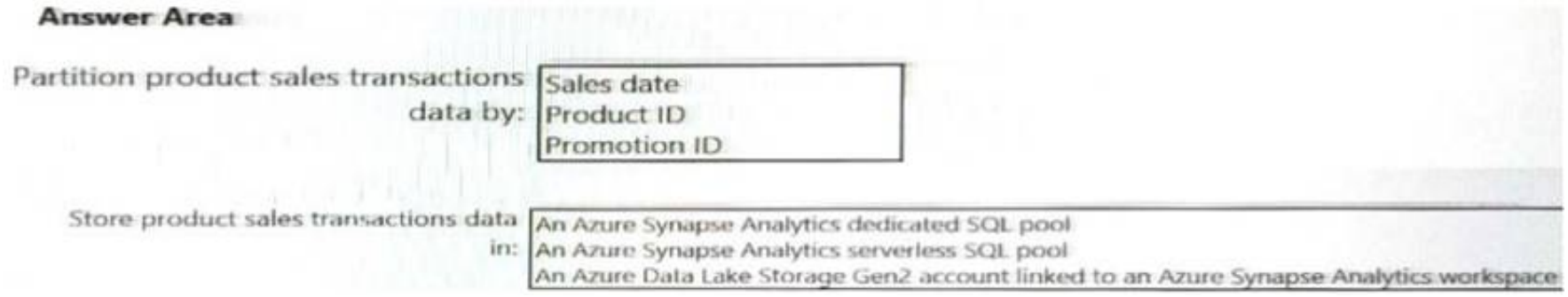
Exam Questions DP-203

Data Engineering on Microsoft Azure

https://www.2passeasy.com/dumps/DP-203/

NEW QUESTION 1
- (Exam Topic 1)
You need to design the partitions for the product sales transactions. The solution must mee 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.



A. Mastered
B. Not Mastered

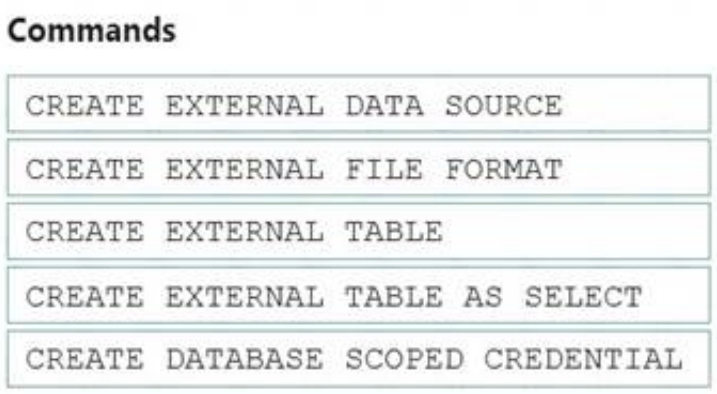
Answer: A

Explanation:
Box 1: Sales date
Scenario: Contoso requirements for data integration include:
- Partition data that contains sales transaction records. Partitions must be designed to provide efficient loads by month. Boundary values must belong to the partition on the right.

Box 2: An Azure Synapse Analytics Dedicated SQL pool Scenario: Contoso requirements for data integration include:
- Ensure that data storage costs and performance are predictable.

The size of a dedicated SQL pool (formerly SQL DW) is determined by Data Warehousing Units (DWU). Dedicated SQL pool (formerly SQL DW) stores data in relational tables with columnar storage. This format
significantly reduces the data storage costs, and improves query performance.
Synapse analytics dedicated sql pool Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-overview-wha

NEW QUESTION 2
- (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.



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 3
- (Exam Topic 1)
You need to implement the surrogate key for the retail store table. The solution must meet the sales transaction dataset requirements.
What should you create?

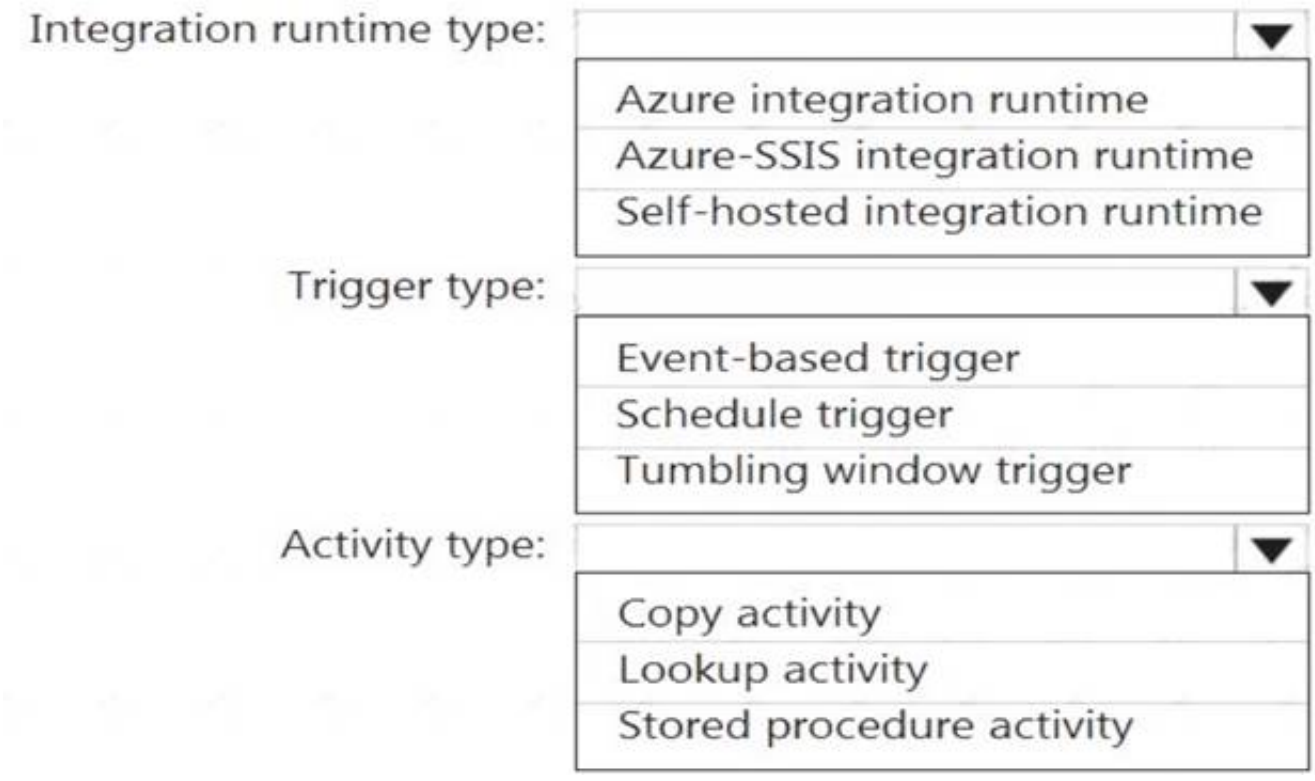
A. a table that has an IDENTITY property
B. a system-versioned temporal table

C. a user-defined SEQUENCE object
D. a table that has a FOREIGN KEY constraint

Answer: A

Explanation:
Scenario: Implement a surrogate key to account for changes to the retail store addresses.
A surrogate key on a table is a column with a unique identifier for each row. The key is not generated from the table data. Data modelers like to create surrogate keys on their tables when they design data warehouse models. You can use the IDENTITY property to achieve this goal simply and effectively without affecting load performance.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-tables-identity

NEW QUESTION 4
- (Exam Topic 2)
Which Azure Data Factory components should you recommend using together to import the daily inventory data from the SQL server to Azure Data Lake Storage? 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: Self-hosted integration runtime
A self-hosted IR is capable of running copy activity between a cloud data stores and a data store in private network.
Box 2: Schedule trigger
Schedule every 8 hours Box 3: Copy activity Scenario:
- Customer data, including name, contact information, and loyalty number, comes from Salesforce and can be imported into Azure once every eight hours. Row modified dates are not trusted in the source table.
- Product data, including product ID, name, and category, comes from Salesforce and can be imported into Azure once every eight hours. Row modified dates are not trusted in the source table.

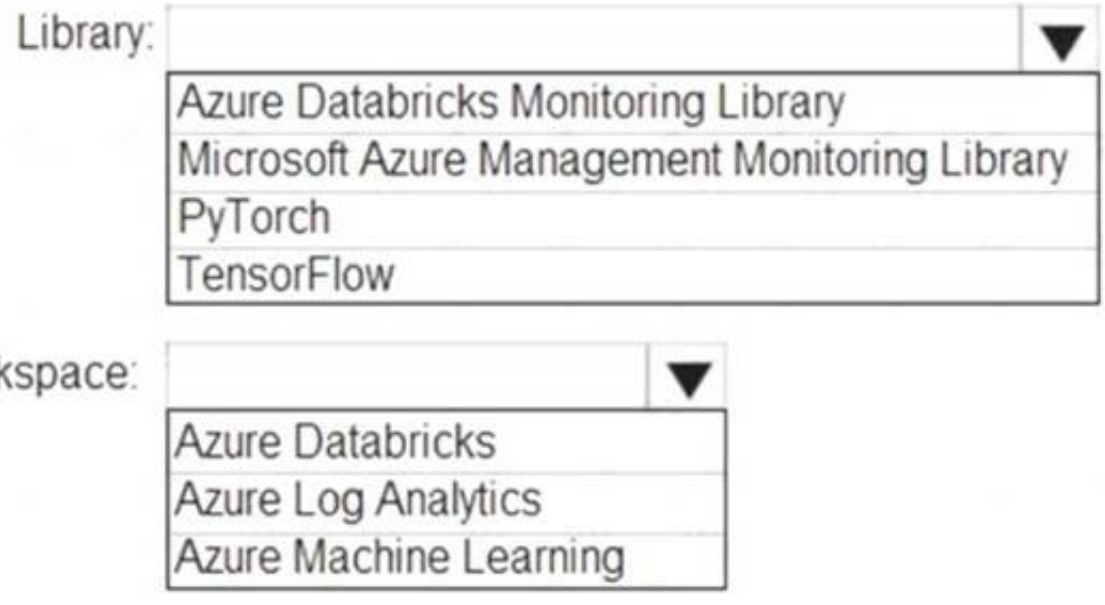
NEW QUESTION 5
- (Exam Topic 2)
What should you do to improve high availability of the real-time data processing solution?

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

NEW QUESTION 6
- (Exam Topic 3)
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.
NOTE: Each correct selection is worth one point.



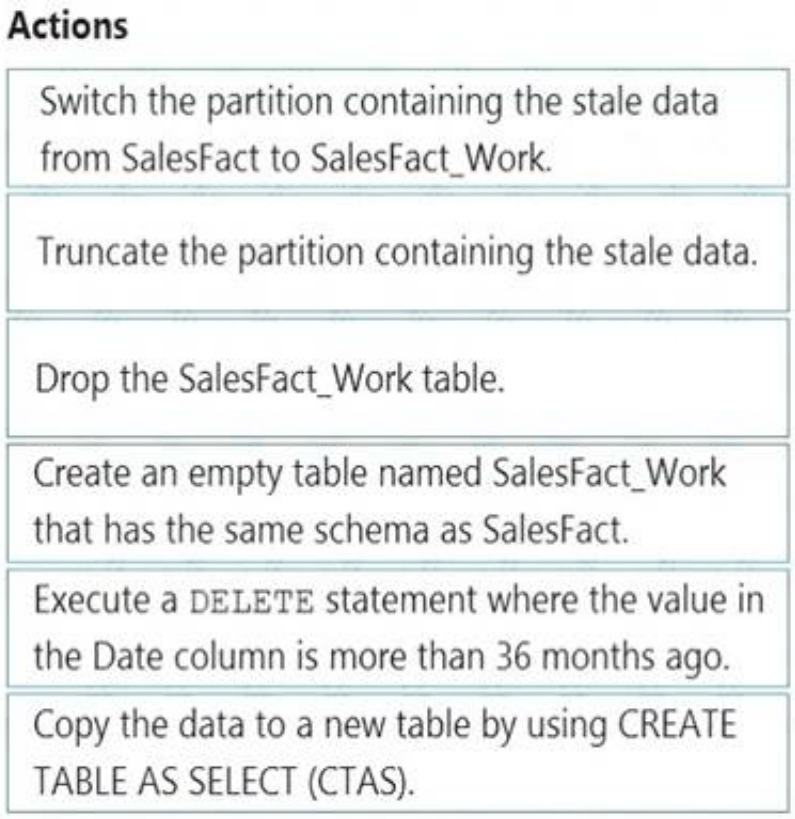
A. Mastered
B. Not Mastered

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 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.



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

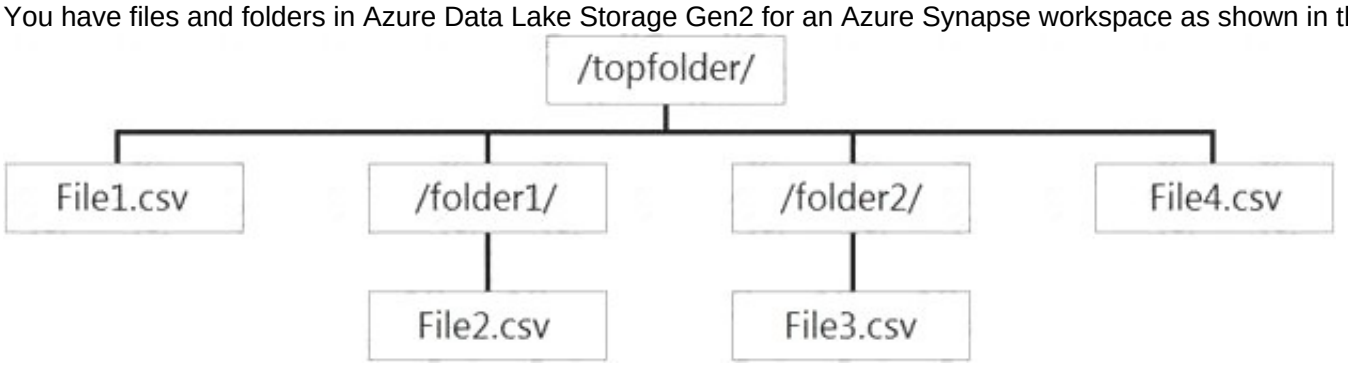
Explanation:
All file formats have different performance characteristics. For the fastest load, use compressed delimited text files.
Reference:
https://docs.microsoft.com/en-us/azure/sql-data-warehouse/guidance-for-loading-data

NEW QUESTION 9
- (Exam Topic 3)
You have several Azure Data Factory pipelines that contain a mix of the following types of activities.
* Wrangling data flow
* Notebook
* Copy
* jar
Which two Azure services should you use to debug the activities? Each correct answer presents part of the solution NOTE: Each correct selection is worth one point.

A. Azure HDInsight
B. Azure Databricks
C. Azure Machine Learning
D. Azure Data Factory
E. Azure Synapse Analytics

Answer: CE

NEW QUESTION 10
- (Exam Topic 3)
You have files and folders in Azure Data Lake Storage Gen2 for an Azure Synapse workspace as shown in the following exhibit.



You create an external table named ExtTable that has LOCATION='/topfolder/'.
When you query ExtTable by using an Azure Synapse Analytics serverless SQL pool, which files are returned?

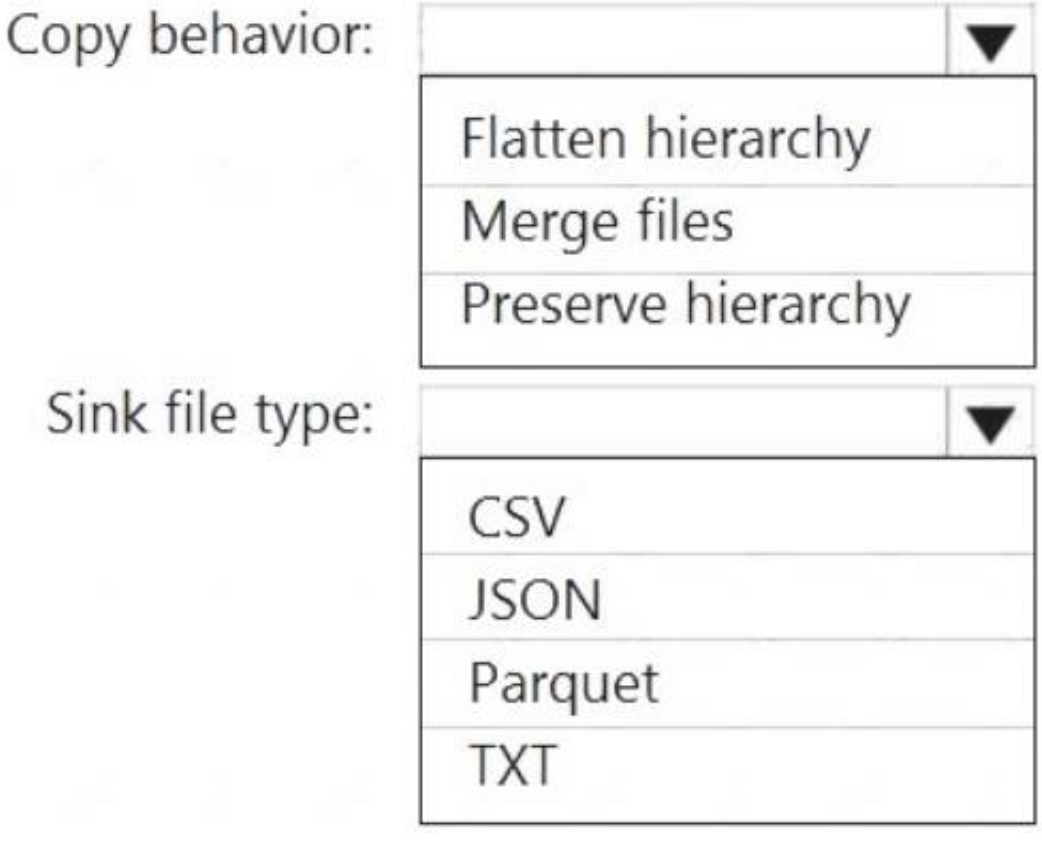
A. File2.csv and File3.csv only
B. File1.csv and File4.csv only
C. File1.csv, File2.csv, File3.csv, and File4.csv
D. File1.csv only

Answer: C

Explanation:
To run a T-SQL query over a set of files within a folder or set of folders while treating them as a single entity or rowset, provide a path to a folder or a pattern (using wildcards) over a set of files or folders. Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/query-data-storage#query-multiple-files-or-folders

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 13
- (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 18
- (Exam Topic 3)
You are building an Azure Stream Analytics job to identify how much time a user spends interacting with a feature on a webpage.
The job receives events based on user actions on the webpage. Each row of data represents an event. Each event has a type of either 'start' or 'end'.
You need to calculate the duration between start and end events.
How should you complete the query? 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: DATEDIFF
DATEDIFF function returns the count (as a signed integer value) of the specified datepart boundaries crossed between the specified startdate and enddate.
Syntax: DATEDIFF (datepart , startdate, enddate) Box 2: LAST
The LAST function can be used to retrieve the last event within a specific condition. In this example, the condition is an event of type Start, partitioning the search by PARTITION BY user and feature. This way, every user and feature is treated independently when searching for the Start event. LIMIT DURATION limits the search back in time to 1 hour between the End and Start events.
Example: SELECT
[user], feature, DATEDIFF(
second,
LAST(Time) OVER (PARTITION BY [user], feature LIMIT DURATION(hour,
1) WHEN Event = 'start'), Time) as duration
FROM input TIMESTAMP BY Time
WHERE
Event = 'end' Reference:
https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-stream-analytics-query-patterns

NEW QUESTION 20
- (Exam Topic 3)
You have an Azure Data Lake Storage account that has a virtual network service endpoint configured.
You plan to use Azure Data Factory to extract data from the Data Lake Storage account. The data will then be loaded to a data warehouse in Azure Synapse Analytics by using PolyBase.
Which authentication method should you use to access Data Lake Storage?

A. shared access key authentication
B. managed identity authentication
C. account key authentication
D. service principal authentication

Answer: B

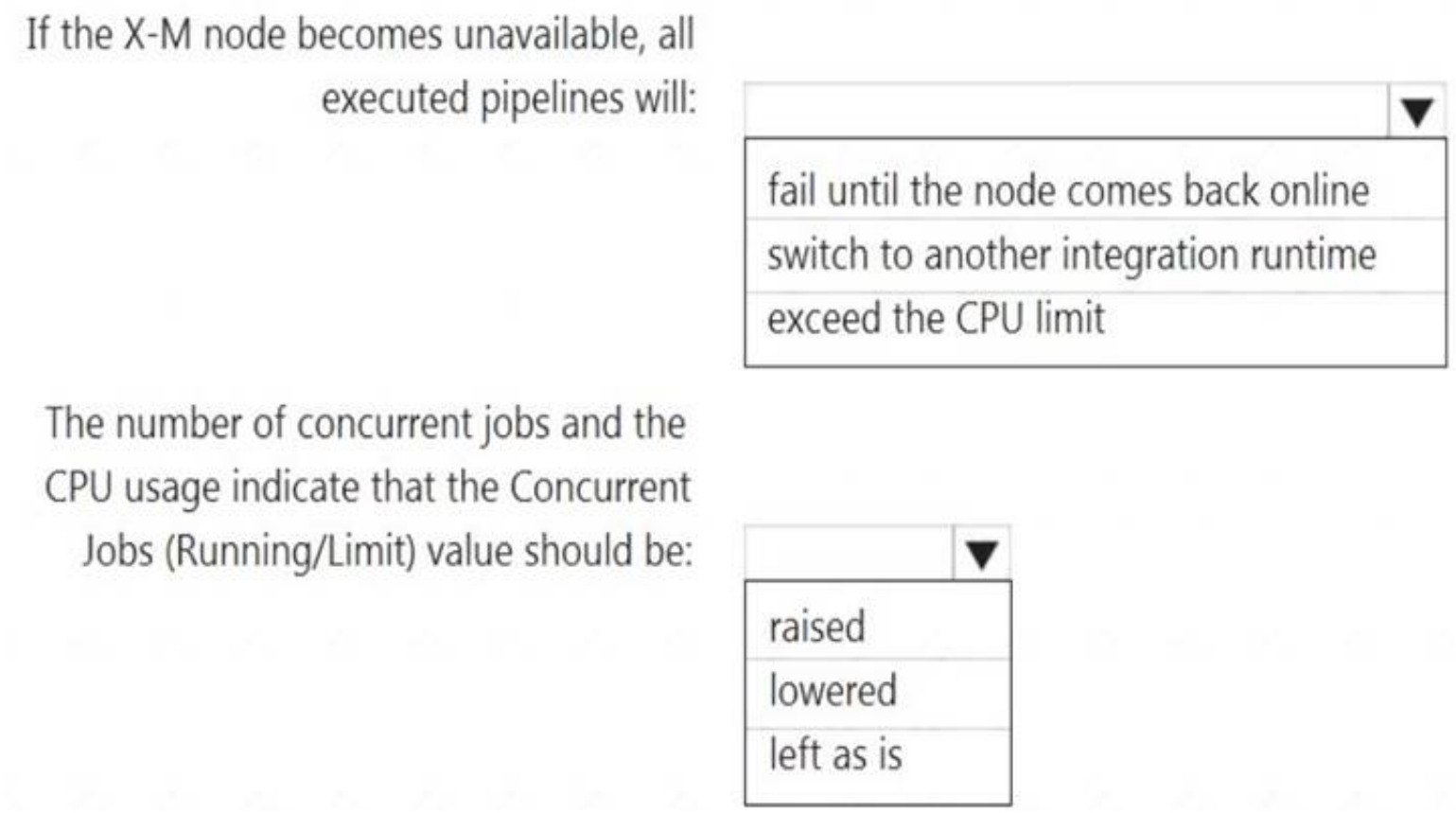
Explanation:
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/connector-azure-sql-data-warehouse#use-polybase-to-load-d

NEW QUESTION 22
- (Exam Topic 3)
You have a self-hosted integration runtime in Azure Data Factory.
The current status of the integration runtime has the following configurations:
- Status: Running
- Type: Self-Hosted
- Version: 4.4.7292.1
- Running / Registered Node(s): 1/1
- High Availability Enabled: False
- Linked Count: 0
- Queue Length: 0
- Average Queue Duration. 0.00s

The integration runtime has the following node details:
- Name: X-M
- Status: Running
- Version: 4.4.7292.1

- Available Memory: 7697MB
- CPU Utilization: 6%
- Network (In/Out): 1.21KBps/0.83KBps
- Concurrent Jobs (Running/Limit): 2/14
- Role: Dispatcher/Worker
- Credential Status: In Sync

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

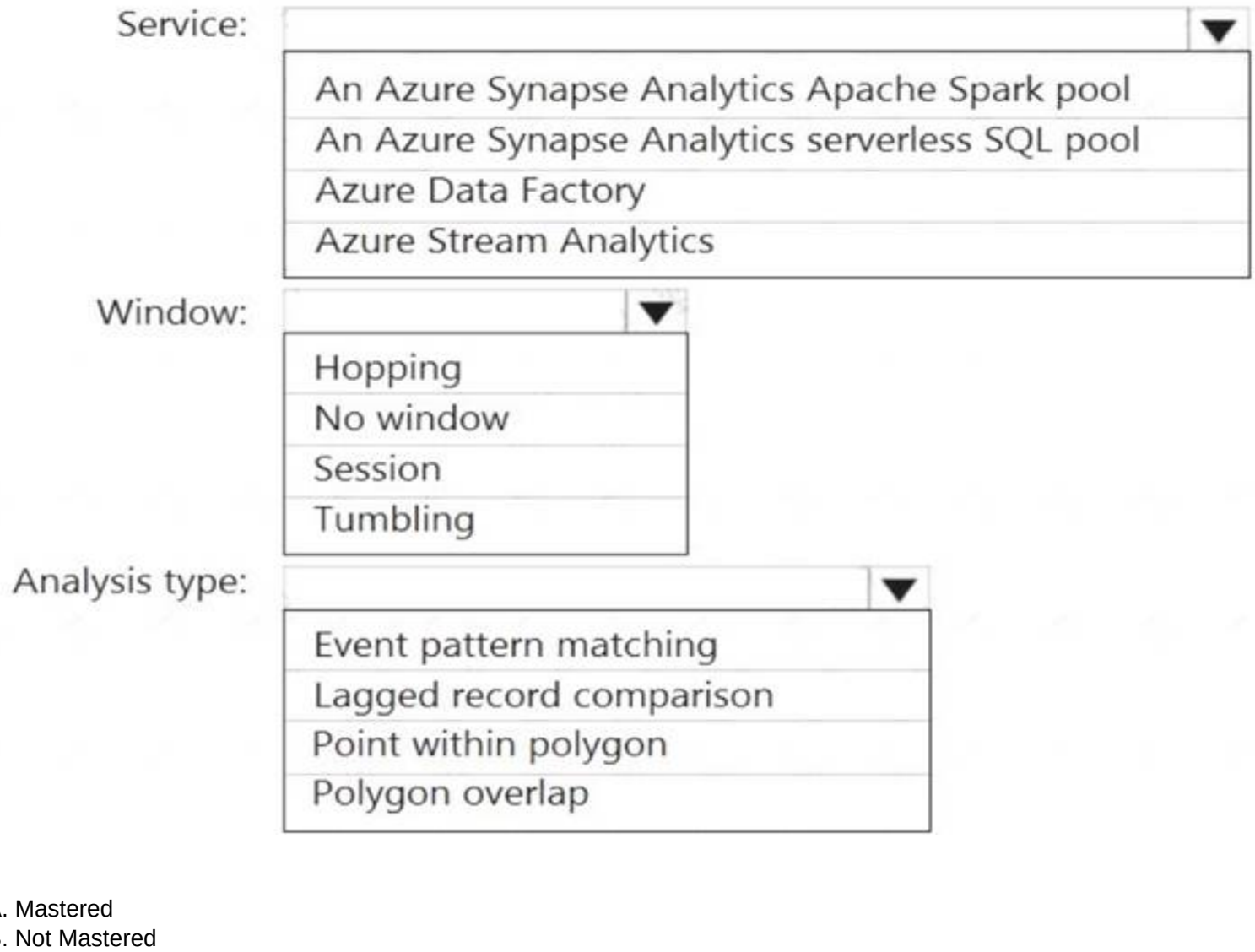


A. Mastered
B. Not Mastered

Answer: A

Explanation:
Box 1: fail until the node comes back online We see: High Availability Enabled: False
Note: Higher availability of the self-hosted integration runtime so that it's no longer the single point of failure in your big data solution or cloud data integration with Data Factory.
Box 2: lowered We see:
Concurrent Jobs (Running/Limit): 2/14 CPU Utilization: 6%
Note: When the processor and available RAM aren't well utilized, but the execution of concurrent jobs reaches a node's limits, scale up by increasing the number of concurrent jobs that a node can run
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/create-self-hosted-integration-runtime

NEW QUESTION 27
- (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 minute.
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.
NOTE: Each correct selection is worth one point.



A. Mastered
B. Not Mastered

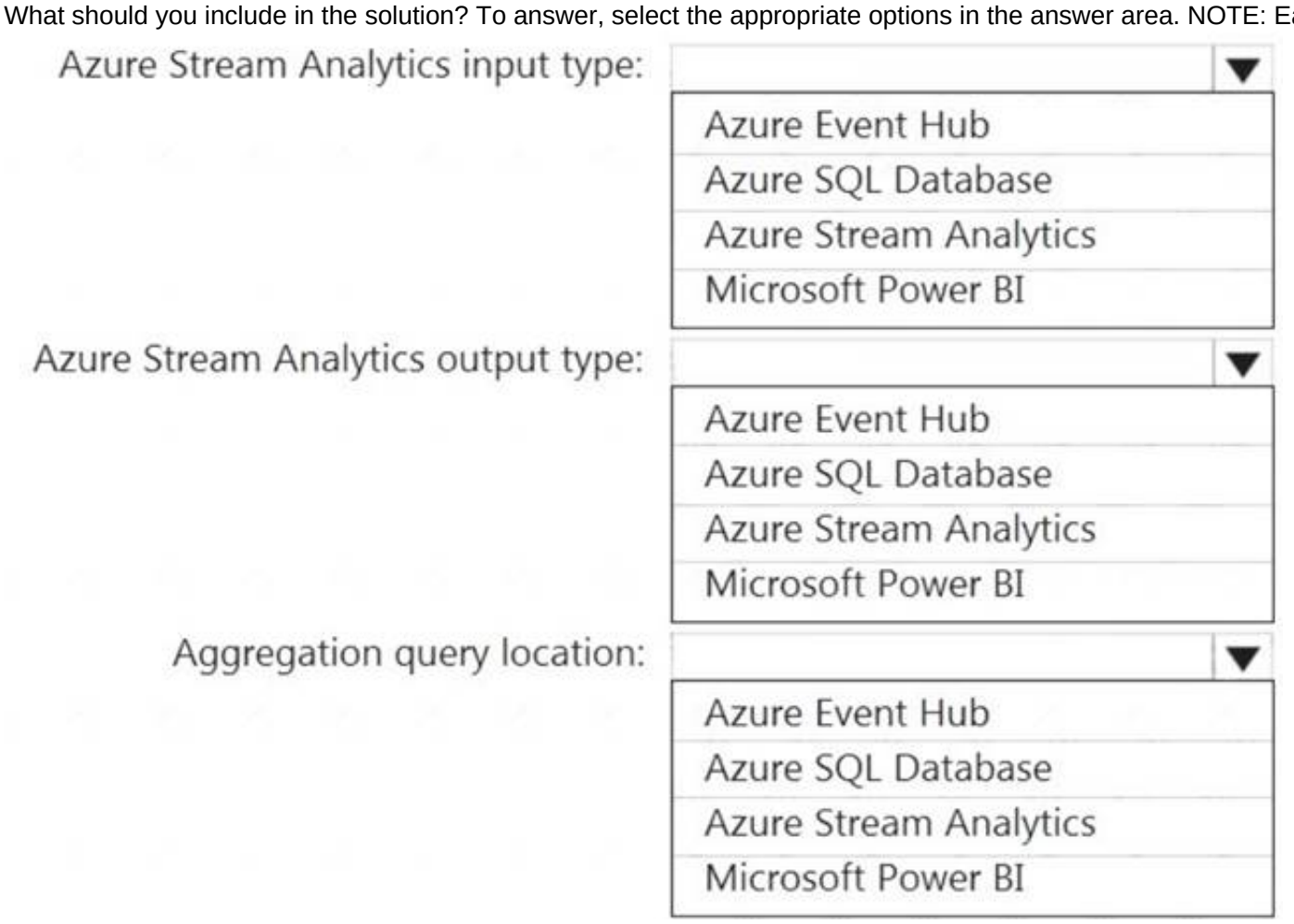
Answer: A

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 28
- (Exam Topic 3)
You are designing a real-time dashboard solution that will visualize streaming data from remote sensors that connect to the internet. The streaming data must be aggregated to show the average value of each 10-second interval. The data will be discarded after being displayed in the dashboard.
The solution will use Azure Stream Analytics and must meet the following requirements:

- Minimize latency from an Azure Event hub to the dashboard.
- Minimize the required storage.
- Minimize development effort.

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



A. Mastered
B. Not Mastered

Answer: A

Explanation:
Reference:
https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-power-bi-dashboard

NEW QUESTION 32
- (Exam Topic 3)
You are developing a solution using a Lambda architecture on Microsoft Azure. The data at test layer must meet the following requirements:
Data storage:
•Serve as a repository (or high volumes of large files in various formats.
•Implement optimized storage for big data analytics workloads.
•Ensure that data can be organized using a hierarchical structure. Batch processing:
•Use a managed solution for in-memory computation processing.
•Natively support Scala, Python, and R programming languages.
•Provide the ability to resize and terminate the cluster automatically. Analytical data store:
•Support parallel processing.
•Use columnar storage.
•Support SQL-based languages.
You need to identify the correct technologies to build the Lambda architecture.
Which technologies should you use? To answer, select the appropriate options in the answer area NOTE: Each correct selection is worth one point.

Architecture requirement	Technology
Data storage	Azure SQL Database Azure Blob Storage Azure Cosmos DB Azure Data Lake Store
Batch processing	HDInsight Spark HDInsight Hadoop Azure Databricks HDInsight Interactive Query
Analytical data store	HDInsight HBase Azure SQL Data Warehouse Azure Analysis Services Azure Cosmos DB

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Data storage: Azure Data Lake Store
A key mechanism that allows Azure Data Lake Storage Gen2 to provide file system performance at object storage scale and prices is the addition of a hierarchical namespace. This allows the collection of objects/files within an account to be organized into a hierarchy of directories and nested subdirectories in the same way that the file system on your computer is organized. With the hierarchical namespace enabled, a storage account becomes capable of providing the scalability and cost-effectiveness of object storage, with file system semantics that are familiar to analytics engines and frameworks.
Batch processing: HD Insight Spark
Aparch Spark is an open-source, parallel-processing framework that supports in-memory processing to boost the performance of big-data analysis applications. HDInsight is a managed Hadoop service. Use it deploy and manage Hadoop clusters in Azure. For batch processing, you can use Spark, Hive, Hive LLAP, MapReduce.
Languages: R, Python, Java, Scala, SQL Analytic data store: SQL Data Warehouse
SQL Data Warehouse is a cloud-based Enterprise Data Warehouse (EDW) that uses Massively Parallel Processing (MPP).
SQL Data Warehouse stores data into relational tables with columnar storage. References:
https://docs.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-namespace https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/batch-processing https://docs.microsoft.com/en-us/azure/sql-data-warehouse/sql-data-warehouse-overview-what-is

NEW QUESTION 36
- (Exam Topic 3)
You are designing a partition strategy for a fact table in an Azure Synapse Analytics dedicated SQL pool. The table has the following specifications:
• Contain sales data for 20,000 products.

• Use hash distribution on a column named ProductID,
• Contain 2.4 billion records for the years 2019 and 2020.
Which number of partition ranges provides optimal compression and performance of the clustered columnstore index?

A. 40
B. 240
C. 400
D. 2,400

Answer: B

NEW QUESTION 38
- (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 Azure SQL data warehouse. You need to prepare the files to ensure that the data copies quickly.
Solution: You modify the files to ensure that each row is more than 1 MB. Does this meet the goal?

A. Yes
B. No

Answer: B

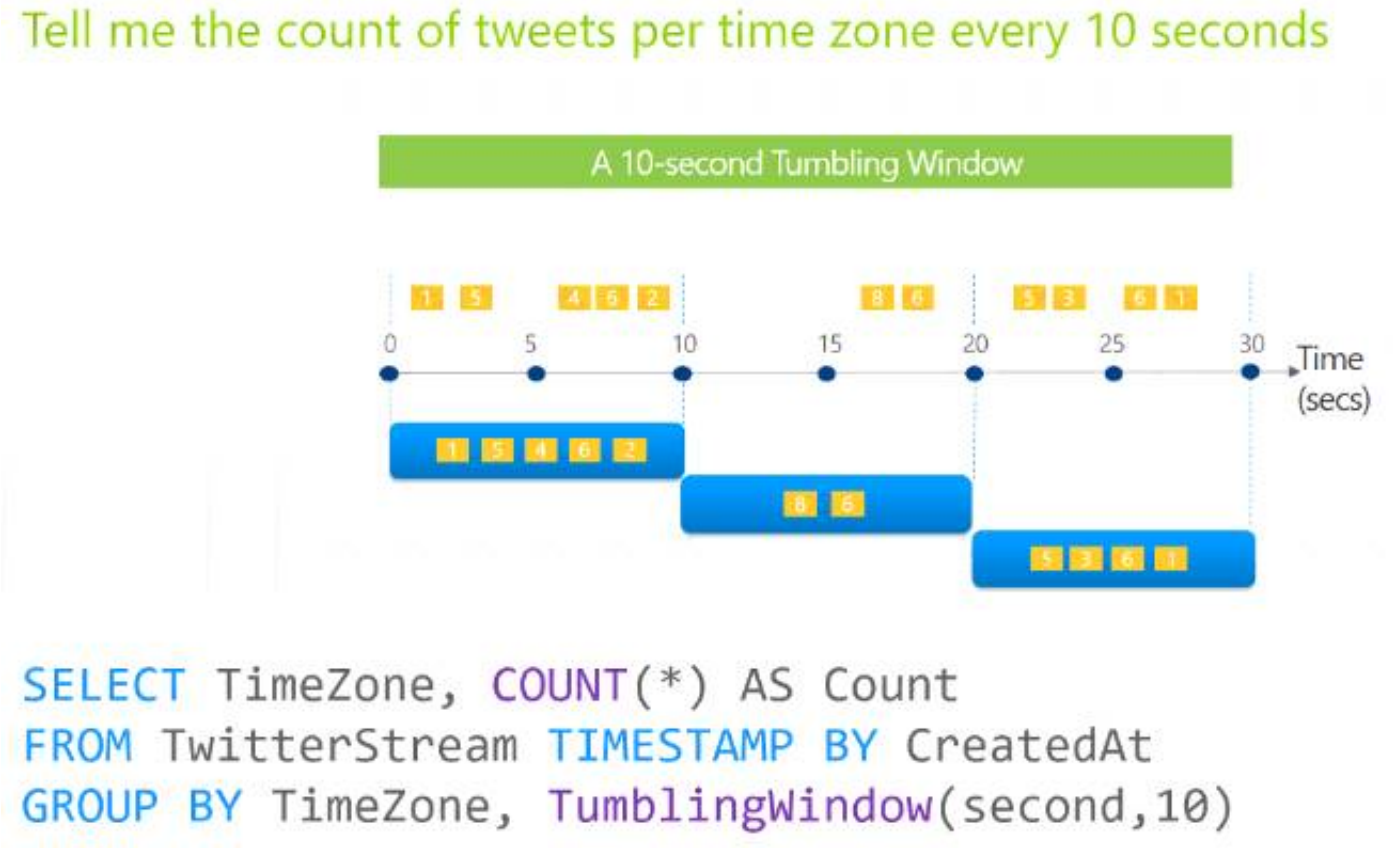
Explanation:
Instead modify the files to ensure that each row is less than 1 MB. References:
https://docs.microsoft.com/en-us/azure/sql-data-warehouse/guidance-for-loading-data

NEW QUESTION 39
- (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.



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

NEW QUESTION 43
- (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 48
- (Exam Topic 3)
You have an Azure Synapse Analytics dedicated SQL pool that contains the users shown in the following table.

Name	Role
User1	Server admin
User2	db_datareader

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

```
SELECT c.name,
    tbl.name as table_name,
    typ.name as datatype,
    c.is_masked,
    c.masking_function
FROM sys.masked_columns AS c
INNER JOIN sys.tables AS tbl ON c.[object_id] = tbl.[object_id]
INNER JOIN sys.types typ ON c.user_type_id = typ.user_type_id
WHERE is_masked = 1;
```

Results | Messages

	name	table_name	datatype	is_masked	masking_function
1	BirthDate	DimCustomer	date	1	default()
2	Gender	DimCustomer	nvarchar	1	default()
3	EmailAddress	DimCustomer	nvarchar	1	email()
4	YearlyIncome	DimCustomer	money	1	default()

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

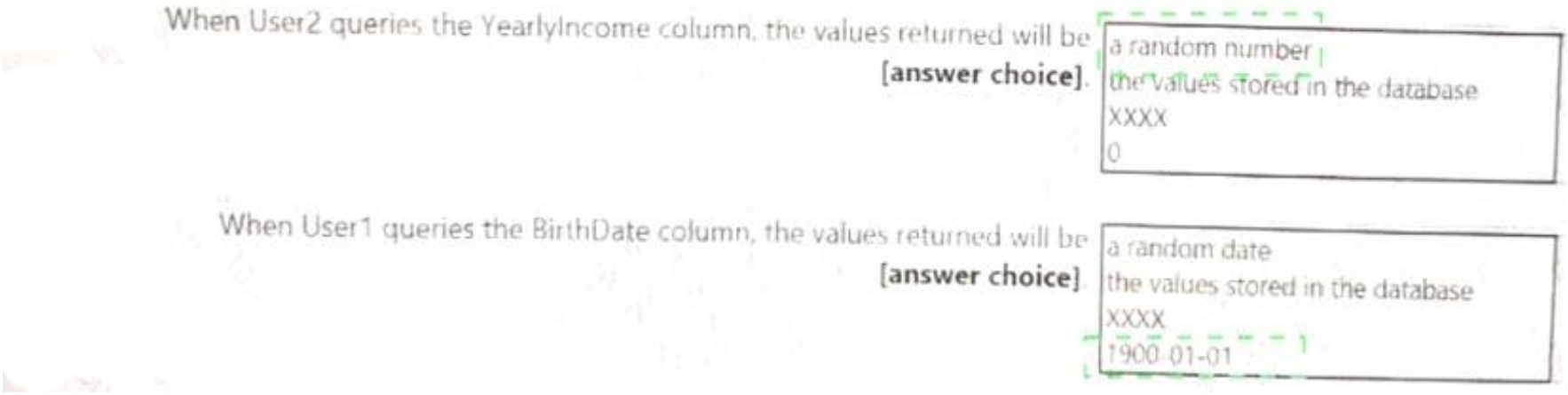
When User2 queries the YearlyIncome column, the values returned will be **[answer choice]**.
- a random number
- the values stored in the database
- XXXX
- 0

When User1 queries the BirthDate column, the values returned will be **[answer choice]**.
- a random date
- the values stored in the database
- XXXX
- 1900-01-01

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Answer Area



NEW QUESTION 49
- (Exam Topic 3)
You are developing a solution that will stream to Azure Stream Analytics. The solution will have both streaming data and reference data.
Which input type should you use for the reference data?

A. Azure Cosmos DB
B. Azure Blob storage
C. Azure IoT Hub
D. Azure Event Hubs

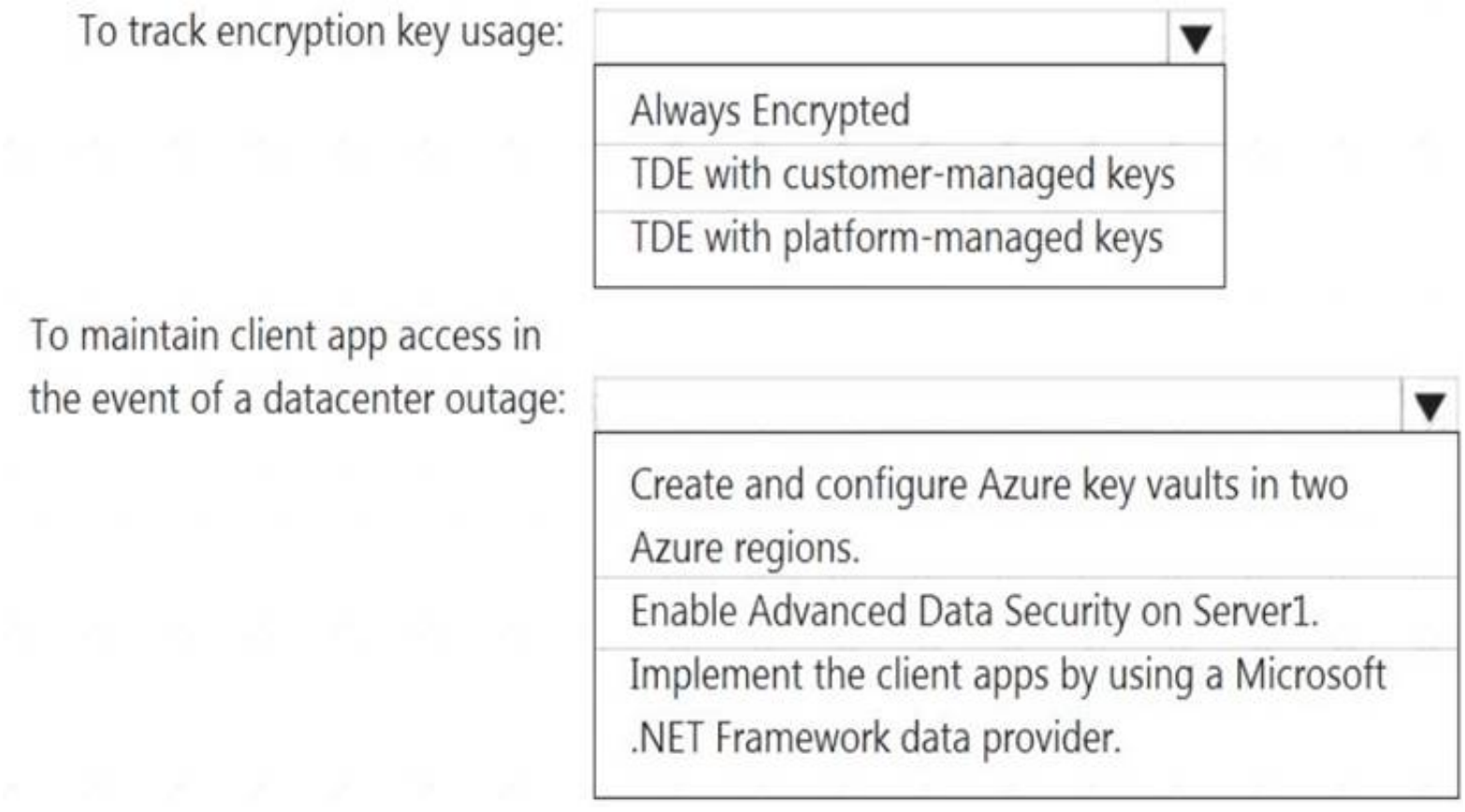
Answer: B

Explanation:
Stream Analytics supports Azure Blob storage and Azure SQL Database as the storage layer for Reference Data.
Reference:
https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-use-reference-data

NEW QUESTION 50
- (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.
NOTE: Each correct selection is worth one point.



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.

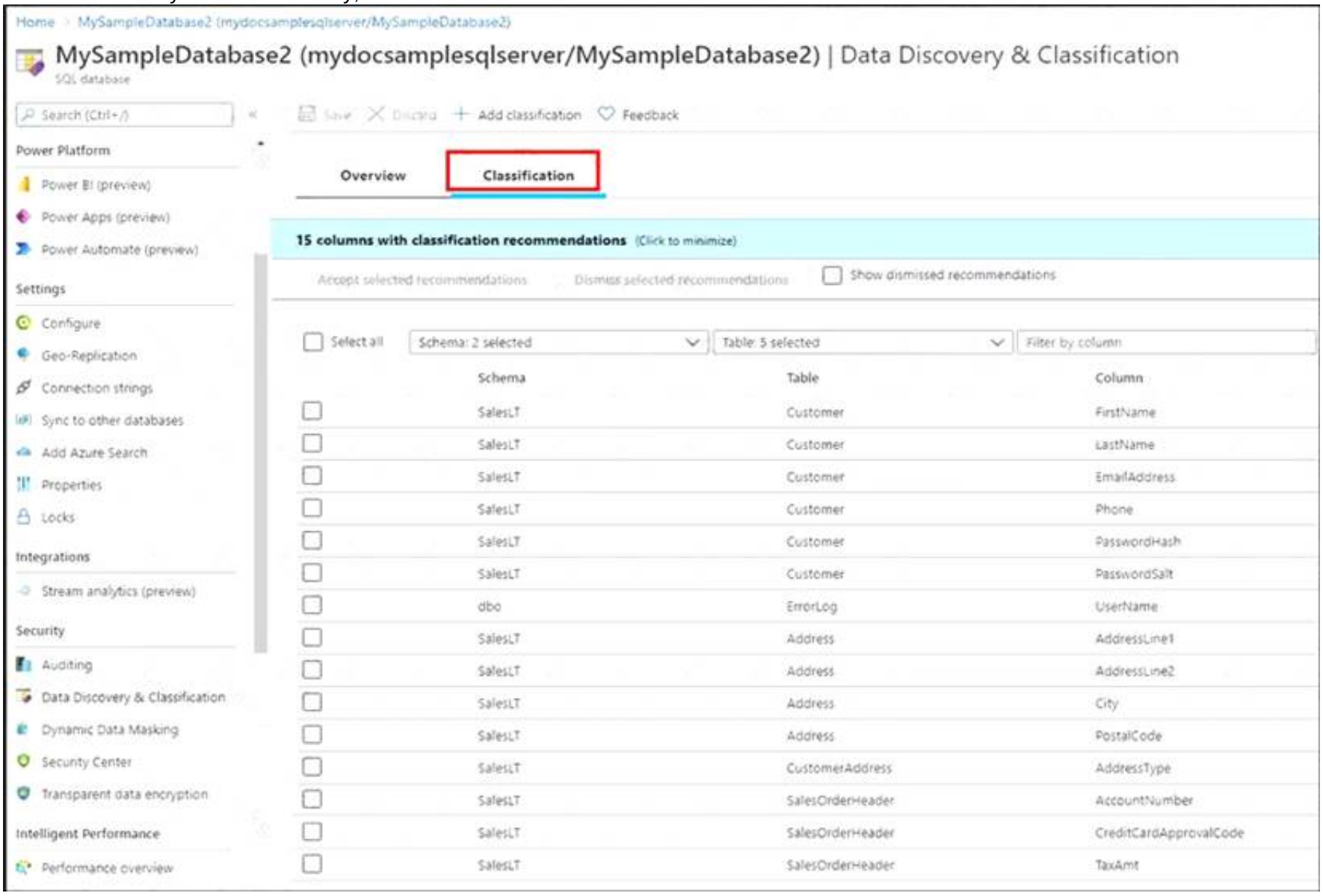
Box 2: Create and configure Azure key vaults in two Azure regions
The contents of your key vault are replicated within the region and to a secondary region at least 150 miles away, but within the same geography to maintain high durability of your keys and secrets.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/security/workspaces-encryption https://docs.microsoft.com/en-us/azure/key-vault/general/logging

NEW QUESTION 54
- (Exam Topic 3)
You plan to create an Azure Synapse Analytics dedicated SQL pool.
You need to minimize the time it takes to identify queries that return confidential information as defined by the company's data privacy regulations and the users who executed the queues.
Which two components should you include in the solution? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

A. sensitivity-classification labels applied to columns that contain confidential information
B. resource tags for databases that contain confidential information
C. audit logs sent to a Log Analytics workspace
D. dynamic data masking for columns that contain confidential information

Answer: AC

Explanation:
A: You can classify columns manually, as an alternative or in addition to the recommendation-based classification:



- Select Add classification in the top menu of the pane.
- In the context window that opens, select the schema, table, and column that you want to classify, and the information type and sensitivity label.
- Select Add classification at the bottom of the context window.

C: An important aspect of the information-protection paradigm is the ability to monitor access to sensitive data. Azure SQL Auditing has been enhanced to include a new field in the audit log called data_sensitivity_information. This field logs the sensitivity classifications (labels) of the data that was returned by a query. Here's an example:

d	client_ip	application_name	duration_milliseconds	response_rows	affected_rows	connection_id	data_sensitivity_information
	[redacted]7.125	Microsoft SQL Server Management Studio - Query	1	847	847	C244A066-2271-...	Confidential - GDPR
	[redacted]7.125	Microsoft SQL Server Management Studio - Query	2	32	32	C244A066-2271-...	Confidential
	[redacted]7.125	Microsoft SQL Server Management Studio - Query	41	32	32	A7088FD4-759E-...	Confidential, Confidential - GDPR

Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/data-discovery-and-classification-overview

NEW QUESTION 59
- (Exam Topic 3)
You are designing an Azure Databricks table. The table will ingest an average of 20 million streaming events per day.
You need to persist the events in the table for use in incremental load pipeline jobs in Azure Databricks. The solution must minimize storage costs and incremental load times.
What should you include in the solution?

A. Partition by DateTime fields.
B. Sink to Azure Queue storage.
C. Include a watermark column.
D. Use a JSON format for physical data storage.

Answer: B

Explanation:
The Databricks ABS-AQS connector uses Azure Queue Storage (AQS) to provide an optimized file source that lets you find new files written to an Azure Blob storage (ABS) container without repeatedly listing all of the files.
This provides two major advantages:
Lower costs: no more costly LIST API requests made to ABS.
Reference:
https://docs.microsoft.com/en-us/azure/databricks/spark/latest/structured-streaming/aqs

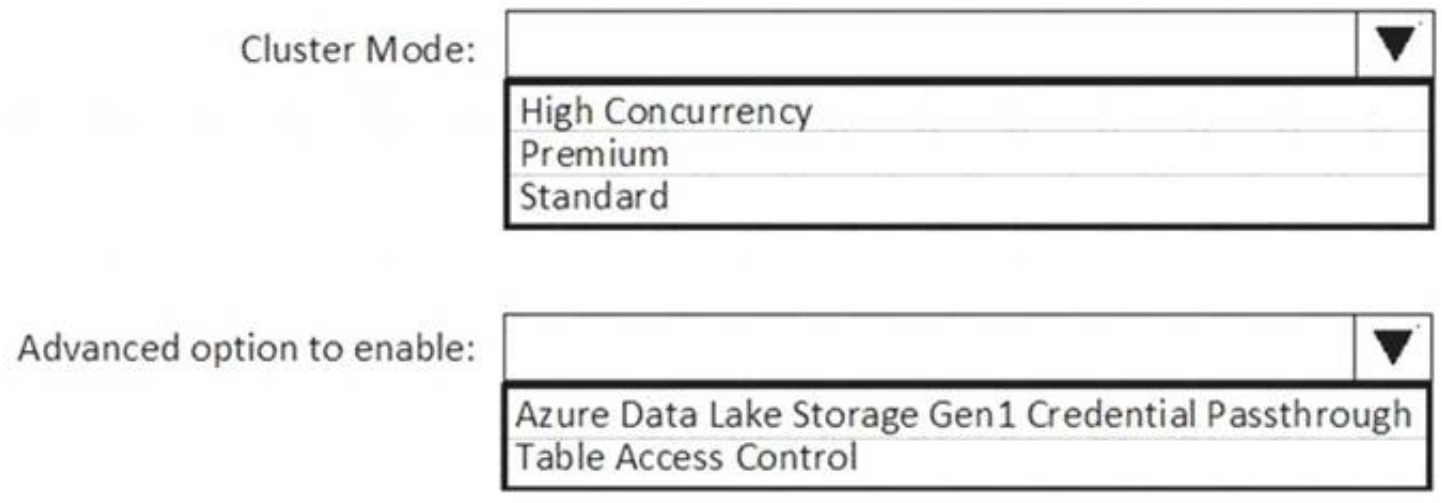
NEW QUESTION 63
- (Exam Topic 3)
You have an Azure Synapse Analytics dedicated SQL pool that contains a large fact table. The table contains 50 columns and 5 billion rows and is a heap.
Most queries against the table aggregate values from approximately 100 million rows and return only two columns.
You 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 68
- (Exam Topic 3)
You need to implement an Azure Databricks cluster that automatically connects to Azure Data Lake Storage Gen2 by using Azure Active Directory (Azure AD) integration.
How should you configure the new cluster? 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: High Concurrency
Enable Azure Data Lake Storage credential passthrough for a high-concurrency cluster. Incorrect:
Support for Azure Data Lake Storage credential passthrough on standard clusters is in Public Preview.
Standard clusters with credential passthrough are supported on Databricks Runtime 5.5 and above and are limited to a single user.
Box 2: Azure Data Lake Storage Gen1 Credential Passthrough
You can authenticate automatically to Azure Data Lake Storage Gen1 and Azure Data Lake Storage Gen2 from Azure Databricks clusters using the same Azure Active Directory (Azure AD) identity that you use to log into Azure Databricks. When you enable your cluster for Azure Data Lake Storage credential passthrough, commands that you run on that cluster can read and write data in Azure Data Lake Storage without requiring you to configure service principal credentials for access to storage.
References:
https://docs.azuredatabricks.net/spark/latest/data-sources/azure/adls-passthrough.html

NEW QUESTION 70
- (Exam Topic 3)
You have an Azure Stream Analytics job that is a Stream Analytics project solution in Microsoft Visual Studio. The job accepts data generated by IoT devices in the JSON format.
You need to modify the job to accept data generated by the IoT devices in the Protobuf format.

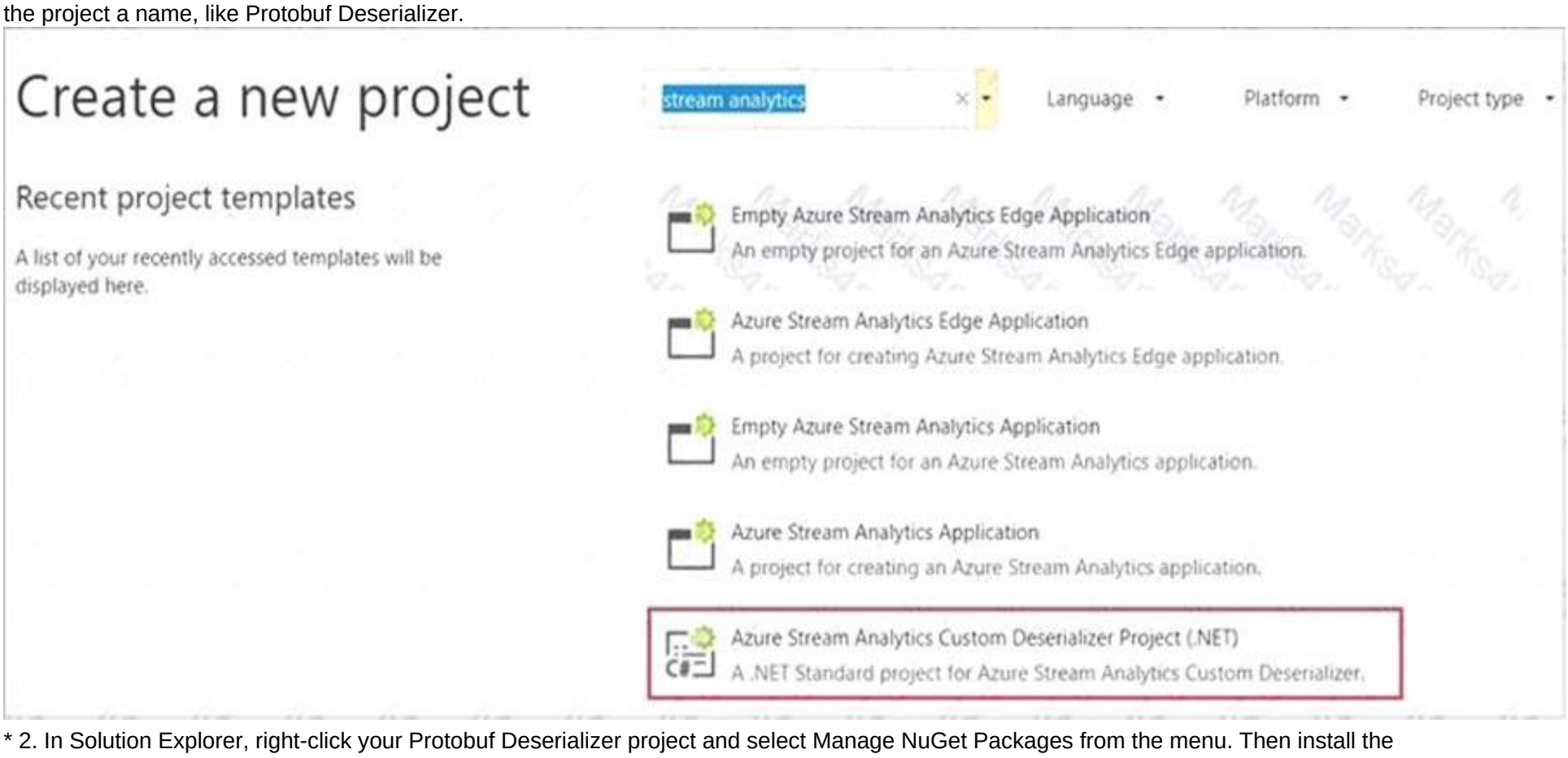
Which three actions should you perform from Visual Studio on sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
Change the Event Serialization Format to Protobuf in the input.json file of the job and reference the DLL.	
Add an Azure Stream Analytics Custom Deserializer Project (.NET) project to the solution.	
Add .NET deserializer code for Protobuf to the custom deserializer project.	
Add .NET deserializer code for Protobuf to the Stream Analytics project.	
Add an Azure Stream Analytics Application project to the solution.	

A. Mastered
B. Not Mastered

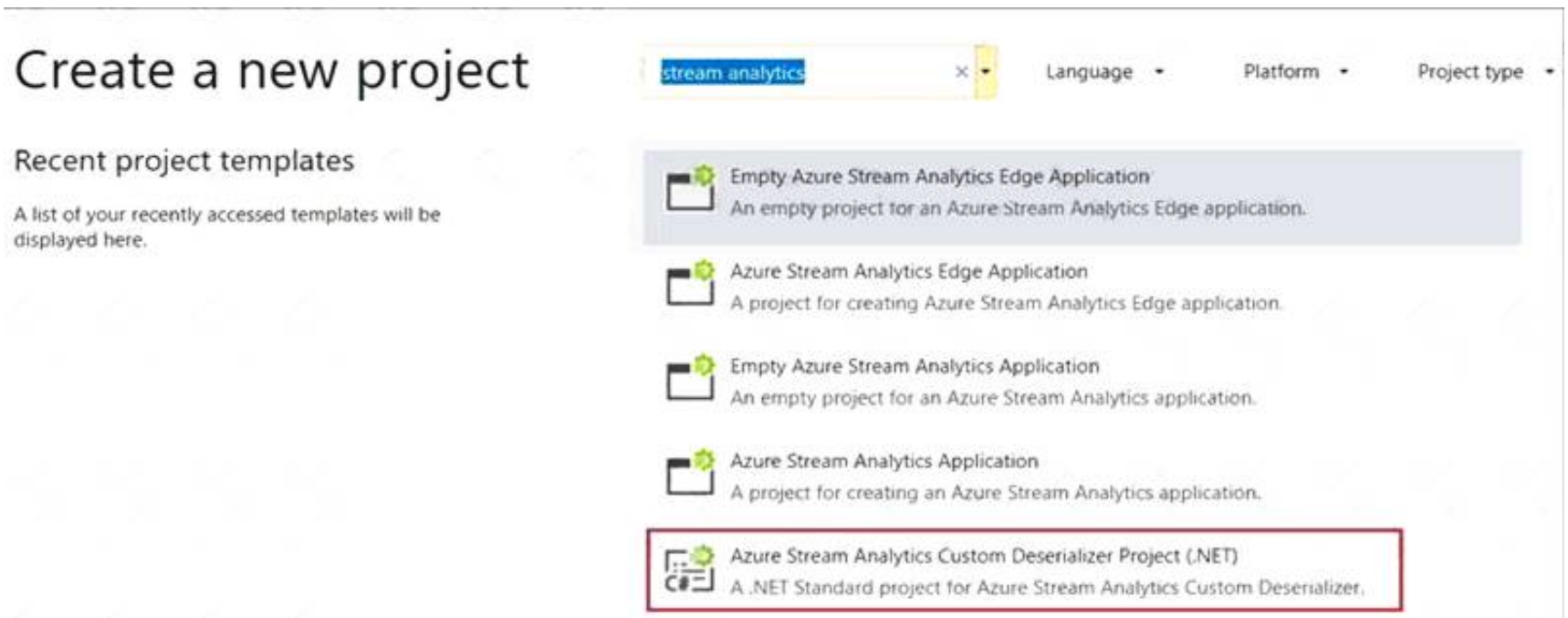
Answer: A

Explanation:
Step 1: Add an Azure Stream Analytics Custom Deserializer Project (.NET) project to the solution. Create a custom deserializer
* 1. Open Visual Studio and select File > New > Project. Search for Stream Analytics and select Azure Stream Analytics Custom Deserializer Project (.NET). Give the project a name, like Protobuf Deserializer.



* 2. In Solution Explorer, right-click your Protobuf Deserializer project and select Manage NuGet Packages from the menu. Then install the Microsoft.Azure.StreamAnalytics and Google.Protobuf NuGet packages.
* 3. Add the MessageBodyProto class and the MessageBodyDeserializer class to your project.
* 4. Build the Protobuf Deserializer project.
Step 2: Add .NET deserializer code for Protobuf to the custom deserializer project
Azure Stream Analytics has built-in support for three data formats: JSON, CSV, and Avro. With custom .NET deserializers, you can read data from other formats such as Protocol Buffer, Bond and other user defined formats for both cloud and edge jobs.
Step 3: Add an Azure Stream Analytics Application project to the solution Add an Azure Stream Analytics project
- In Solution Explorer, right-click the Protobuf Deserializer solution and select Add > New Project. Under Azure Stream Analytics > Stream Analytics, choose Azure Stream Analytics Application. Name it ProtobufCloudDeserializer and select OK.
- Right-click References under the ProtobufCloudDeserializer Azure Stream Analytics project. Under Projects, add Protobuf Deserializer. It should be automatically populated for you.

Reference:
https://docs.microsoft.com/en-us/azure/stream-analytics/custom-deserializer



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
Select the PipelineRuns category.	
Create a Log Analytics workspace that has Data Retention set to 120 days.	
Stream to an Azure event hub.	
Create an Azure Storage account that has a lifecycle policy.	
From the Azure portal, add a diagnostic setting.	
Send the data to a Log Analytics workspace.	
Select the TriggerRuns category.	

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 74
- (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
• EventTypelD: 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 78
- (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

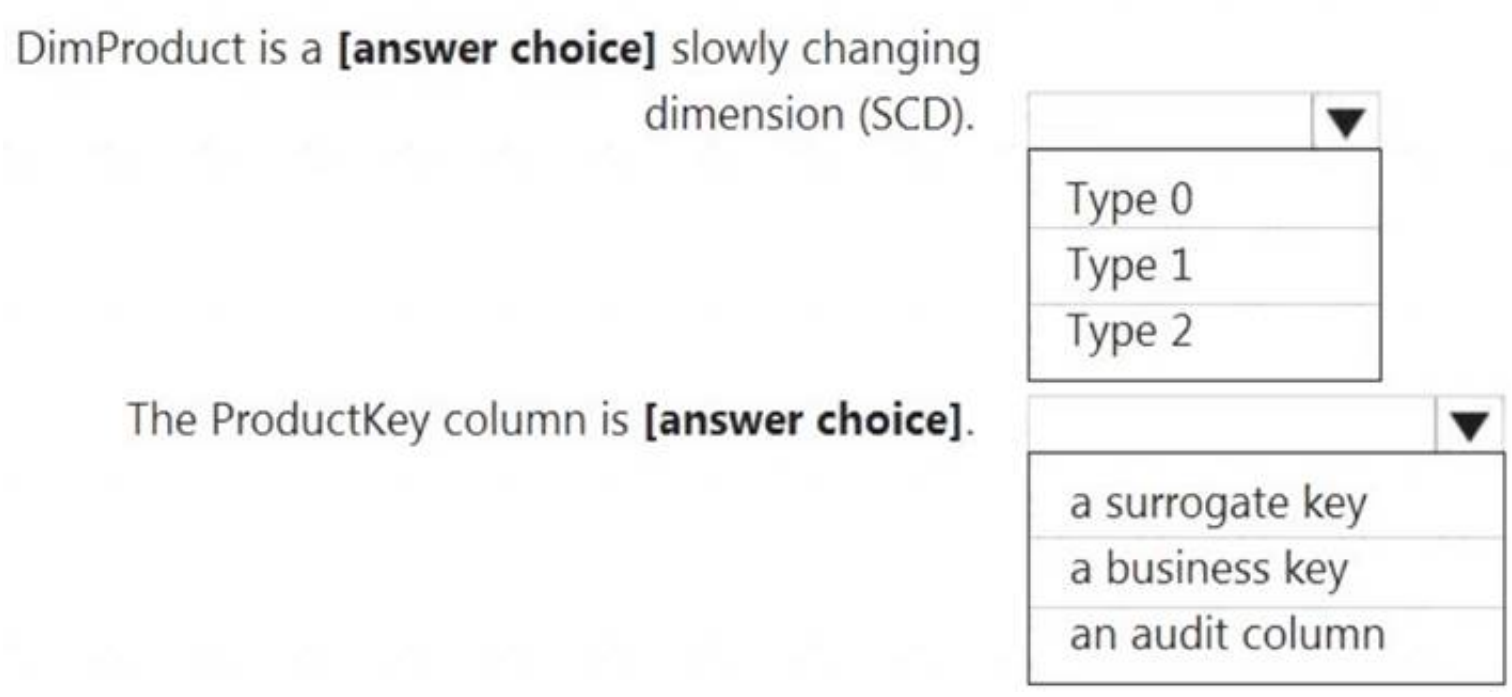
Answer: A

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 81
- (Exam Topic 3)
You are creating dimensions for a data warehouse in an Azure Synapse Analytics dedicated SQL pool. You create a table by using the Transact-SQL statement shown in the following exhibit.

```
CREATE TABLE [DBO].[DimProduct](
        [ProductKey] [int] IDENTITY(1,1) NOT NULL,
        [ProductSourceID] [int] NOT NULL,
        [ProductName] [nvarchar](100) NOT NULL,
        [ProductNumber] [nvarchar](25) NOT NULL,
        [Color] [nvarchar](15) NULL,
        [Size] [nvarchar](5) NULL,
        [Weight] [decimal](8, 2) NULL,
        [ProductCategory] [nvarchar](100) NULL,
        [SellStartDate] [date] NOT NULL,
        [SellEndDate] [date] NULL,
        [RowInsertedDateTime] [datetime] NOT NULL,
        [RowUpdatedDateTime] [datetime] NOT NULL,
        [ETLAuditID] [int] NOT NULL
)
```

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.



A. Mastered
B. Not Mastered

Answer: A

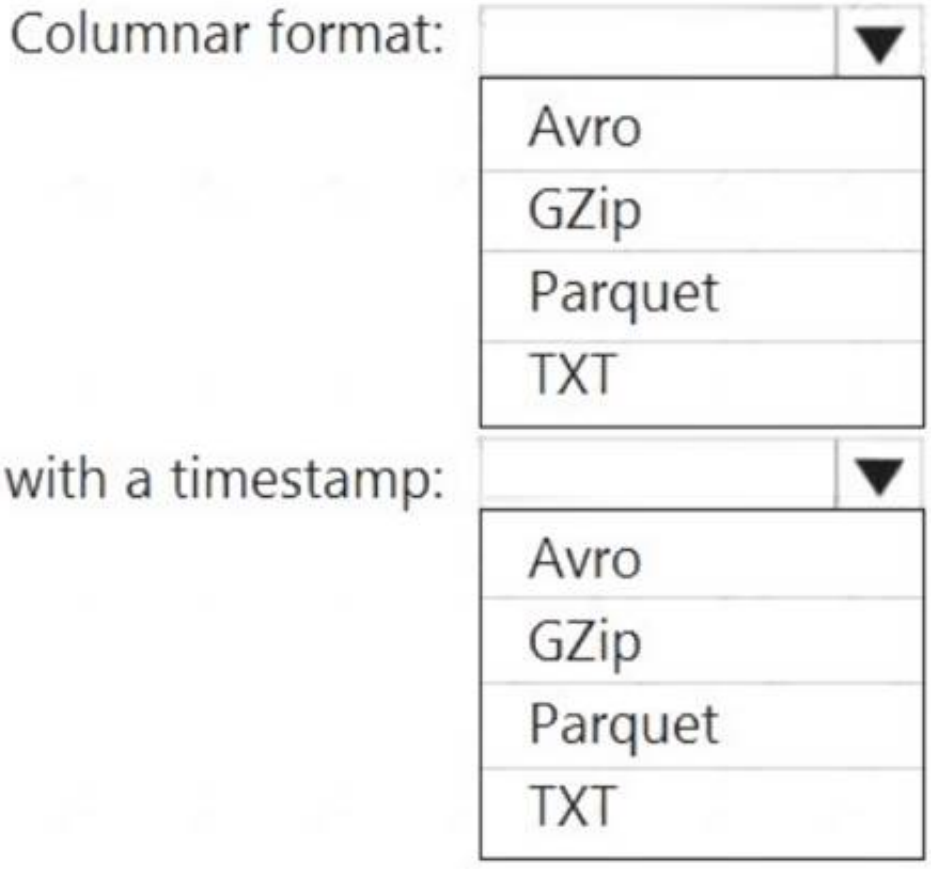
Explanation:
Box 1: Type 2
A Type 2 SCD supports versioning of dimension members. Often the source system doesn't store versions, so the data warehouse load process detects and manages changes in a dimension table. In this case, the dimension table must use a surrogate key to provide a unique reference to a version of the dimension member. It also includes columns that define the date range validity of the version (for example, StartDate and EndDate) and possibly a flag column (for example, IsCurrent) to easily filter by current dimension members.
Reference:
https://docs.microsoft.com/en-us/learn/modules/populate-slowly-changing-dimensions-azure-synapse-analytics

NEW QUESTION 86
- (Exam Topic 3)
You are planning a streaming data solution that will use Azure Databricks. The solution will stream sales transaction data from an online store. The solution has the following specifications:
* The output data will contain items purchased, quantity, line total sales amount, and line total tax amount.
* Line total sales amount and line total tax amount will be aggregated in Databricks.
* Sales transactions will never be updated. Instead, new rows will be added to adjust a sale.
You need to recommend an output mode for the dataset that will be processed by using Structured Streaming. The solution must minimize duplicate data.
What should you recommend?

A. Append
B. Update
C. Complete

Answer: C

NEW QUESTION 91
- (Exam Topic 3)
You need to output files from Azure Data Factory.
Which file format should you use for each type of output? 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: Parquet
Parquet stores data in columns, while Avro stores data in a row-based format. By their very nature,
column-oriented data stores are optimized for read-heavy analytical workloads, while row-based databases are best for write-heavy transactional workloads.
Box 2: Avro
An Avro schema is created using JSON format.
AVRO supports timestamps.
Note: Azure Data Factory supports the following file formats (not GZip or TXT).

- Avro format
- Binary format
- Delimited text format
- Excel format
- JSON format
- ORC format
- Parquet format
- XML format

Reference:
https://www.datanami.com/2018/05/16/big-data-file-formats-demystified

NEW QUESTION 92
- (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 96
- (Exam Topic 3)
You use Azure Data Lake Storage Gen2.
You need to ensure that workloads can use filter predicates and column projections to filter data at the time the data is read from disk.
Which two actions should you perform? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

A. Reregister the Microsoft Data Lake Store resource provider.
B. Reregister the Azure Storage resource provider.

C. Create a storage policy that is scoped to a container.
D. Register the query acceleration feature.
E. Create a storage policy that is scoped to a container prefix filter.

Answer: BD

NEW QUESTION 100
- (Exam Topic 3)
You are designing a sales transactions table in an Azure Synapse Analytics dedicated SQL pool. The table will contains approximately 60 million rows per month and will be partitioned by month. The table will use a clustered column store index and round-robin distribution.
Approximately how many rows will there be for each combination of distribution and partition?

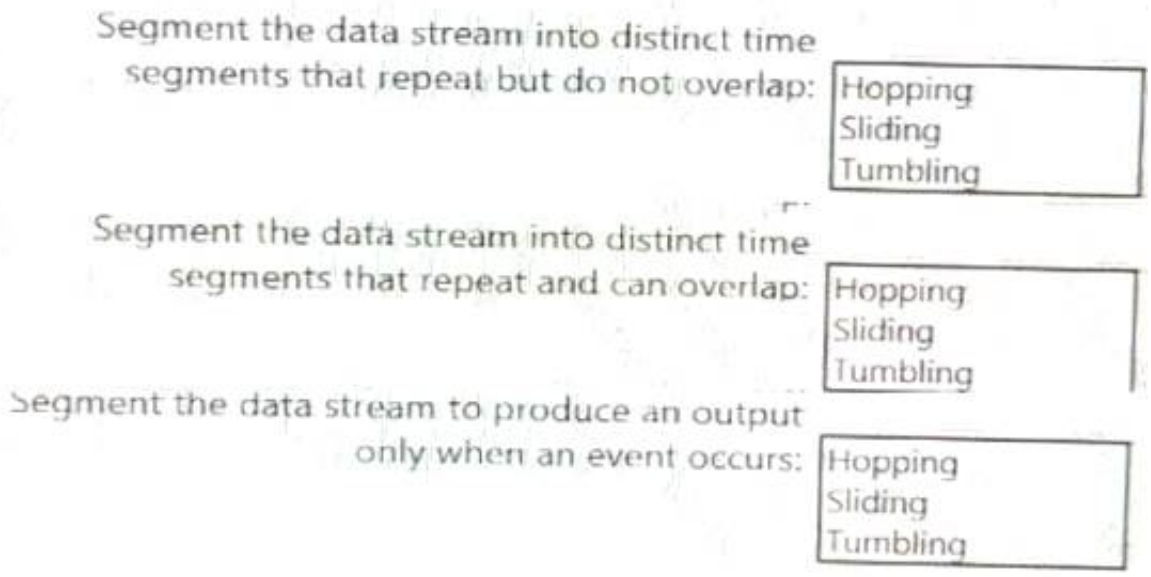
A. 1 million
B. 5 million
C. 20 million
D. 60 million

Answer: D

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

NEW QUESTION 103
- (Exam Topic 3)
You are implementing Azure Stream Analytics windowing functions.
Which windowing function should you use for each requirement? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Answer Area

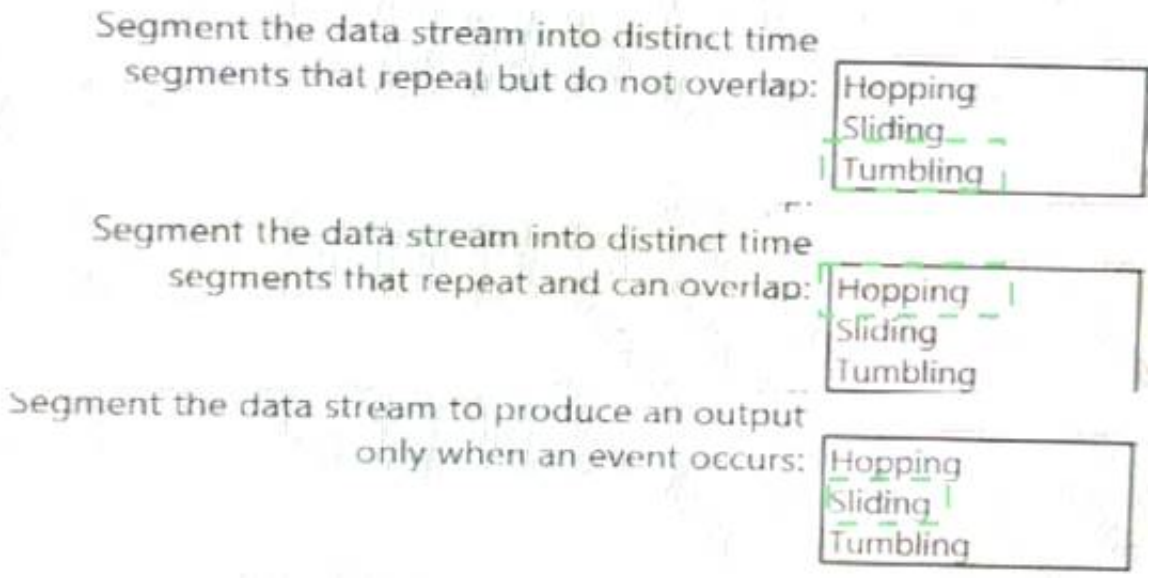


A. Mastered
B. Not Mastered

Answer: A

Explanation:

Answer Area



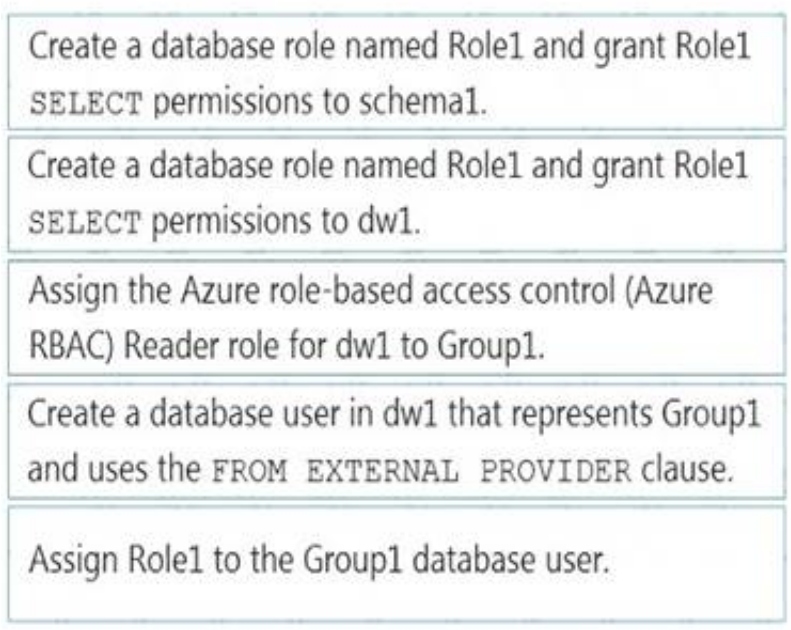
NEW QUESTION 108
- (Exam Topic 3)
You create an Azure Databricks cluster and specify an additional library to install. When you attempt to load the library to a notebook, the library in not found.
You need to identify the cause of the issue. What should you review?

A. notebook logs
B. cluster event logs
C. global init scripts logs
D. workspace logs

Answer: C

Explanation:
Cluster-scoped Init Scripts: Init scripts are shell scripts that run during the startup of each cluster node before the Spark driver or worker JVM starts. Databricks customers use init scripts for various purposes such as installing custom libraries, launching background processes, or applying enterprise security policies.
Logs for Cluster-scoped init scripts are now more consistent with Cluster Log Delivery and can be found in the same root folder as driver and executor logs for the cluster.
Reference:
https://databricks.com/blog/2018/08/30/introducing-cluster-scoped-init-scripts.html

NEW QUESTION 111
- (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.

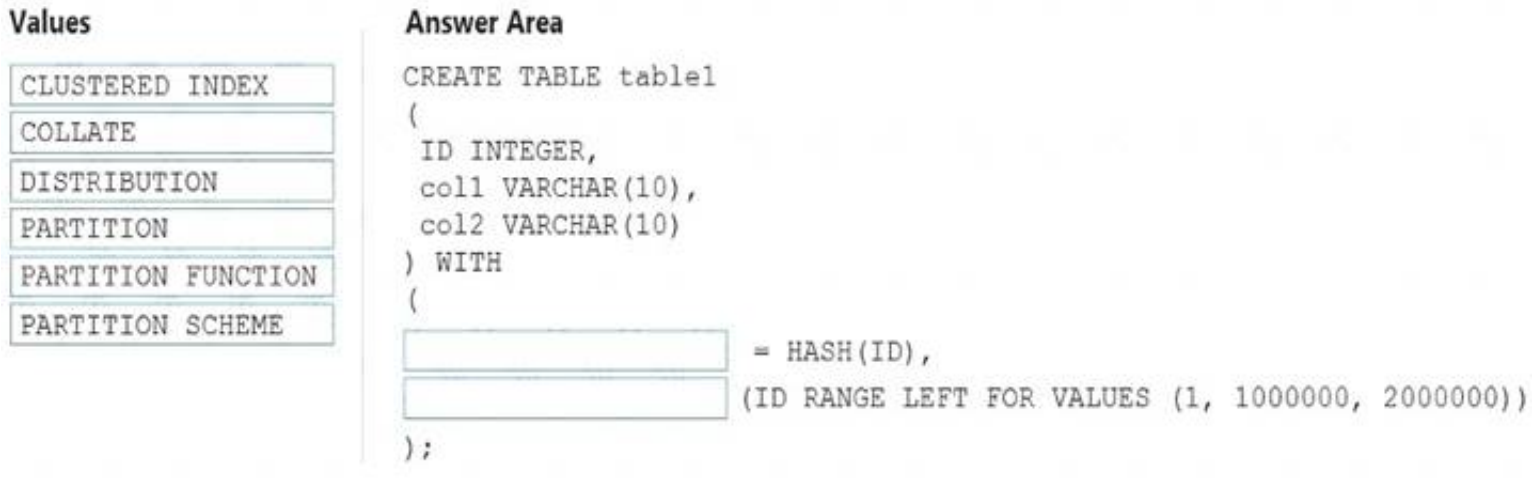


A. Mastered
B. Not Mastered

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 112
- (Exam Topic 3)
You need to create a partitioned table in an Azure Synapse Analytics dedicated SQL pool.
How should you complete the Transact-SQL statement? To answer, drag the appropriate values to the correct targets. Each value 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.



A. Mastered
B. Not Mastered

Answer: A

Explanation:
Box 1: DISTRIBUTION
Table distribution options include DISTRIBUTION = HASH (distribution_column_name), assigns each row to one distribution by hashing the value stored in distribution_column_name. Box 2: PARTITION
Table partition options. Syntax:
PARTITION (partition_column_name RANGE [LEFT | RIGHT] FOR VALUES ([boundary_value [,...n]]
))
Reference:
https://docs.microsoft.com/en-us/sql/t-sql/statements/create-table-azure-sql-data-warehouse?

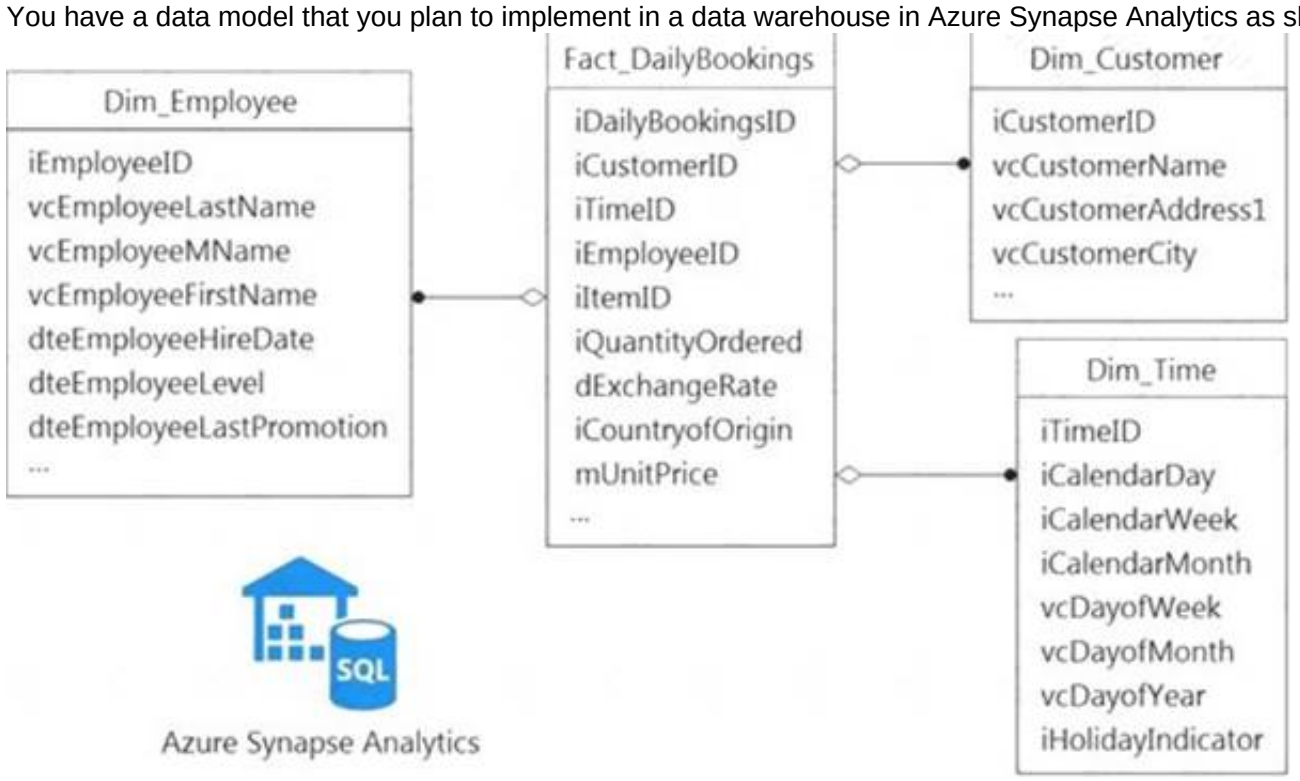
NEW QUESTION 115
- (Exam Topic 3)
You develop data engineering solutions for a company.
A project requires the deployment of data to Azure Data Lake Storage.
You need to implement role-based access control (RBAC) so that project members can manage the Azure Data Lake Storage resources.
Which three actions should you perform? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

A. Assign Azure AD security groups to Azure Data Lake Storage.
B. Configure end-user authentication for the Azure Data Lake Storage account.
C. Configure service-to-service authentication for the Azure Data Lake Storage account.
D. Create security groups in Azure Active Directory (Azure AD) and add project members.
E. Configure access control lists (ACL) for the Azure Data Lake Storage account.

Answer: ADE

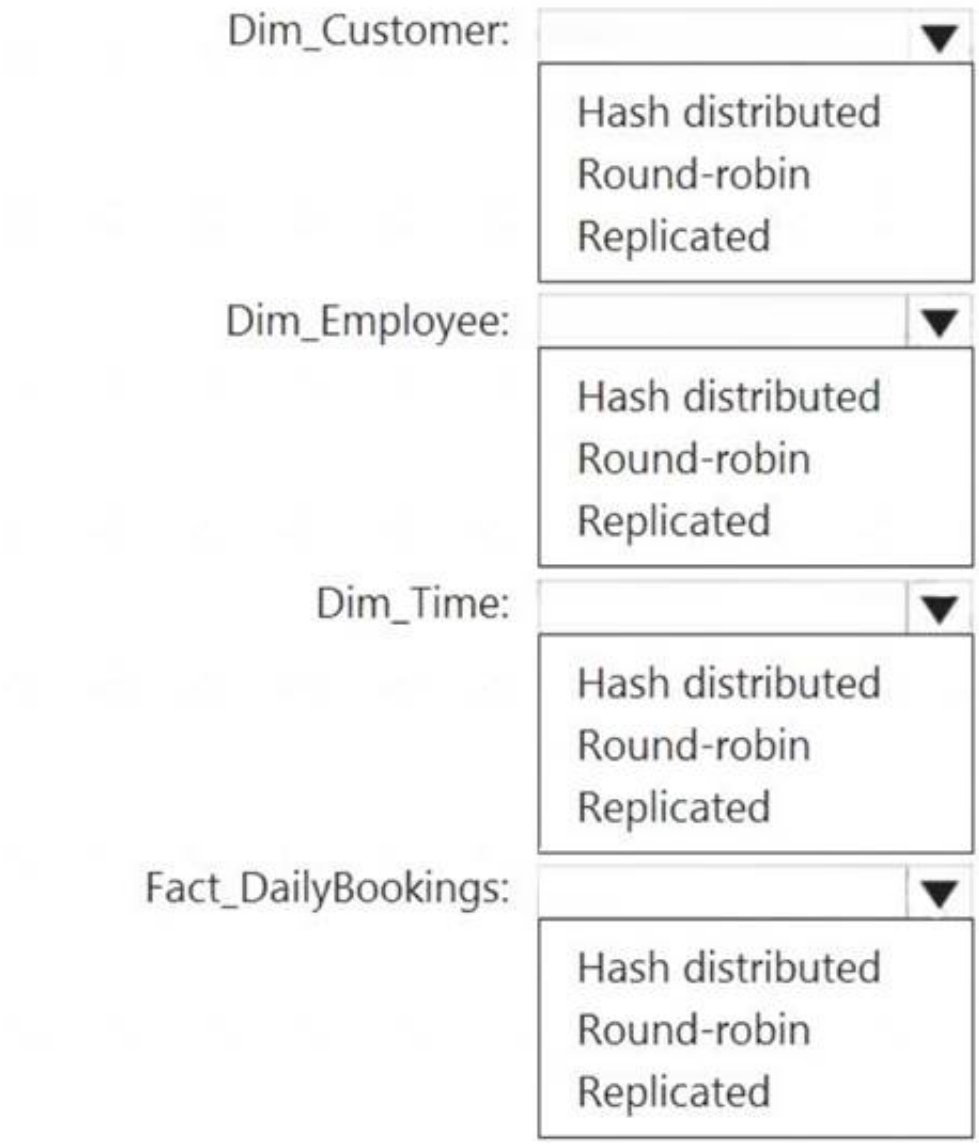
Explanation:
References:
https://docs.microsoft.com/en-us/azure/data-lake-store/data-lake-store-secure-data

NEW QUESTION 119
- (Exam Topic 3)
You have a data model that you plan to implement in a data warehouse in Azure Synapse Analytics as shown in the following exhibit.



All the dimension tables will be less than 2 GB after compression, and the fact table will be approximately 6 TB.
Which type of table should you use for each table? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Answer Area

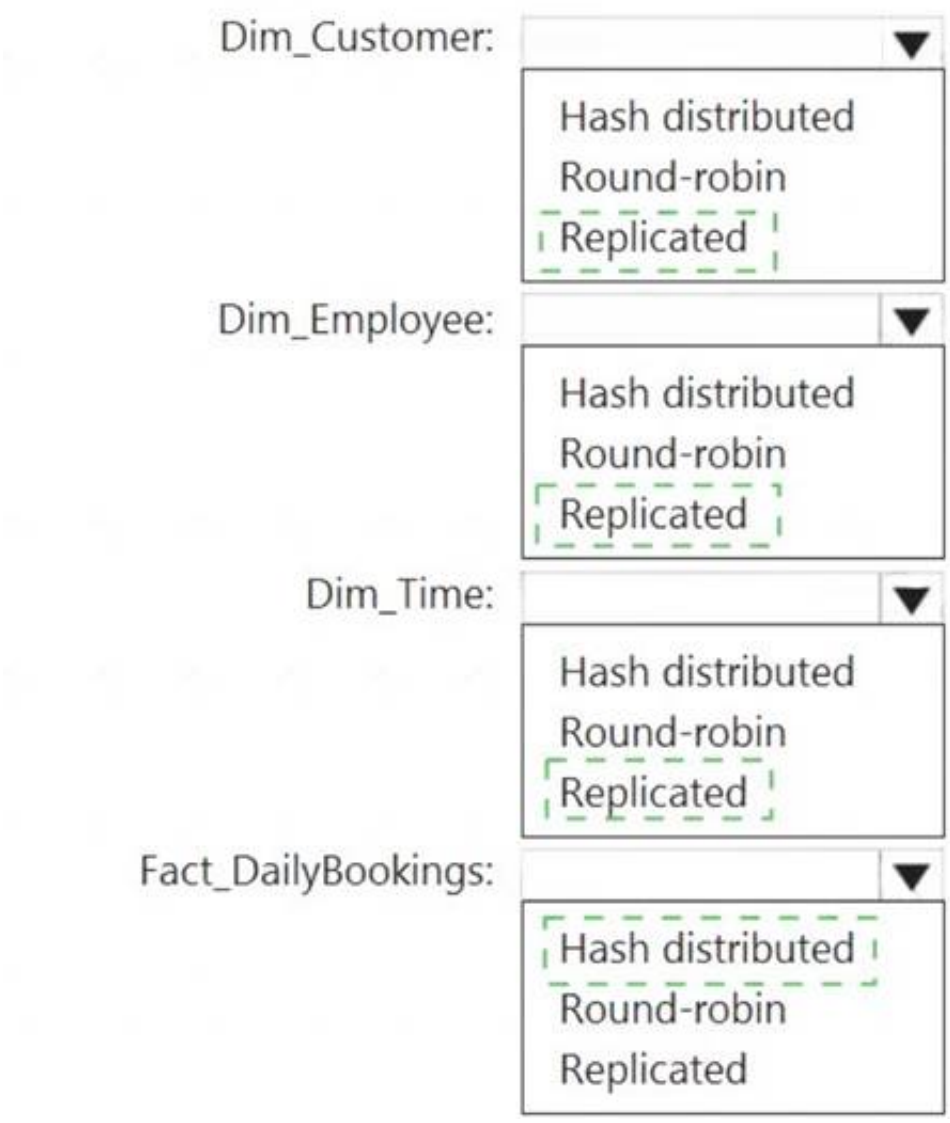


A. Mastered
B. Not Mastered

Answer: A

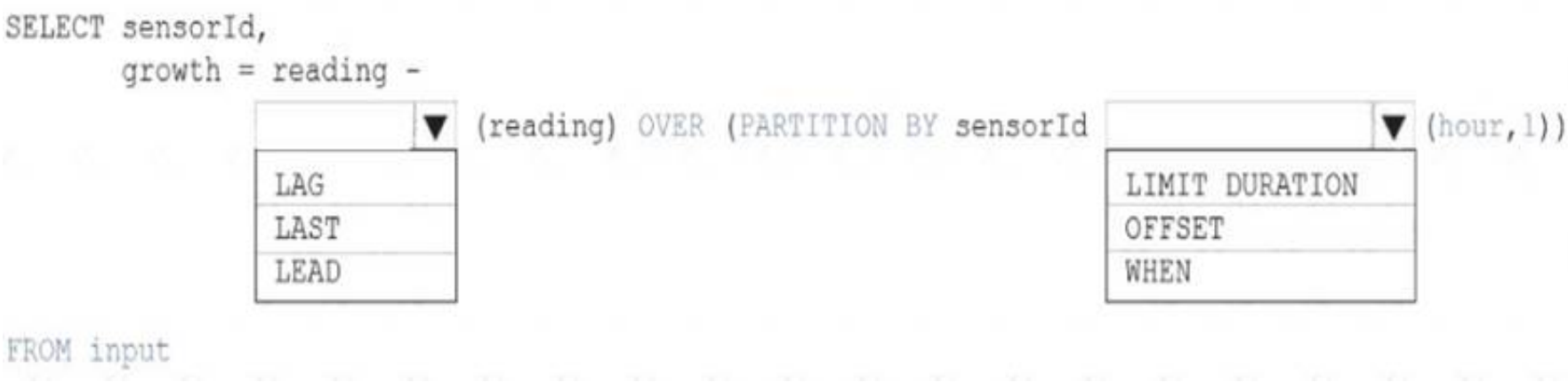
Explanation:

Answer Area



NEW QUESTION 120
- (Exam Topic 3)

You are building an Azure Analytics query 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.
NOTE: Each correct selection is worth one point.



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 sensorId,
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 121
- (Exam Topic 3)
You need to design an Azure Synapse Analytics dedicated SQL pool that meets the following requirements:
- Can return an employee record from a given point in time.
- Maintains the latest employee information.
- Minimizes query complexity.

How should you model the employee data?

A. as a temporal table
B. as a SQL graph table
C. as a degenerate dimension table
D. as a Type 2 slowly changing dimension (SCD) table

Answer: D

Explanation:
A Type 2 SCD supports versioning of dimension members. Often the source system doesn't store versions, so the data warehouse load process detects and manages changes in a dimension table. In this case, the dimension table must use a surrogate key to provide a unique reference to a version of the dimension member. It also includes columns that define the date range validity of the version (for example, StartDate and EndDate) and possibly a flag column (for example, IsCurrent) to easily filter by current dimension members.
Reference:
https://docs.microsoft.com/en-us/learn/modules/populate-slowly-changing-dimensions-azure-synapse-analytics

NEW QUESTION 123
- (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 125
- (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)}/{yyyy}/{mm}/{dd}/{hh}/

NEW QUESTION 126
- (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.
NOTE: Each correct selection is worth one point.

Answer Area

```
Select TimeZone, count(*) AS MessageCount
FROM [ LAST / OVER / SYSTEM.TIMESTAMP() / TIMESTAMP BY ] CreatedAt
MessageStream
GROUP BY
TimeZone,
[ HOPPINGWINDOW / SESSIONWINDOW / SLIDINGWINDOW / TUMBLINGWINDOW ] (second,15)
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Answer Area

```
Select TimeZone, count(*) AS MessageCount
FROM [ LAST / OVER / SYSTEM.TIMESTAMP() / TIMESTAMP BY ] CreatedAt
MessageStream
GROUP BY
TimeZone,
[ HOPPINGWINDOW / SESSIONWINDOW / SLIDINGWINDOW / TUMBLINGWINDOW ] (second,15)
```

NEW QUESTION 128
- (Exam Topic 3)
You have an Azure Synapse workspace named MyWorkspace that contains an Apache Spark database named mytestdb.
You run the following command in an Azure Synapse Analytics Spark pool in MyWorkspace. CREATE TABLE mytestdb.myParquetTable(EmployeeID int, EmployeeName string, EmployeeStartDate date) USING Parquet
You then use Spark to insert a row into mytestdb.myParquetTable. The row contains the following data.

EmployeeName	EmployeeID	EmployeeStartDate
Alice	24	2020-01-25

One minute later, you execute the following query from a serverless SQL pool in MyWorkspace. SELECT EmployeeID FROM mytestdb.dbo.myParquetTable WHERE name = 'Alice';
What will be returned by the query?

A. 24
B. an error
C. a null value

Answer: A

Explanation:
Once a database has been created by a Spark job, you can create tables in it with Spark that use Parquet as the storage format. Table names will be converted to lower case and need to be queried using the lower case name. These tables will immediately become available for querying by any of the Azure Synapse workspace Spark pools. They can also be used from any of the Spark jobs subject to permissions.
Note: For external tables, since they are synchronized to serverless SQL pool asynchronously, there will be a delay until they appear.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/metadata/table

NEW QUESTION 131
- (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 134
- (Exam Topic 3)
You are designing a dimension table for a data warehouse. The table will track the value of the dimension attributes over time and preserve the history of the data by adding new rows as the data changes.
Which type of slowly changing dimension (SCD) should use?

A. Type 0
B. Type 1
C. Type 2
D. Type 3

Answer: C

Explanation:
Type 2 - Creating a new additional record. In this methodology all history of dimension changes is kept in the database. You capture attribute change by adding a new row with a new surrogate key to the dimension table. Both the prior and new rows contain as attributes the natural key(or other durable identifier). Also 'effective date' and 'current indicator' columns are used in this method. There could be only one record with current indicator set to 'Y'. For 'effective date' columns, i.e. start_date and end_date, the end_date for current record usually is set to value 9999-12-31. Introducing changes to the dimensional model in type 2 could be very expensive database operation so it is not recommended to use it in dimensions where a new attribute could be added in the future.
https://www.datawarehouse4u.info/SCD-Slowly-Changing-Dimensions.html

NEW QUESTION 138
- (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 143
- (Exam Topic 3)
You have an Azure Synapse Analytics 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 148
- (Exam Topic 3)
You have a table in an Azure Synapse Analytics dedicated SQL pool. The table was created by using the following Transact-SQL statement.

```
CREATE TABLE [dbo].[DimEmployee](
   [EmployeeKey] [int] IDENTITY(1,1) NOT NULL,
   [EmployeeID] [int] NOT NULL,
   [FirstName] [varchar](100) NOT NULL,
   [LastName] [varchar](100) NOT NULL,
   [JobTitle] [varchar](100) NULL,
   [LastHireDate] [date] NULL,
   [StreetAddress] [varchar](500) NOT NULL,
   [City] [varchar](200) NOT NULL,
   [StateProvince] [varchar](50) NOT NULL,
   [Portalcode] [varchar](10) NOT NULL
   )
```

You need to alter the table to meet the following requirements:
- Ensure that users can identify the current manager of employees.
- Support creating an employee reporting hierarchy for your entire company.
- Provide fast lookup of the managers' attributes such as name and job title.

Which column should you add to the table?

A. [ManagerEmployeeID] [int] NULL
B. [ManagerEmployeeID] [smallint] NULL
C. [ManagerEmployeeKey] [int] NULL
D. [ManagerName] [varchar](200) NULL

Answer: A

Explanation:
Use the same definition as the EmployeeID column. Reference:
https://docs.microsoft.com/en-us/analysis-services/tabular-models/hierarchies-ssas-tabular

NEW QUESTION 152
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