream Analytics job? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Number of partitions: 1 8 16 32 Partition key: Fraud indicator Fraud score Individual line items Payment details

A. Mastered

B. Not Mastered

Answer: A

Explanation:

Box 1: 16

For Event Hubs you need to set the partition key explicitly.

An embarrassingly parallel job is the most scalable scenario in Azure Stream Analytics. It connects one partition of the input to one instance of the query to one partition of the output.

Box 2: Transaction ID Reference:

https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features#partitions

NEW QUESTION 132

- (Exam Topic 3)

You are designing an Azure Databricks interactive cluster. The cluster will be used infrequently and will be configured for auto-termination. You need to ensure that the cluster configuration is retained indefinitely after the cluster is terminated. The solution must minimize costs.

What should you do?

- A. Clone the cluster after it is terminated.
- B. Terminate the cluster manually when processing completes.
- C. Create an Azure runbook that starts the cluster every 90 days.
- D. Pin the cluster.

Answer: D

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/clusters/clusters-manage.html#automatic-termination



NEW QUESTION 135

- (Exam Topic 3)

You have a partitioned table in an Azure Synapse Analytics dedicated SQL pool.

You need to design queries to maximize the benefits of partition elimination. What should you include in the Transact-SQL queries?

A. JOIN

B. WHERE

C. DISTINCT

D. GROUP BY

Answer: B

NEW QUESTION 139

- (Exam Topic 3)

You use Azure Stream Analytics to receive Twitter data from Azure Event Hubs and to output the data to an Azure Blob storage account.

You need to output the count of tweets during the last five minutes every five minutes. Each tweet must only be counted once.

Which windowing function should you use?

A. a five-minute Session window

B. a five-minute Sliding window

C. a five-minute Tumbling window

D. a five-minute Hopping window that has one-minute hop

Answer: C

Explanation:

Tumbling window functions are used to segment a data stream into distinct time segments and perform a function against them, such as the example below. The key differentiators of a Tumbling window are that they repeat, do not overlap, and an event cannot belong to more than one tumbling window. References:

https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-window-functions

NEW QUESTION 144

- (Exam Topic 3)

You have an Azure Synapse Analystics dedicated SQL pool that contains a table named Contacts. Contacts contains a column named Phone.

You need to ensure that users in a specific role only see the last four digits of a phone number when querying the Phone column.

What should you include in the solution?

A. a default value

B. dynamic data masking

C. row-level security (RLS)

D. column encryption

E. table partitions

Answer: C

NEW QUESTION 146



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