Exam Questions DP-203

Data Engineering on Microsoft Azure

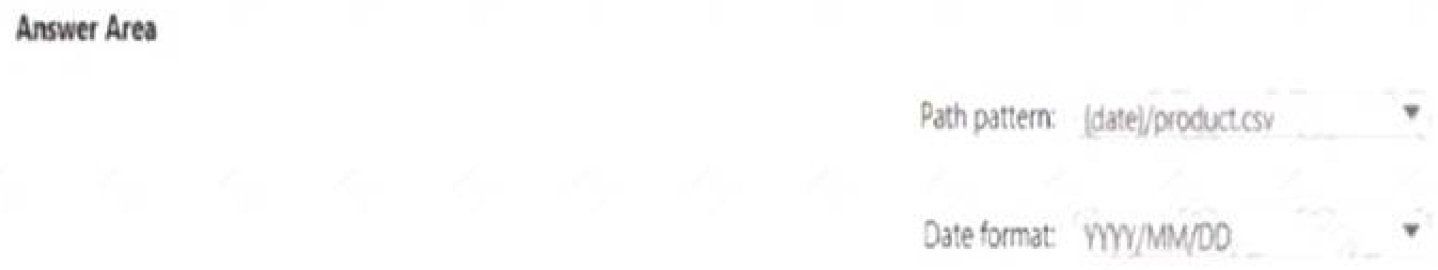
https://www.2passeasy.com/dumps/DP-203/

NEW QUESTION 1
- (Exam Topic 3)
The storage account container view is shown in the Refdata exhibit. (Click the Refdata tab.) You need to configure the Stream Analytics job to pick up the new reference data. What should you configure? 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:
Answer as below



Answer Area

Path pattern: {date}/product.csv

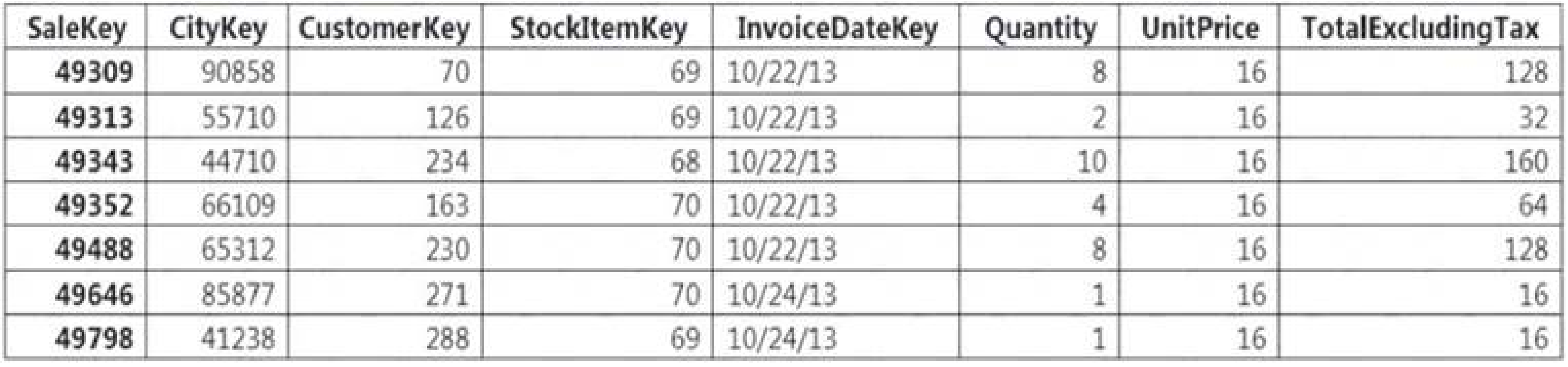
Date format: YYYY/MM/DD

NEW QUESTION 2
- (Exam Topic 3)
You have two Azure Blob Storage accounts named account1 and account2?
You plan to create an Azure Data Factory pipeline that will use scheduled intervals to replicate newly created or modified blobs from account1 to account?
You need to recommend a solution to implement the pipeline. The solution must meet the following requirements:
• Ensure that the pipeline only copies blobs that were created of modified since the most recent replication event.
• Minimize the effort to create the pipeline. What should you recommend?

A. Create a pipeline that contains a flowlet.
B. Create a pipeline that contains a Data Flow activity.
C. Run the Copy Data tool and select Metadata-driven copy task.
D. Run the Copy Data tool and select Built-in copy task.

Answer: A

NEW QUESTION 3
- (Exam Topic 3)
You implement an enterprise data warehouse in Azure Synapse Analytics. You have a large fact table that is 10 terabytes (TB) in size.
Incoming queries use the primary key SaleKey column to retrieve data as displayed in the following table:



SaleKey	CityKey	CustomerKey	StockItemKey	InvoiceDateKey	Quantity	UnitPrice	TotalExcludingTax
49309	90858	70	69	10/22/13	8	16	128
49313	55710	126	69	10/22/13	2	16	32
49343	44710	234	68	10/22/13	10	16	160
49352	66109	163	70	10/22/13	4	16	64
49488	65312	230	70	10/22/13	8	16	128
49646	85877	271	70	10/24/13	1	16	16
49798	41238	288	69	10/24/13	1	16	16

You need to distribute the large fact table across multiple nodes to optimize performance of the table. Which technology should you use?

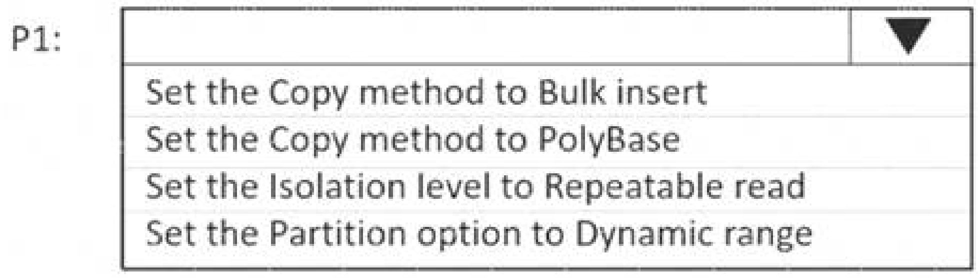
A. hash distributed table with clustered index
B. hash distributed table with clustered Columnstore index
C. round robin distributed table with clustered index
D. round robin distributed table with clustered Columnstore index
E. heap table with distribution replicate

Answer: B

Explanation:
Hash-distributed tables improve query performance on large fact tables.
Columnstore indexes can achieve up to 100x better performance on analytics and data warehousing workloads and up to 10x better data compression than traditional rowstore indexes.
Reference:
https://docs.microsoft.com/en-us/azure/sql-data-warehouse/sql-data-warehouse-tables-distribute https://docs.microsoft.com/en-us/sql/relational-databases/indexes/columnstore-indexes-query-performance

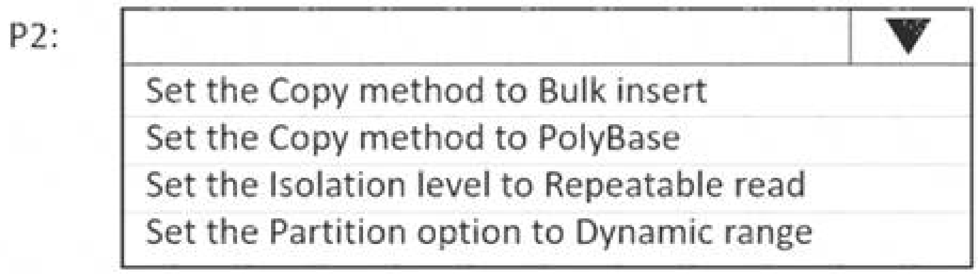
NEW QUESTION 4
- (Exam Topic 3)
HOTSPOT
You have an Azure Data Factory instance named ADF1 and two Azure Synapse Analytics workspaces named WS1 and WS2.
ADF1 contains the following pipelines:
➢ P1: Uses a copy activity to copy data from a nonpartitioned table in a dedicated SQL pool of WS1 to an Azure Data Lake Storage Gen2 account

P2: Uses a copy activity to copy data from text-delimited files in an Azure Data Lake Storage Gen2 account to a nonpartitioned table in a dedicated SQL pool of WS2
You need to configure P1 and P2 to maximize parallelism and performance.
Which dataset settings should you configure for the copy activity if each pipeline? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.



P1:

- Set the Copy method to Bulk insert
- Set the Copy method to PolyBase
- Set the Isolation level to Repeatable read
- Set the Partition option to Dynamic range



P2:

- Set the Copy method to Bulk insert
- Set the Copy method to PolyBase
- Set the Isolation level to Repeatable read
- Set the Partition option to Dynamic range

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Box 1: Set the Copy method to PolyBase
While SQL pool supports many loading methods including non-Polybase options such as BCP and SQL BulkCopy API, the fastest and most scalable way to load data is through PolyBase. PolyBase is a technology that accesses external data stored in Azure Blob storage or Azure Data Lake Store via the T-SQL language.
Box 2: Set the Copy method to Bulk insert
Polybase not possible for text files. Have to use Bulk insert. Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/load-data-overview

NEW QUESTION 5
- (Exam Topic 3)
You have an Azure Synapse Analytics workspace named WS1 that contains an Apache Spark pool named
Pool1.
You plan to create a database named D61 in Pool1.
You need to ensure that when tables are created in DB1, the tables are available automatically as external tables to the built-in serverless SQL pod.
Which format should you use for the tables in DB1?

A. Parquet
B. CSV
C. ORC
D. JSON

Answer: A

Explanation:
Serverless SQL pool can automatically synchronize metadata from Apache Spark. A serverless SQL pool database will be created for each database existing in serverless Apache Spark pools.
For each Spark external table based on Parquet or CSV and located in Azure Storage, an external table is created in a serverless SQL pool database.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/develop-storage-files-spark-tables

NEW QUESTION 6
- (Exam Topic 3)
A company plans to use Apache Spark analytics to analyze intrusion detection data.
You need to recommend a solution to analyze network and system activity data for malicious activities and policy violations. The solution must minimize administrative efforts.
What should you recommend?

A. Azure Data Lake Storage
B. Azure Databricks
C. Azure HDInsight
D. Azure Data Factory

Answer: B

Explanation:
Three common analytics use cases with Microsoft Azure Databricks
Recommendation engines, churn analysis, and intrusion detection are common scenarios that many organizations are solving across multiple industries. They require machine learning, streaming analytics, and utilize massive amounts of data processing that can be difficult to scale without the right tools.
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Note: Recommendation engines, churn analysis, and intrusion detection are common scenarios that many organizations are solving across multiple industries. They require machine learning, streaming analytics, and utilize massive amounts of data processing that can be difficult to scale without the right tools.
Reference:
https://azure.microsoft.com/es-es/blog/three-critical-analytics-use-cases-with-microsoft-azure-databricks/

NEW QUESTION 7
- (Exam Topic 3)
You manage an enterprise data warehouse in Azure Synapse Analytics.
Users report slow performance when they run commonly used queries. Users do not report performance changes for infrequently used queries.
You need to monitor resource utilization to determine the source of the performance issues. Which metric should you monitor?

A. Data IO percentage
B. Local tempdb percentage
C. Cache used percentage
D. DWU percentage

Answer: C

Explanation:
Monitor and troubleshoot slow query performance by determining whether your workload is optimally leveraging the adaptive cache for dedicated SQL pools.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-how-to-monit

NEW QUESTION 8
- (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: In an Azure Synapse Analytics pipeline, you use a Get Metadata activity that retrieves the DateTime of the files.
Does this meet the goal?

A. Yes
B. No

Answer: B

Explanation:
Instead use a serverless SQL pool to create an external table with the extra column. Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/create-use-external-tables

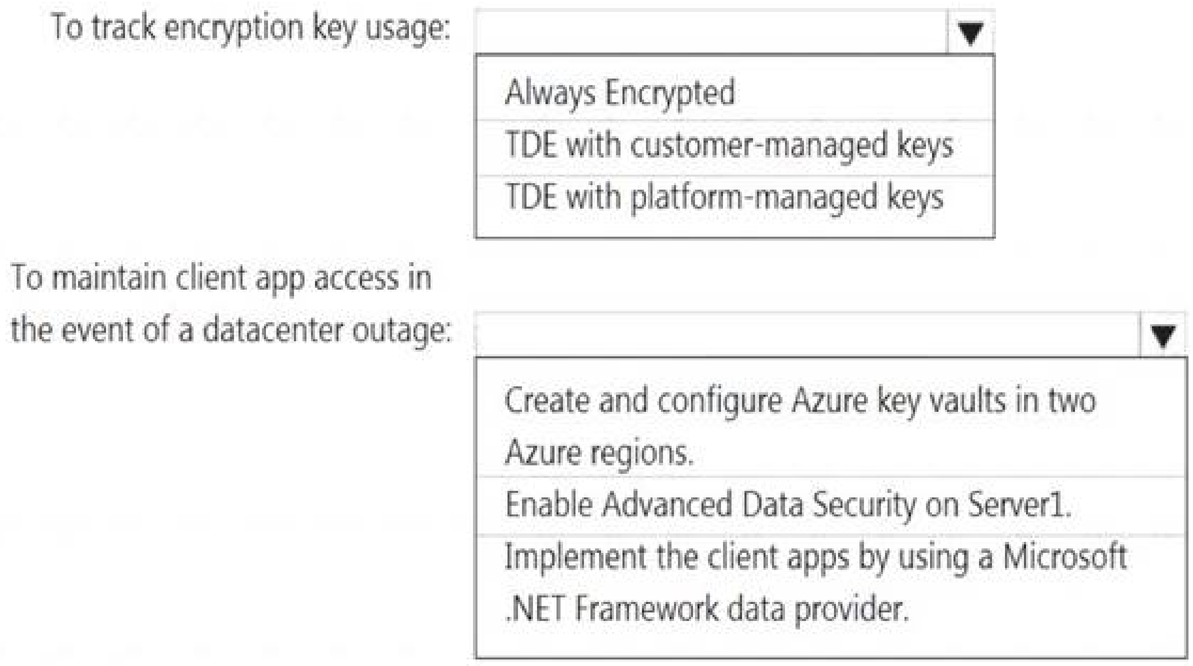
NEW QUESTION 9
- (Exam Topic 3)
You are designing an Azure Databricks cluster that runs user-defined local processes. You need to recommend a cluster configuration that meets the following requirements:
• Minimize query latency.
• Maximize the number of users that can run queues on the cluster at the same time « Reduce overall costs without compromising other requirements
Which cluster type should you recommend?

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

Answer: C

Explanation:
A High Concurrency cluster is a managed cloud resource. The key benefits of High Concurrency clusters are that they provide fine-grained sharing for maximum resource utilization and minimum query latencies.
Databricks chooses the appropriate number of workers required to run your job. This is referred to as autoscaling. Autoscaling makes it easier to achieve high cluster utilization, because you don’t need to provision the cluster to match a workload.
Reference:
https://docs.microsoft.com/en-us/azure/databricks/clusters/configure

NEW QUESTION 10
- (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.



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: ▼

- Create and configure Azure key vaults in two Azure regions.
- Enable Advanced Data Security on Server1.
- Implement the client apps by using a Microsoft .NET Framework data provider.

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

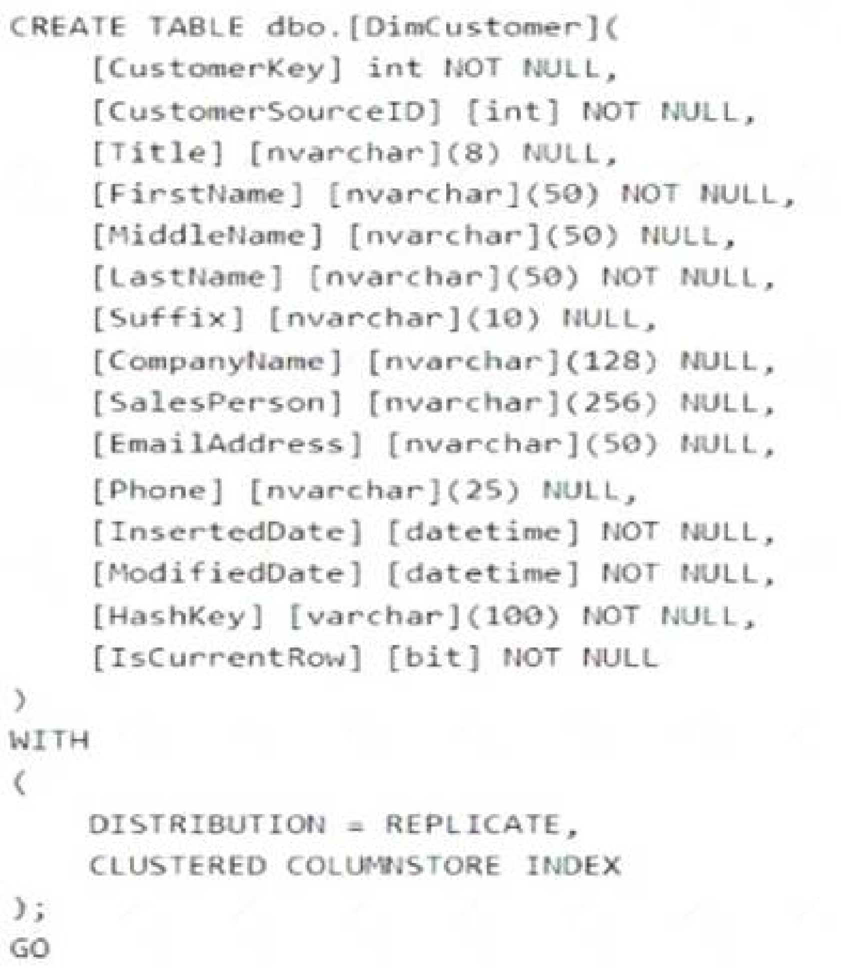
NEW QUESTION 10
- (Exam Topic 3)
You have an Azure data solution that contains an enterprise data warehouse in Azure Synapse Analytics named DW1.
Several users execute ad hoc queries to DW1 concurrently. You regularly perform automated data loads to DW1.
You need to ensure that the automated data loads have enough memory available to complete quickly and successfully when the adhoc queries run. What should you do?

A. Hash distribute the large fact tables in DW1 before performing the automated data loads.
B. Assign a smaller resource class to the automated data load queries.
C. Assign a larger resource class to the automated data load queries.
D. Create sampled statistics for every column in each table of DW1.

Answer: C

Explanation:
The performance capacity of a query is determined by the user's resource class. Resource classes are pre-determined resource limits in Synapse SQL pool that govern compute resources and concurrency for query execution.
Resource classes can help you configure resources for your queries by setting limits on the number of queries that run concurrently and on the compute-resources assigned to each query. There's a trade-off between memory and concurrency.
Smaller resource classes reduce the maximum memory per query, but increase concurrency. Larger resource classes increase the maximum memory per query, but reduce concurrency. Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/resource-classes-for-workload-ma

NEW QUESTION 13
- (Exam Topic 3)
You have an Azure Synapse Analytics dedicated SQL pool named pool1.
You plan to implement a star schema in pool1 and create a new table named DimCustomer by using the following code.



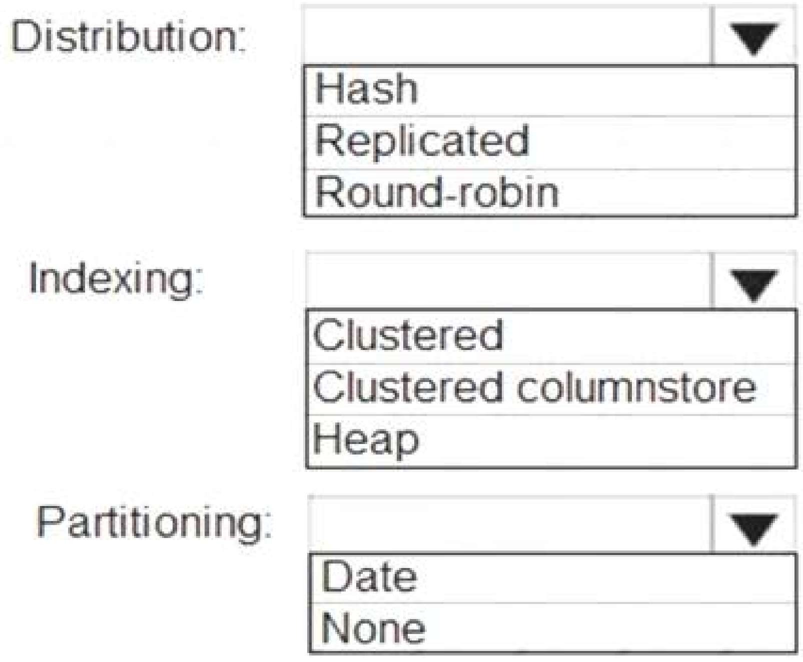
```
CREATE TABLE dbo.[DimCustomer](
    [CustomerKey] int NOT NULL,
    [CustomerSourceID] [int] NOT NULL,
    [Title] [nvarchar](8) NULL,
    [FirstName] [nvarchar](50) NOT NULL,
    [MiddleName] [nvarchar](50) NULL,
    [LastName] [nvarchar](50) NOT NULL,
    [Suffix] [nvarchar](10) NULL,
    [CompanyName] [nvarchar](128) NULL,
    [SalesPerson] [nvarchar](256) NULL,
    [EmailAddress] [nvarchar](50) NULL,
    [Phone] [nvarchar](25) NULL,
    [InsertedDate] [datetime] NOT NULL,
    [ModifiedDate] [datetime] NOT NULL,
    [HashKey] [varchar](100) NOT NULL,
    [IsCurrentRow] [bit] NOT NULL
)
WITH
(
    DISTRIBUTION = REPLICATE,
    CLUSTERED COLUMNSTORE INDEX
);
GO
```

You need to ensure that DimCustomer has the necessary columns to support a Type 2 slowly changing dimension (SCD). Which two columns should you add? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

A. [HistoricalSalesPerson] [nvarchar] (256) NOT NULL
B. [EffectiveEndDate] [datetime] NOT NULL
C. [PreviousModifiedDate] [datetime] NOT NULL
D. [RowID] [bigint] NOT NULL
E. [EffectiveStartDate] [datetime] NOT NULL

Answer: AB

NEW QUESTION 16
- (Exam Topic 3)
You have a SQL pool in Azure Synapse.
You plan to load data from Azure Blob storage to a staging table. Approximately 1 million rows of data will be loaded daily. The table will be truncated before each daily load.
You need to create the staging table. The solution must minimize how long it takes to load the data to the staging table.
How should you configure the table? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.



Distribution:
- Hash
- Replicated
- Round-robin

Indexing:
- Clustered
- Clustered columnstore
- Heap

Partitioning:
- Date
- None

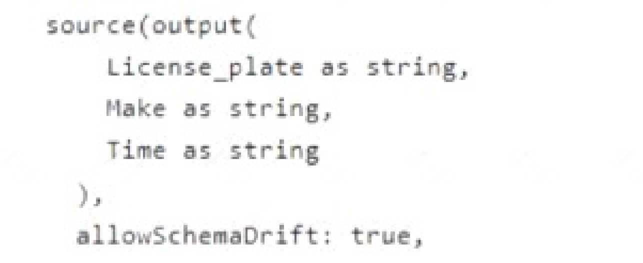
A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, application, table Description automatically generated
Box 1: Hash
Hash-distributed tables improve query performance on large fact tables. They can have very large numbers of rows and still achieve high performance.
Box 2: Clustered columnstore
When creating partitions on clustered columnstore tables, it is important to consider how many rows belong to each partition. For optimal compression and performance of clustered columnstore tables, a minimum of 1 million rows per distribution and partition is needed.
Box 3: Date

Table partitions enable you to divide your data into smaller groups of data. In most cases, table partitions are created on a date column.
Partition switching can be used to quickly remove or replace a section of a table. Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-tables-partitio https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-tables-distribu

NEW QUESTION 21
- (Exam Topic 3)
You have an Azure Data Factory pipeline that contains a data flow. The data flow contains the following expression.

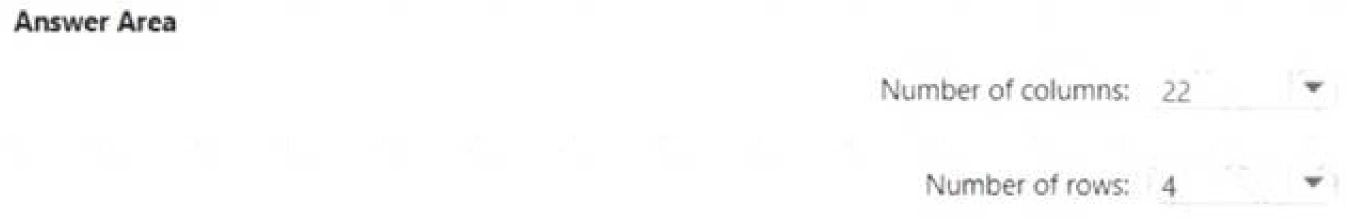


```
source(output(
    License_plate as string,
    Make as string,
    Time as string
  ),
  allowSchemaDrift: true,
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:
See below answer.



Answer Area

Number of columns: 22

Number of rows: 4

NEW QUESTION 24
- (Exam Topic 3)
You have an Azure Stream Analytics query. The query returns a result set that contains 10,000 distinct values for a column named clusterID.
You monitor the Stream Analytics job and discover high latency. You need to reduce the latency.
Which two actions should you perform? Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point.

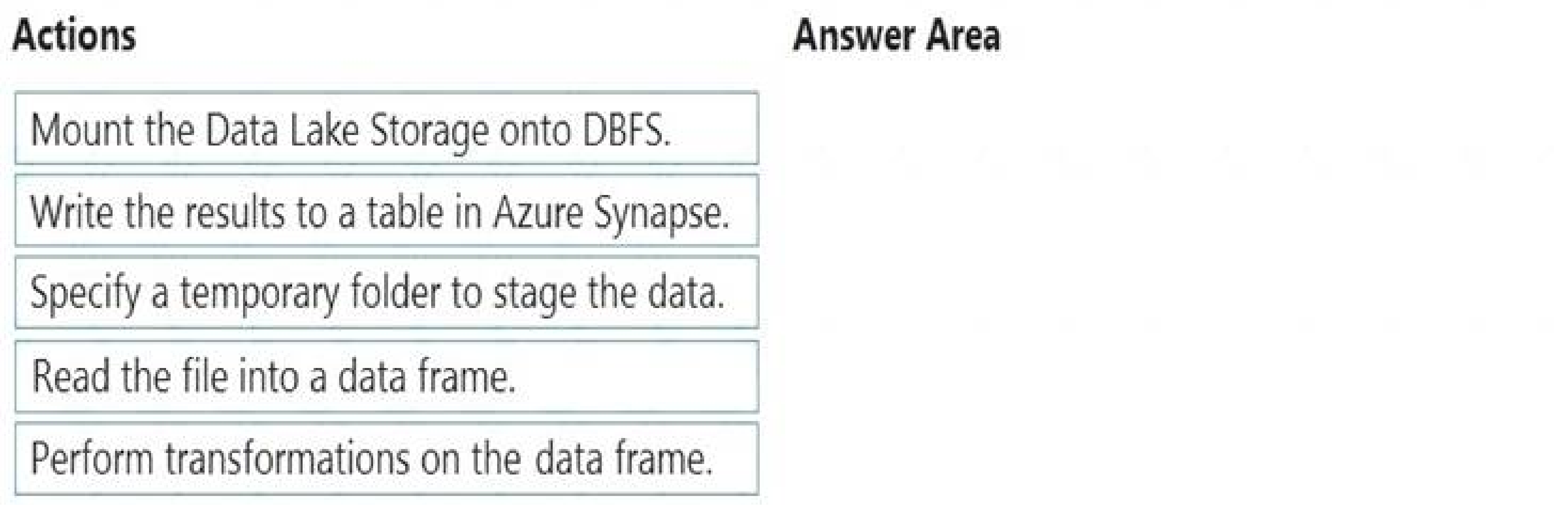
A. Add a pass-through query.
B. Add a temporal analytic function.
C. Scale out the query by using PARTITION BY.
D. Convert the query to a reference query.
E. Increase the number of streaming units.

Answer: CE

Explanation:
C: Scaling a Stream Analytics job takes advantage of partitions in the input or output. Partitioning lets you divide data into subsets based on a partition key. A process that consumes the data (such as a Streaming Analytics job) can consume and write different partitions in parallel, which increases throughput.
E: Streaming Units (SUs) represents the computing resources that are allocated to execute a Stream Analytics job. The higher the number of SUs, the more CPU and memory resources are allocated for your job. This capacity lets you focus on the query logic and abstracts the need to manage the hardware to run your Stream Analytics job in a timely manner.
References:
https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-parallelization https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-streaming-unit-consumption

NEW QUESTION 29
- (Exam Topic 3)
You have an Azure Data Lake Storage Gen2 account that contains a JSON file for customers. The file contains two attributes named FirstName and LastName.
You need to copy the data from the JSON file to an Azure Synapse Analytics table by using Azure Databricks. A new column must be created that concatenates the FirstName and LastName values.
You create the following components:
- A destination table in Azure Synapse
- An Azure Blob storage container
- A service principal

In which order should you perform the actions? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Actions

Mount the Data Lake Storage onto DBFS.

Write the results to a table in Azure Synapse.

Specify a temporary folder to stage the data.

Read the file into a data frame.

Perform transformations on the data frame.

Answer Area

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Table Description automatically generated
Step 1: Mount the Data Lake Storage onto DBFS
Begin with creating a file system in the Azure Data Lake Storage Gen2 account. Step 2: Read the file into a data frame.
You can load the json files as a data frame in Azure Databricks. Step 3: Perform transformations on the data frame.
Step 4: Specify a temporary folder to stage the data
Specify a temporary folder to use while moving data between Azure Databricks and Azure Synapse. Step 5: Write the results to a table in Azure Synapse.
You upload the transformed data frame into Azure Synapse. You use the Azure Synapse connector for Azure Databricks to directly upload a dataframe as a table in a Azure Synapse.
Reference:
https://docs.microsoft.com/en-us/azure/azure-databricks/databricks-extract-load-sql-data-warehouse

NEW QUESTION 30
- (Exam Topic 3)
You have an Azure Synapse Analytics dedicated SQL pool that contains a table named Table1. Table1 contains the following:

- One billion rows
- A clustered columnstore index
- A hash-distributed column named Product Key
- A column named Sales Date that is of the date data type and cannot be null Thirty million rows will be added to Table1 each month.

You need to partition Table1 based on the Sales Date column. The solution must optimize query performance and data loading.
How often should you create a partition?

A. once per month
B. once per year
C. once per day
D. once per week

Answer: B

Explanation:
Need a minimum 1 million rows per distribution. Each table is 60 distributions. 30 millions rows is added each month. Need 2 months to get a minimum of 1 million rows per distribution in a new partition.
Note: When creating partitions on clustered columnstore tables, it is important to consider how many rows belong to each partition. For optimal compression and performance of clustered columnstore tables, a minimum of 1 million rows per distribution and partition is needed. Before partitions are created, dedicated SQL pool already divides each table into 60 distributions.
Any partitioning added to a table is in addition to the distributions created behind the scenes. Using this example, if the sales fact table contained 36 monthly partitions, and given that a dedicated SQL pool has 60 distributions, then the sales fact table should contain 60 million rows per month, or 2.1 billion rows when all months are populated. If a table contains fewer than the recommended minimum number of rows per partition, consider using fewer partitions in order to increase the number of rows per partition.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-tables-partitio

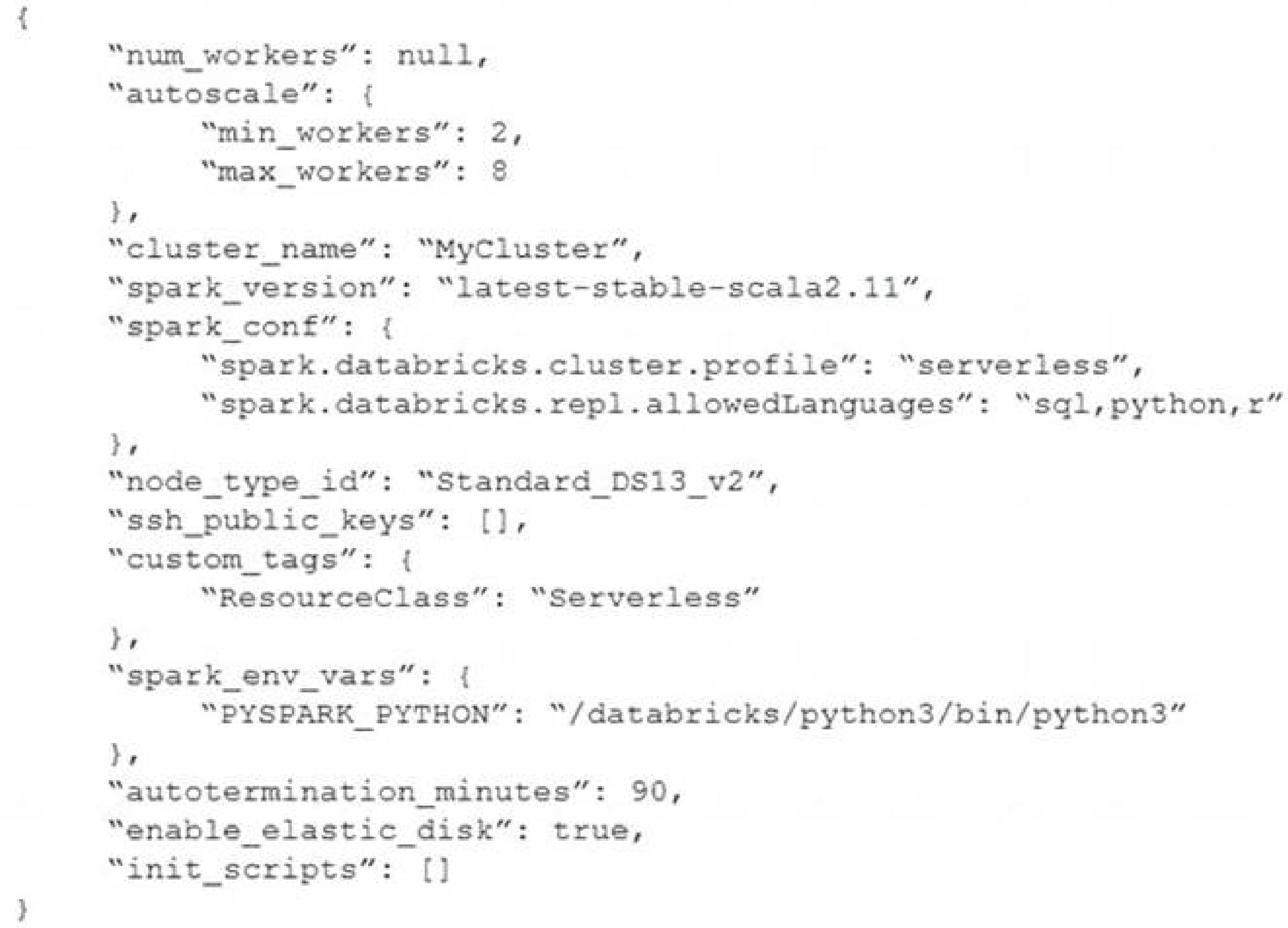
NEW QUESTION 34
- (Exam Topic 3)
You have an Azure data factory that connects to a Microsoft Purview account. The data factory is registered in Microsoft Purview.
You update a Data Factory pipeline.
You need to ensure that the updated lineage is available in Microsoft Purview.
What You have an Azure subscription that contains an Azure SQL database named DB1 and a storage account named storage1. The storage1 account contains a file named File1.txt. File1.txt contains the names of selected tables in DB1.
You need to use an Azure Synapse pipeline to copy data from the selected tables in DB1 to the files in storage1. The solution must meet the following requirements:
• The Copy activity in the pipeline must be parameterized to use the data in File1.txt to identify the source and destination of the copy.
• Copy activities must occur in parallel as often as possible.
Which two pipeline activities should you include in the pipeline? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

A. If Condition

B. ForEach
C. Lookup
D. Get Metadata

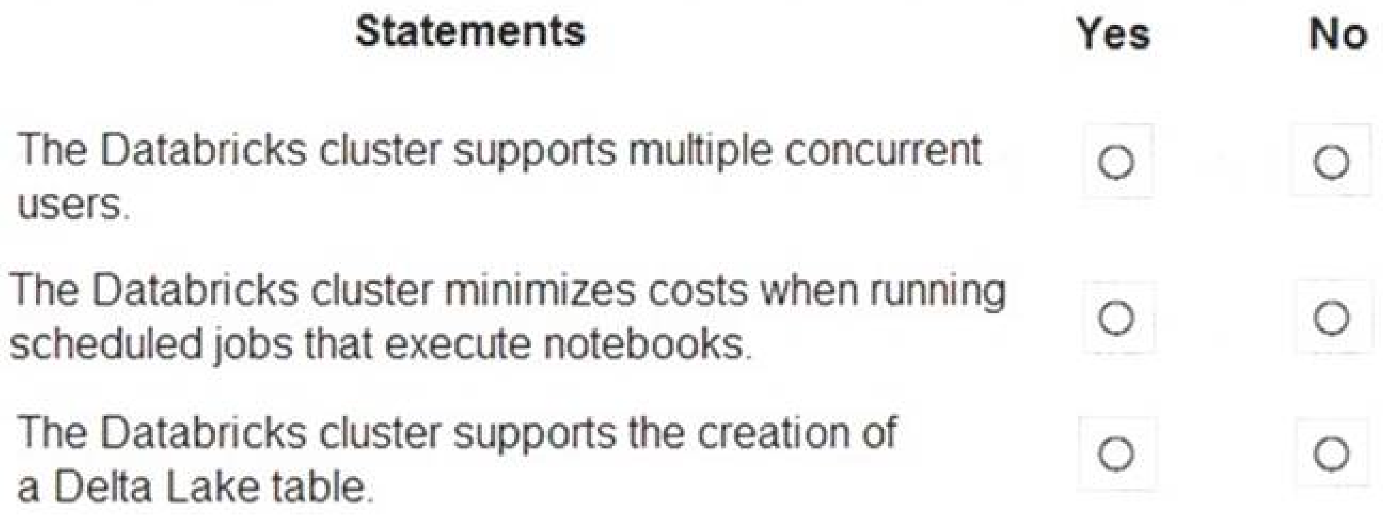
Answer: CD

NEW QUESTION 35
- (Exam Topic 3)
The following code segment is used to create an Azure Databricks cluster.



```
{
      “num_workers”: null,
      “autoscale”: {
           “min_workers”: 2,
           “max_workers”: 8
      },
      “cluster_name”: “MyCluster”,
      “spark_version”: “latest-stable-scala2.11”,
      “spark_conf”: {
           “spark.databricks.cluster.profile”: “serverless”,
           “spark.databricks.repl.allowedLanguages”: “sql,python,r”
      },
      “node_type_id”: “Standard_DS13_v2”,
      “ssh_public_keys”: [],
      “custom_tags”: {
           “ResourceClass”: “Serverless”
      },
      “spark_env_vars”: {
           “PYSPARK_PYTHON”: “/databricks/python3/bin/python3”
      },
      “autotermination_minutes”: 90,
      “enable_elastic_disk”: true,
      “init_scripts”: []
}
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.



Statements	Yes	No
The Databricks cluster supports multiple concurrent users.	○	○
The Databricks cluster minimizes costs when running scheduled jobs that execute notebooks.	○	○
The Databricks cluster supports the creation of a Delta Lake table.	○	○

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, text, application Description automatically generated
Box 1: Yes
A cluster mode of ‘High Concurrency’ is selected, unlike all the others which are ‘Standard’. This results in a worker type of Standard_DS13_v2.
Box 2: No
When you run a job on a new cluster, the job is treated as a data engineering (job) workload subject to the job workload pricing. When you run a job on an existing cluster, the job is treated as a data analytics (all-purpose) workload subject to all-purpose workload pricing.
Box 3: Yes
Delta Lake on Databricks allows you to configure Delta Lake based on your workload patterns. Reference:
https://adatis.co.uk/databricks-cluster-sizing/ https://docs.microsoft.com/en-us/azure/databricks/jobs
https://docs.databricks.com/administration-guide/capacity-planning/cmbp.html https://docs.databricks.com/delta/index.html

NEW QUESTION 40
- (Exam Topic 3)
You have an activity in an Azure Data Factory pipeline. The activity calls a stored procedure in a data warehouse in Azure Synapse Analytics and runs daily.
You need to verify the duration of the activity when it ran last. What should you use?

A. activity runs in Azure Monitor

B. Activity log in Azure Synapse Analytics
C. the sys.dm_pdw_wait_stats data management view in Azure Synapse Analytics
D. an Azure Resource Manager template

Answer: A

Explanation:
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/monitor-visually

NEW QUESTION 41
- (Exam Topic 3)
You are designing a folder structure for the files m an Azure Data Lake Storage Gen2 account. The account has one container that contains three years of data.
You need to recommend a folder structure that meets the following requirements:
• Supports partition elimination for queries by Azure Synapse Analytics serverless SQL pooh
• Supports fast data retrieval for data from the current month
• Simplifies data security management by department Which folder structure should you recommend?

A. \YYY\MM\DD\Department\DataSource\DataFile_YYYMMMDD.parquet
B. \Depdftment\DataSource\YYY\MM\DataFile_YYYYMMDD.parquet
C. \DD\MM\YYYY\Department\DataSource\DataFile_DDMMYY.parquet
D. \DataSource\Department\YYYYMM\DataFile_YYYYMMDD.parquet

Answer: B

Explanation:
Department top level in the hierarchy to simplify security management.
Month (MM) at the leaf/bottom level to support fast data retrieval for data from the current month.

NEW QUESTION 46
- (Exam Topic 3)
You need to design a solution that will process streaming data from an Azure Event Hub and output the data to Azure Data Lake Storage. The solution must ensure that analysts can interactively query the streaming data.
What should you use?

A. event triggers in Azure Data Factory
B. Azure Stream Analytics and Azure Synapse notebooks
C. Structured Streaming in Azure Databricks
D. Azure Queue storage and read-access geo-redundant storage (RA-GRS)

Answer: C

Explanation:
Apache Spark Structured Streaming is a fast, scalable, and fault-tolerant stream processing API. You can use it to perform analytics on your streaming data in near real-time.
With Structured Streaming, you can use SQL queries to process streaming data in the same way that you would process static data.
Azure Event Hubs is a scalable real-time data ingestion service that processes millions of data in a matter of seconds. It can receive large amounts of data from multiple sources and stream the prepared data to Azure Data Lake or Azure Blob storage.
Azure Event Hubs can be integrated with Spark Structured Streaming to perform the processing of messages in near real-time. You can query and analyze the processed data as it comes by using a Structured Streaming query and Spark SQL.
Reference:
https://k21academy.com/microsoft-azure/data-engineer/structured-streaming-with-azure-event-hubs/

NEW QUESTION 51
- (Exam Topic 3)
You have an Azure SQL database named DB1 and an Azure Data Factory data pipeline named pipeline. From Data Factory, you configure a linked service to DB1.
In DB1, you create a stored procedure named SP1. SP1 returns a single row of data that has four columns.
You need to add an activity to pipeline to execute SP1. The solution must ensure that the values in the columns are stored as pipeline variables.
Which two types of activities can you use to execute SP1? (Refer to Data Engineering on Microsoft Azure documents or guide for Answers explanation available at Microsoft.com)

A. Stored Procedure
B. Lookup
C. Script
D. Copy

Answer: AB

Explanation:
the two types of activities that you can use to execute SP1 are Stored Procedure and Lookup.
A Stored Procedure activity executes a stored procedure on an Azure SQL Database or Azure Synapse Analytics or SQL Server1. You can specify the stored procedure name and parameters in the activity setting1s.
A Lookup activity retrieves a dataset from any data source that returns a single row of data with four columns2. You can use a query to execute a stored procedure as the source of the Lookup activit2y. You can then store the values in the columns as pipeline variables by using expressions2.
https://learn.microsoft.com/en-us/azure/data-factory/transform-data-using-stored-procedure

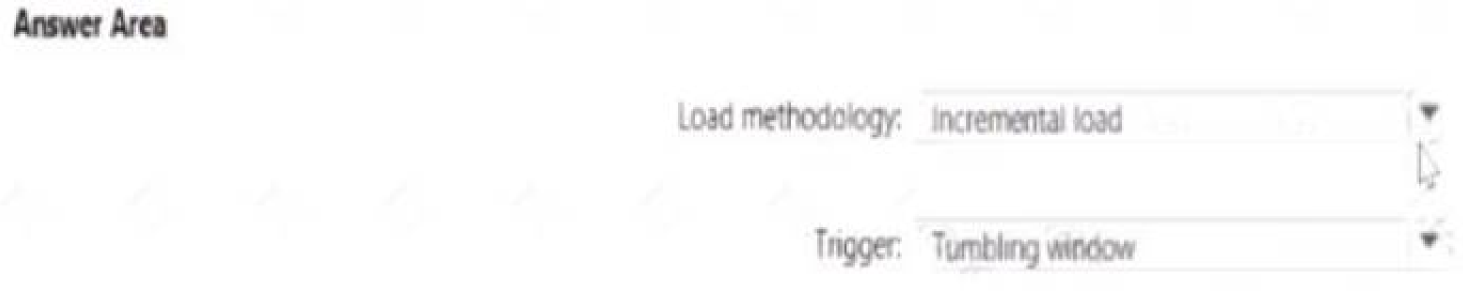
NEW QUESTION 53
- (Exam Topic 3)

You have an Azure Storage account that generates 200.000 new files daily. The file names have a format of (YYY)/(MM)/(DD)/|HH])/(CustornerID).csv.
You need to design an Azure Data Factory solution that will toad new data from the storage account to an Azure Data lake once hourly. The solution must minimize load times and costs.
How should you configure 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:

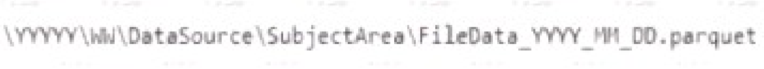


Answer Area

Load methodology: Incremental load

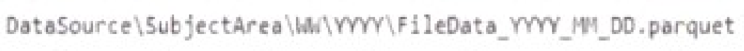
Trigger: Tumbling window

NEW QUESTION 54
- (Exam Topic 3)
You are designing the folder structure for an Azure Data Lake Storage Gen2 account. You identify the following usage patterns:
• Users will query data by using Azure Synapse Analytics serverless SQL pools and Azure Synapse Analytics serverless Apache Spark pods.
• Most queries will include a filter on the current year or week.
• Data will be secured by data source.
You need to recommend a folder structure that meets the following requirements:
• Supports the usage patterns
• Simplifies folder security
• Minimizes query times
Which folder structure should you recommend?
A)



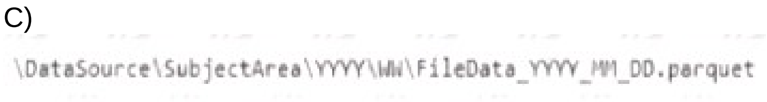
\YYYYY\WW\DataSource\SubjectArea\FileData_YYYY_MM_DD.parquet

B)



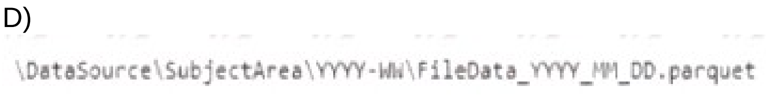
DataSource\SubjectArea\WW\YYYY\FileData_YYYY_MM_DD.parquet

C)



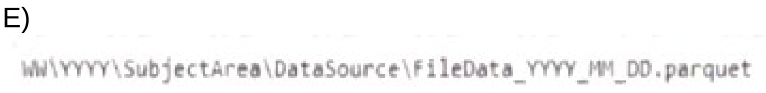
\DataSource\SubjectArea\YYYY\WW\FileData_YYYY_MM_DD.parquet

D)



\DataSource\SubjectArea\YYYY-WW\FileData_YYYY_MM_DD.parquet

E)



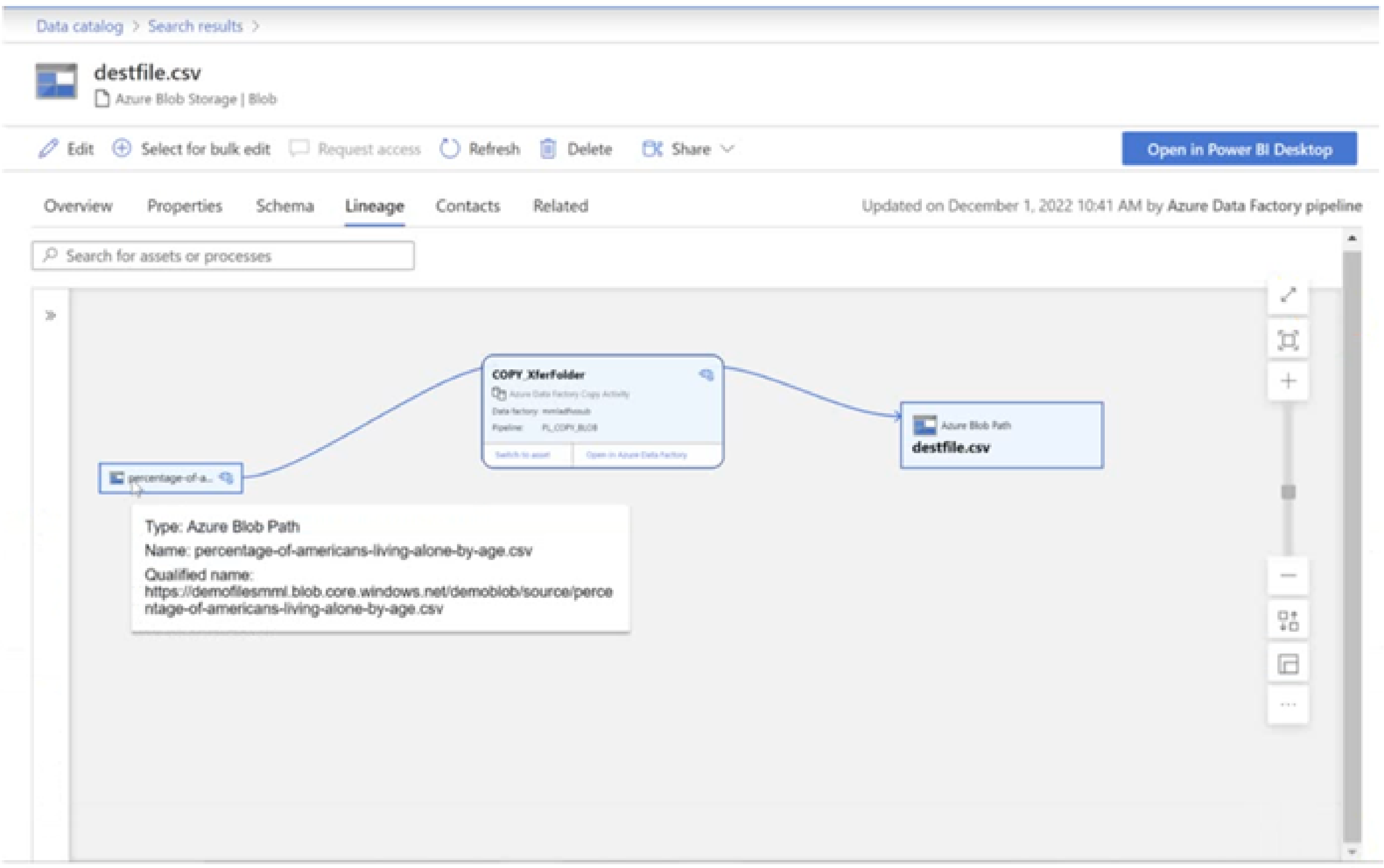
WW\YYYY\SubjectArea\DataSource\FileData_YYYY_MM_DD.parquet

A. Option A
B. Option B
C. Option C
D. Option D
E. Option E

Answer: C

Explanation:
Data will be secured by data source. -> Use DataSource as top folder.
Most queries will include a filter on the current year or week -> Use \YYYY\WW\ as subfolders. Common Use Cases
A common use case is to filter data stored in a date (and possibly time) folder structure such as
/YYYY/MM/DD/ or /YYYY/MM/YYYY-MM-DD/. As new data is generated/sent/copied/moved to the storage account, a new folder is created for each specific time period. This strategy organises data into a maintainable folder structure.
Reference: https://www.serverlesssql.com/optimisation/azurestoragefilteringusingfilepath/

NEW QUESTION 55
- (Exam Topic 3)
You have a Microsoft Purview account. The Lineage view of a CSV file is shown in the following exhibit.



Updated on December 1, 2022 10:41 AM by Azure Data Factory pipeline

Data factory: mmladfhosub
Pipeline: PL_COPY_BLOB

Type: Azure Blob Path
Name: percentage-of-americans-living-alone-by-age.csv
Qualified name:
https://demofilesmml.blob.core.windows.net/demoblob/source/percentage-of-americans-living-alone-by-age.csv

How is the data for the lineage populated?

A. manually
B. by scanning data stores
C. by executing a Data Factory pipeline

Answer: B

Explanation:
According to Microsoft Purview Data Catalog lineage user guide1, data lineage in Microsoft Purview is a core platform capability that populates the Microsoft Purview Data Map with data movement and transformations across systems2. Lineage is captured as it flows in the enterprise and stitched without gaps irrespective of its source2.

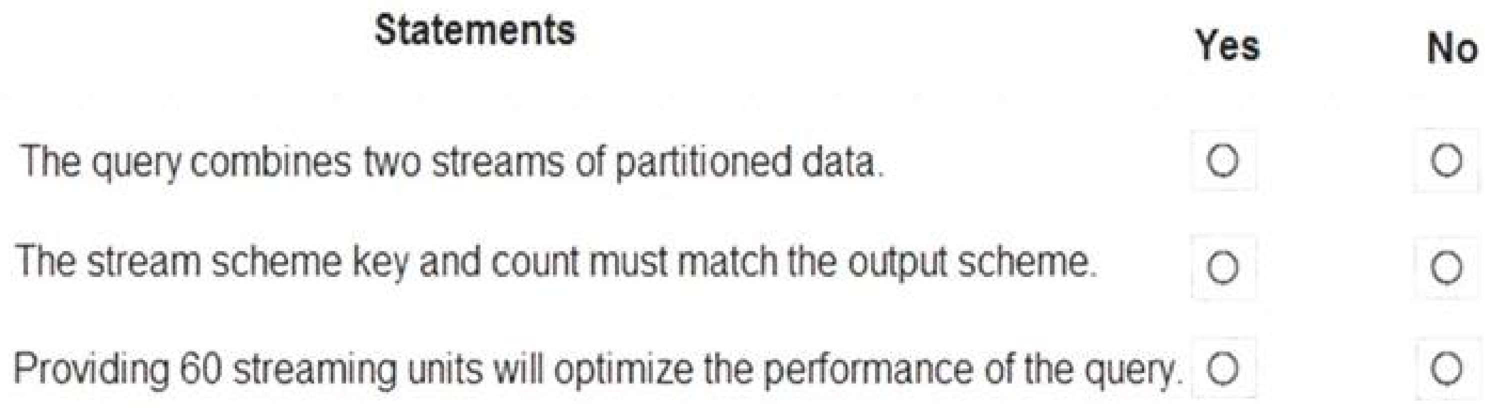
NEW QUESTION 56
- (Exam Topic 3)
You have the following Azure Stream Analytics query.

```
WITH

step1 AS (SELECT *
     FROM input1
     PARTITION BY StateID
     INTO 10),
step2 AS (SELECT *
     FROM input2
     PARTITION BY StateID
     INTO 10)

SELECT *
INTO output
FROM step1
PARTITION BY StateID
UNION
SELECT * INTO output
       FROM step2
       PARTITION BY StateID
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.



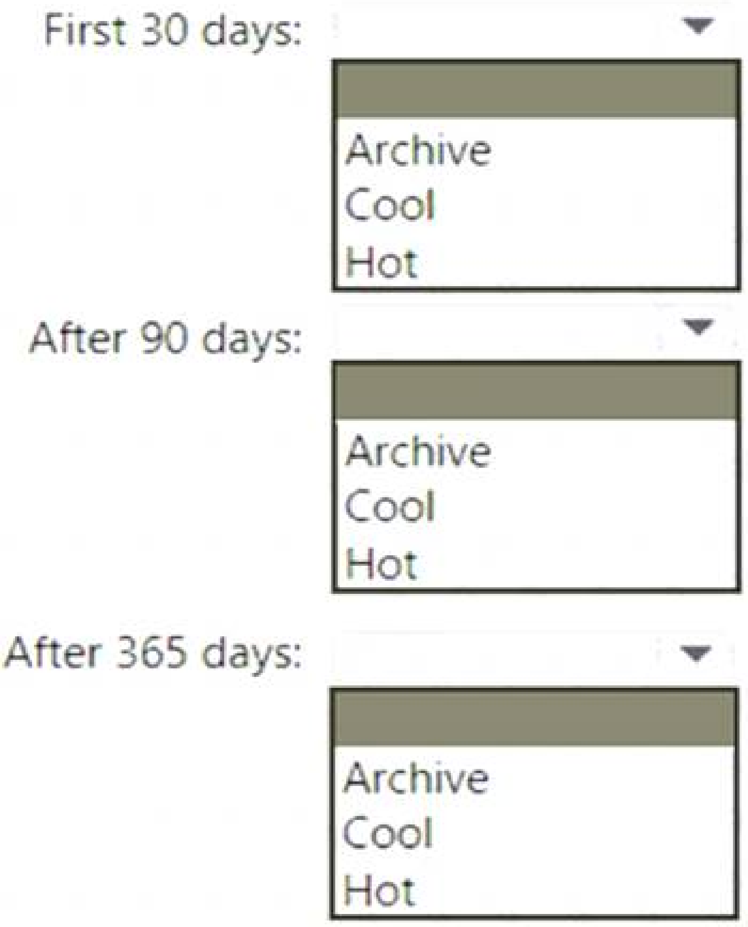
Statements	Yes	No
The query combines two streams of partitioned data.	○	○
The stream scheme key and count must match the output scheme.	○	○
Providing 60 streaming units will optimize the performance of the query.	○	○

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Box 1: No
Note: You can now use a new extension of Azure Stream Analytics SQL to specify the number of partitions of a stream when reshuffling the data.
The outcome is a stream that has the same partition scheme. Please see below for an example: WITH step1 AS (SELECT * FROM [input1] PARTITION BY DeviceID INTO 10),
step2 AS (SELECT * FROM [input2] PARTITION BY DeviceID INTO 10)
SELECT * INTO [output] FROM step1 PARTITION BY DeviceID UNION step2 PARTITION BY DeviceID Note: The new extension of Azure Stream Analytics SQL includes a keyword INTO that allows you to specify the number of partitions for a stream when performing reshuffling using a PARTITION BY statement.
Box 2: Yes
When joining two streams of data explicitly repartitioned, these streams must have the same partition key and partition count. Box 3: Yes
Streaming Units (SUs) represents the computing resources that are allocated to execute a Stream Analytics job. The higher the number of SUs, the more CPU and memory resources are allocated for your job.
In general, the best practice is to start with 6 SUs for queries that don't use PARTITION BY. Here there are 10 partitions, so 6x10 = 60 SUs is good.
Note: Remember, Streaming Unit (SU) count, which is the unit of scale for Azure Stream Analytics, must be adjusted so the number of physical resources available to the job can fit the partitioned flow. In general, six SUs is a good number to assign to each partition. In case there are insufficient resources assigned to the job, the system will only apply the repartition if it benefits the job.
Reference:
https://azure.microsoft.com/en-in/blog/maximize-throughput-with-repartitioning-in-azure-stream-analytics/ https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-streaming-unit-consumption

NEW QUESTION 57
- (Exam Topic 3)
You are designing an application that will use an Azure Data Lake Storage Gen 2 account to store petabytes of license plate photos from toll booths. The account will use zone-redundant storage (ZRS).
You identify the following usage patterns:
• The data will be accessed several times a day during the first 30 days after the data is created. The data must meet an availability SU of 99.9%.
• After 90 days, the data will be accessed infrequently but must be available within 30 seconds.
• After 365 days, the data will be accessed infrequently but must be available within five minutes.



A. Mastered
B. Not Mastered

Answer: A

Explanation:
Box 1: Hot
The data will be accessed several times a day during the first 30 days after the data is created. The data must meet an availability SLA of 99.9%.
Box 2: Cool
After 90 days, the data will be accessed infrequently but must be available within 30 seconds. Data in the Cool tier should be stored for a minimum of 30 days.
When your data is stored in an online access tier (either Hot or Cool), users can access it immediately. The Hot tier is the best choice for data that is in active use, while the Cool tier is ideal for data that is accessed less frequently, but that still must be available for reading and writing.
Box 3: Cool
After 365 days, the data will be accessed infrequently but must be available within five minutes. Reference: https://docs.microsoft.com/en-us/azure/storage/blobs/access-tiers-overview https://docs.microsoft.com/en-us/azure/storage/blobs/archive-rehydrate-overview

NEW QUESTION 58
- (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

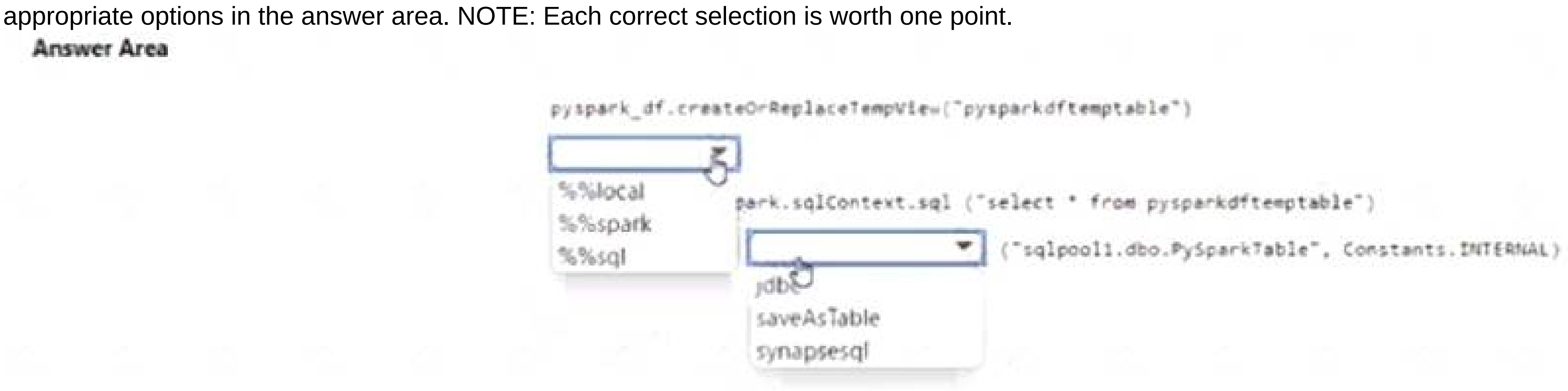
stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.
After you answer a question in this scenario, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.
You have an Azure Storage 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 62
- (Exam Topic 3)
You have an Azure subscription that contains an Azure Synapse Analytics workspace named workspace1. Workspace1 contains a dedicated SQL pool named SQL Pool and an Apache Spark pool named sparkpool. Sparkpool1 contains a DataFrame named pyspark.df.
You need to write the contents of pyspark_df to a tabte in SQLPooM by using a PySpark notebook. How should you complete the code? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.


Answer Area

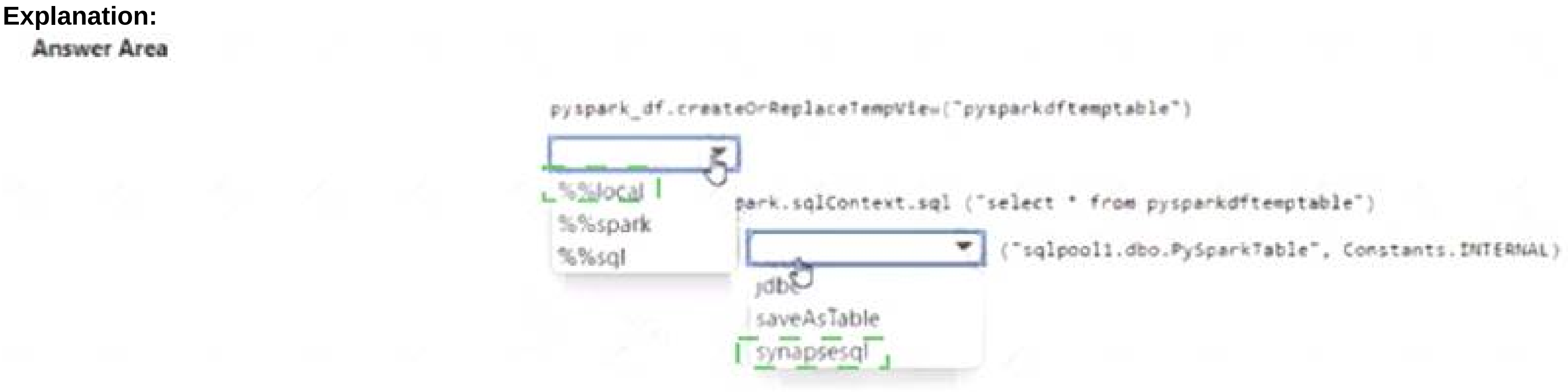
```
pyspark_df.createOrReplaceTempView("pysparkdftemptable")

park.sqlContext.sql ("select * from pysparkdfteeptable")
                     ("sqlpool1.dbo.PySparkTable", Constants.INTERNAL)
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:


Answer Area

```
pyspark_df.createOrReplaceTempView("pysparkdftemptable")

park.sqlContext.sql ("select * from pysparkdfteeptable")
                     ("sqlpool1.dbo.PySparkTable", Constants.INTERNAL)
```

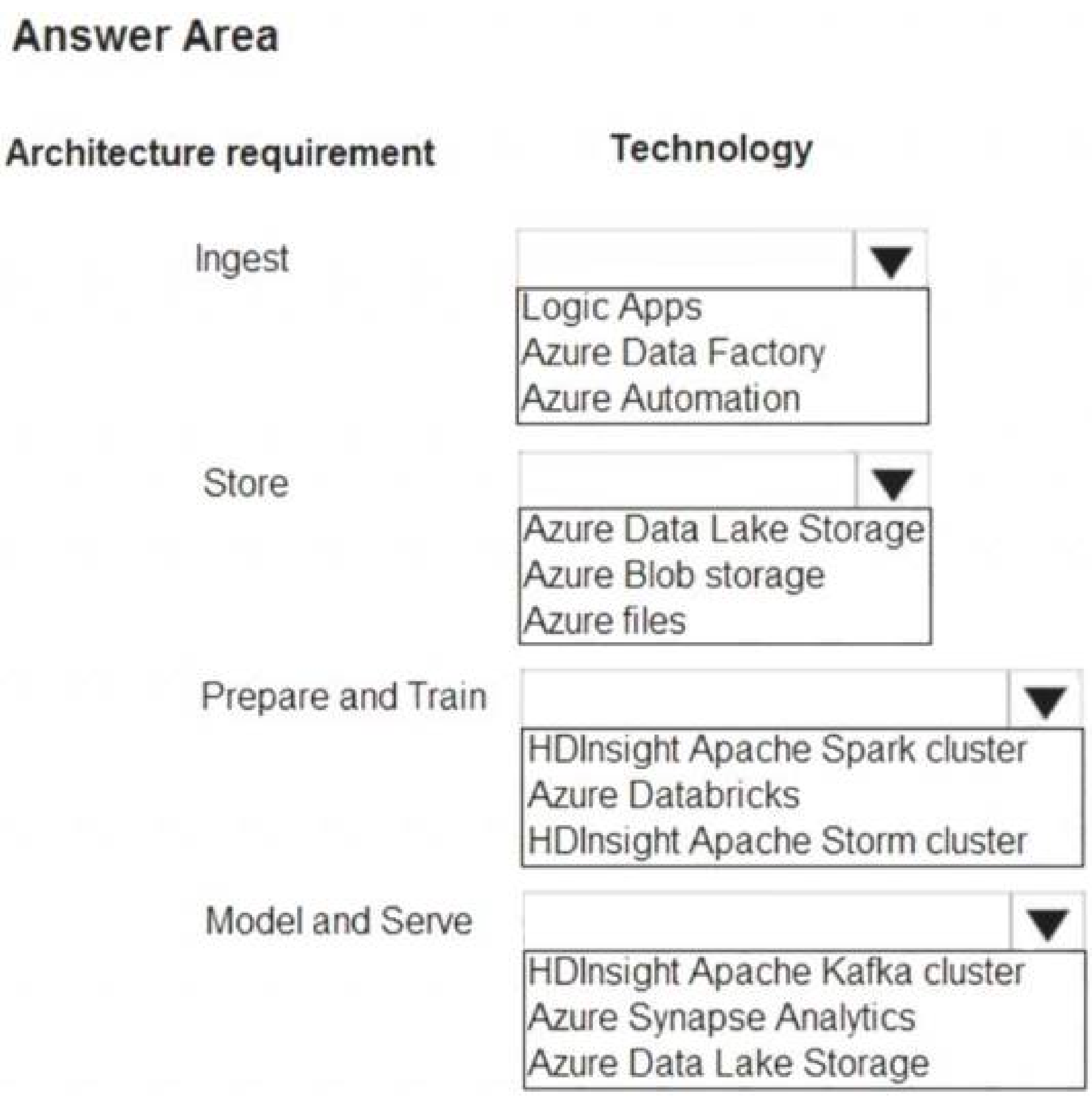
NEW QUESTION 63
- (Exam Topic 3)
A company plans to use Platform-as-a-Service (PaaS) to create the new data pipeline process. The process must meet the following requirements:
Ingest:

- Access multiple data sources.
- Provide the ability to orchestrate workflow.
- Provide the capability to run SQL Server Integration Services packages.

Store:
Optimize storage for big data workloads. Provide encryption of data at rest. Operate with no size limits.
Prepare and Train:

- Provide a fully-managed and interactive workspace for exploration and visualization.
- Provide the ability to program in R, SQL, Python, Scala, and Java.
- Provide seamless user authentication with Azure Active Directory. Model & Serve:
- Implement native columnar storage.
- Support for the SQL language
- Provide support for structured streaming. You need to build the data integration pipeline.

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



Answer Area

Architecture requirement	Technology
Ingest	Logic Apps Azure Data Factory Azure Automation
Store	Azure Data Lake Storage Azure Blob storage Azure files
Prepare and Train	HDInsight Apache Spark cluster Azure Databricks HDInsight Apache Storm cluster
Model and Serve	HDInsight Apache Kafka cluster Azure Synapse Analytics Azure Data Lake Storage

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, application, table, email Description automatically generated

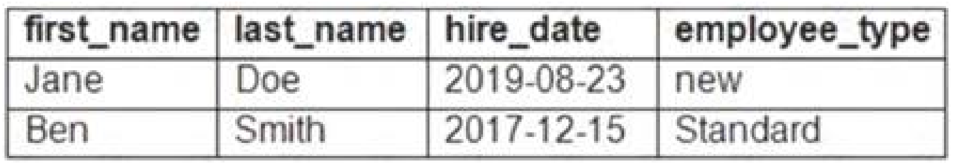
NEW QUESTION 65
- (Exam Topic 3)
You are designing a partition strategy for a fact table in an Azure Synapse Analytics dedicated SQL pool. The table has the following specifications:
• Contain sales data for 20,000 products.
• Use hash distribution on a column named ProduclID,
• Contain 2.4 billion records for the years 20l9 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: A

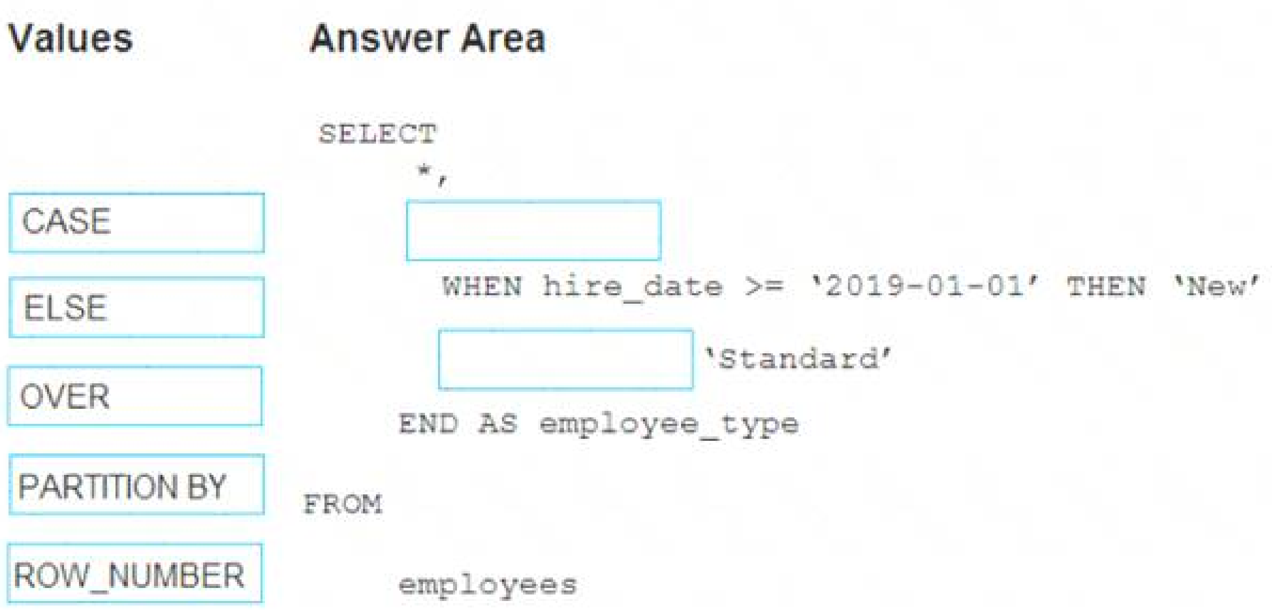
Explanation:
Each partition should have around 1 millions records. Dedication SQL pools already have 60 partitions. We have the formula: Records/(Partitions*60)= 1 million
Partitions= Records/(1 million * 60)
Partitions= 2.4 x 1,000,000,000/(1,000,000 * 60) = 40
Note: Having too many partitions can reduce the effectiveness of clustered columnstore indexes if each partition has fewer than 1 million rows. Dedicated SQL pools automatically partition your data into 60 databases. So, if you create a table with 100 partitions, the result will be 6000 partitions.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/best-practices-dedicated-sql-pool

NEW QUESTION 68
- (Exam Topic 3)
You have the following table named Employees.



first_name	last_name	hire_date	employee_type
Jane	Doe	2019-08-23	new
Ben	Smith	2017-12-15	Standard

You need to calculate the employee_type value based on the hire_date value.
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.



Values

- CASE
- ELSE
- OVER
- PARTITION BY
- ROW_NUMBER

Answer Area

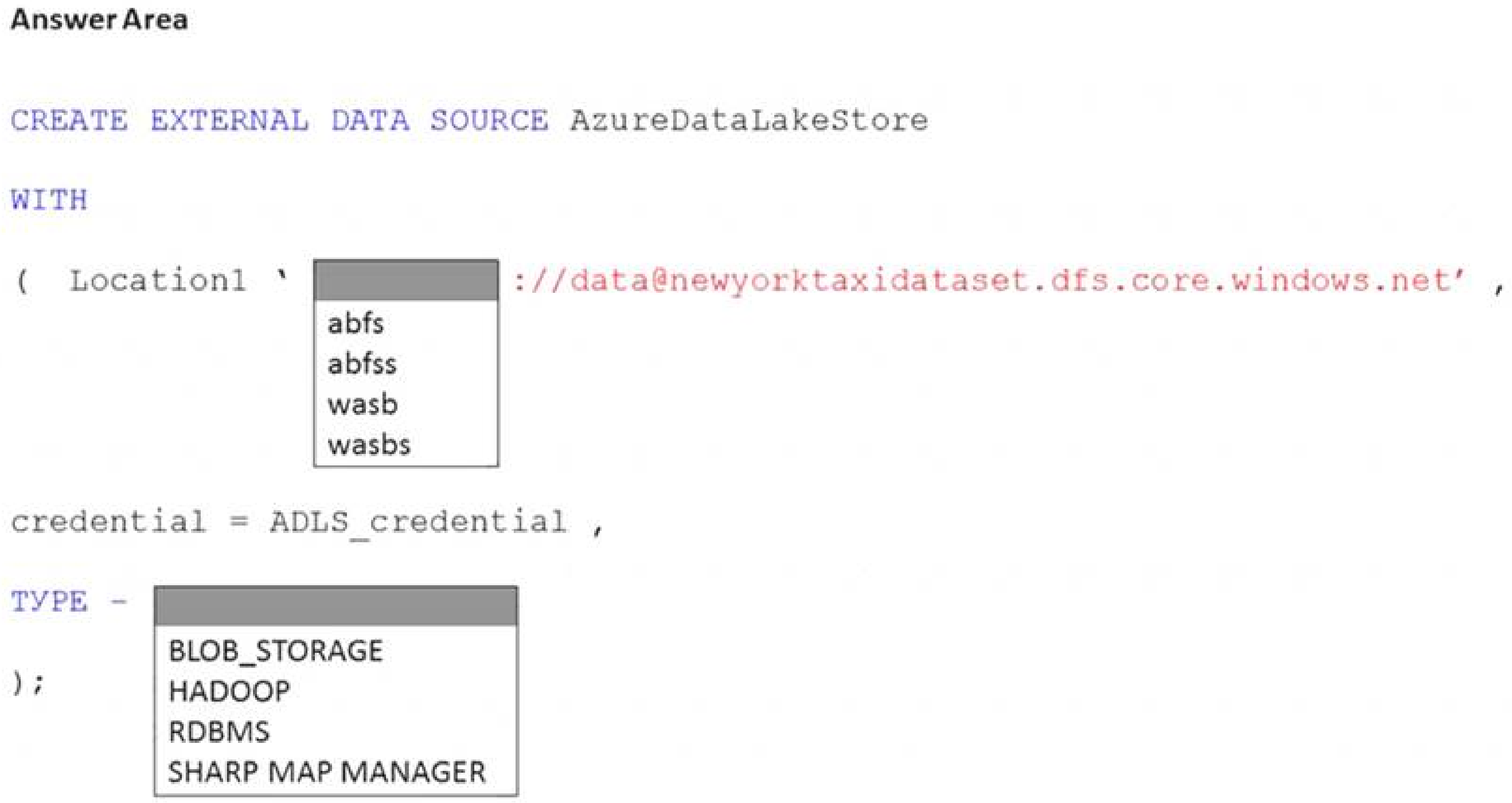
```
SELECT
      *,
      [          ]
        WHEN hire_date >= '2019-01-01' THEN 'New'
         [          ] 'Standard'
      END AS employee_type
FROM
      employees
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, text, application Description automatically generated
Box 1: CASE
CASE evaluates a list of conditions and returns one of multiple possible result expressions.
CASE can be used in any statement or clause that allows a valid expression. For example, you can use CASE in statements such as SELECT, UPDATE, DELETE and SET, and in clauses such as select_list, IN, WHERE, ORDER BY, and HAVING.
Syntax: Simple CASE expression: CASE input_expression
WHEN when_expression THEN result_expression [...n] [ELSE else_result_expression]
END
Box 2: ELSE
Reference:
https://docs.microsoft.com/en-us/sql/t-sql/language-elements/case-transact-sql

NEW QUESTION 69
- (Exam Topic 3)
You have an Azure subscription that contains an Azure Synapse Analytics dedicated SQL pool named Pool1 and an Azure Data Lake Storage account named storage1. Storage1 requires secure transfers.
You need to create an external data source in Pool1 that will be used to read .orc files in storage1. How should you complete the code? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.



Answer Area

```
CREATE EXTERNAL DATA SOURCE AzureDataLakeStore
WITH
(  Location1 '[ abfs | abfss | wasb | wasbs ]://data@newyorktaxidataset.dfs.core.windows.net' ,
credential = ADLS_credential ,
TYPE = [ BLOB_STORAGE | HADOOP | RDBMS | SHARP MAP MANAGER ]
);
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, text, application, email Description automatically generated
Reference:
https://docs.microsoft.com/en-us/sql/t-sql/statements/create-external-data-source-transact-sql?view=azure-sqldw

NEW QUESTION 73
- (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 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 Standard cluster for the jobs.
Does this meet the goal?

A. Yes
B. No

Answer: B

Explanation:
We would need a High Concurrency cluster for 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 75
- (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 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.

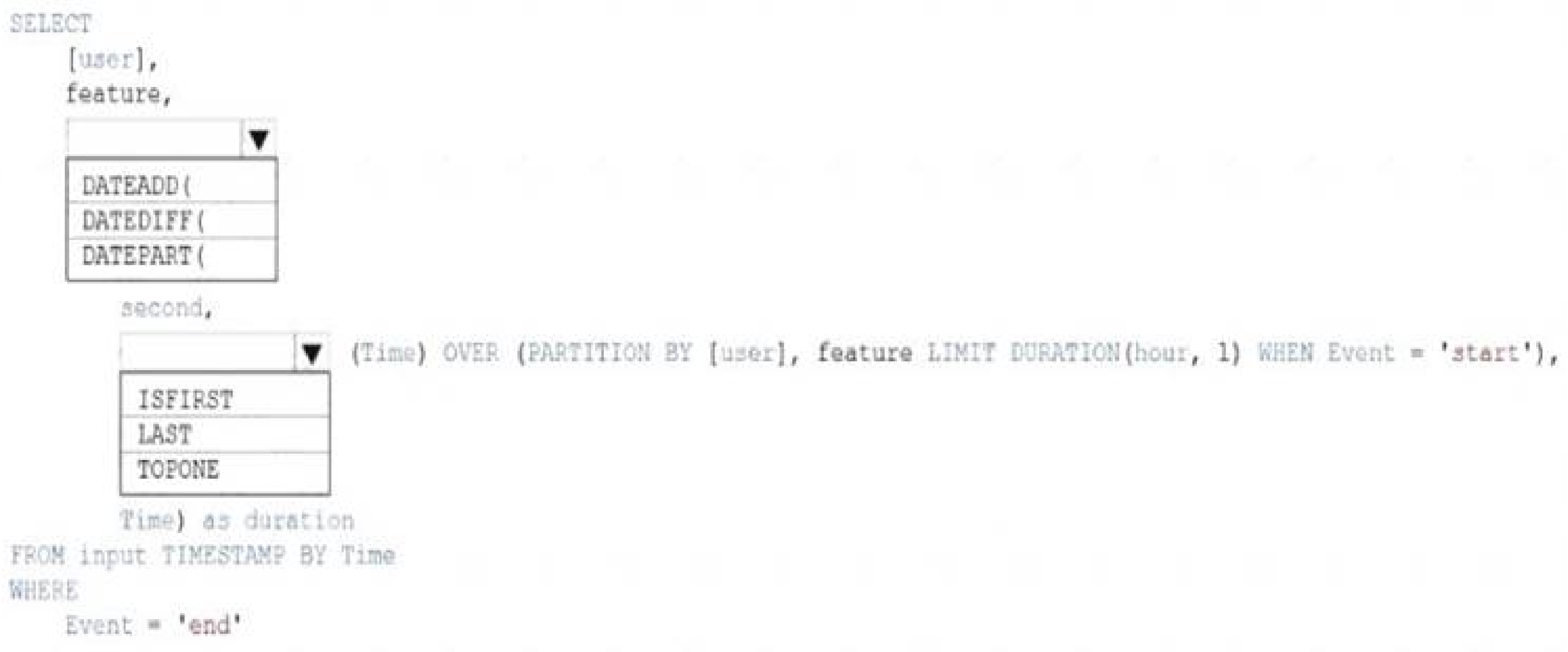
You need to create the Databricks clusters for the workloads.
Solution: You create a High Concurrency cluster for each data scientist, a High Concurrency cluster for the data engineers, and a Standard cluster for the jobs.
Does this meet the goal?

A. Yes
B. No

Answer: B

Explanation:
Need a High Concurrency cluster for the jobs.
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 79
- (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.



```
SELECT
    [user],
    feature,
    [            ▼]
    DATEADD(
    DATEDIFF(
    DATEPART(
        second,
        [            ▼] (Time) OVER (PARTITION BY [user], feature LIMIT DURATION(hour, 1) WHEN Event = 'start'),
        ISFIRST
        LAST
        TOPONE
        Time) as duration
FROM input TIMESTAMP BY Time
WHERE
    Event = 'end'
```

A. Mastered
B. Not Mastered

Answer: A

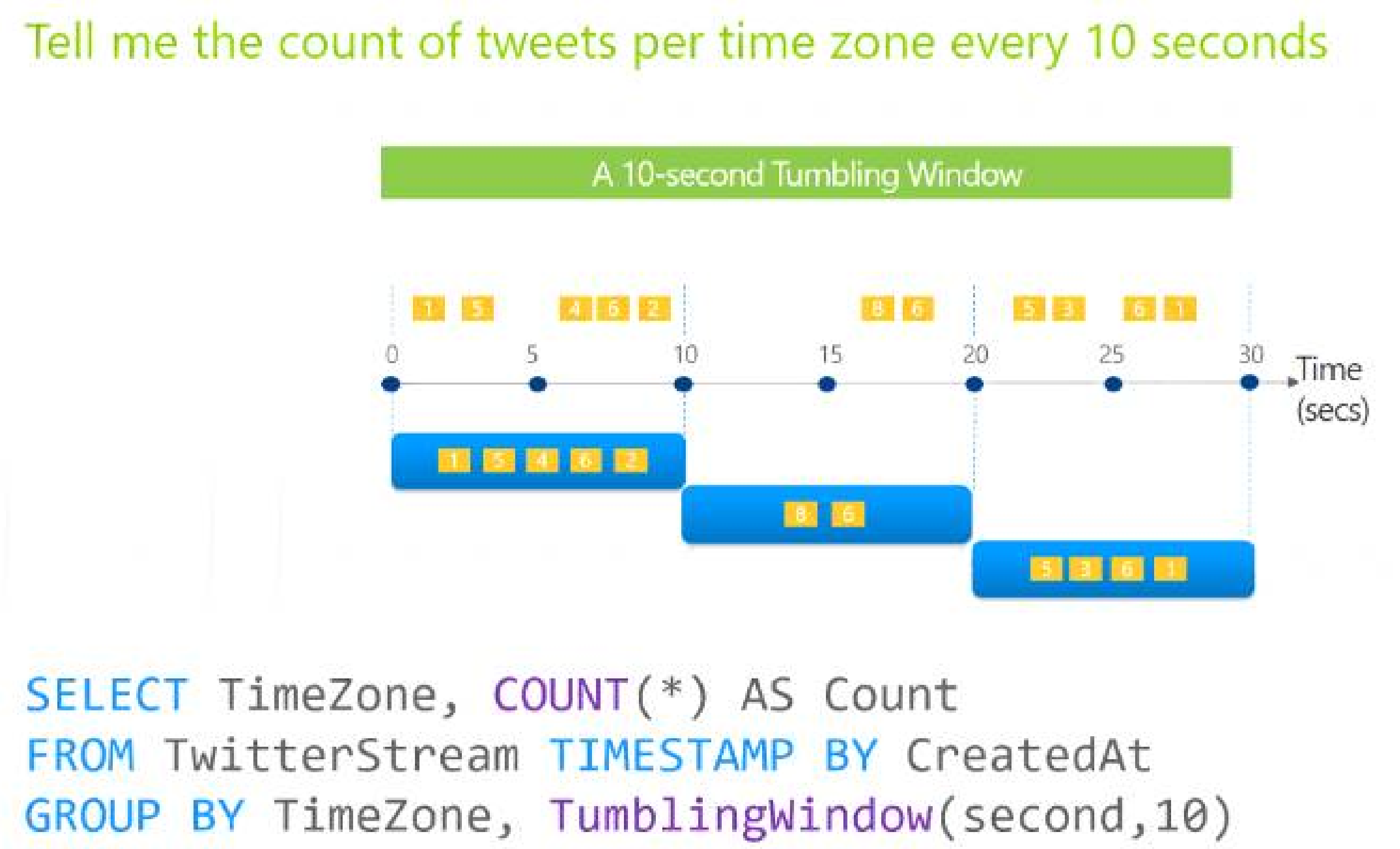
Explanation:
Box 1: DATEDIFF
DATEDIFF function returns the count (as a signed integer value) of the specified datepart boundaries crossed between the specified startdate and enddate.
Syntax: DATEDIFF (datepart , startdate, enddate) Box 2: LAST
The LAST function can be used to retrieve the last event 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 80
- (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 84
- (Exam Topic 3)
You plan to use an Apache Spark pool in Azure Synapse Analytics to load data to an Azure Data Lake Storage Gen2 account.
You need to recommend which file format to use to store the data in the Data Lake Storage account. The solution must meet the following requirements:
• Column names and data types must be defined within the files loaded to the Data Lake Storage account.
• Data must be accessible by using queries from an Azure Synapse Analytics serverless SQL pool.
• Partition elimination must be supported without having to specify a specific partition. What should you recommend?

A. Delta Lake
B. JSON
C. CSV
D. ORC

Answer: D

NEW QUESTION 86
- (Exam Topic 3)
You are monitoring an Azure Stream Analytics job.
You discover that the Backlogged Input Events metric is increasing slowly and is consistently non-zero. You need to ensure that the job can handle all the events.
What should you do?

A. Change the compatibility level of the Stream Analytics job.
B. Increase the number of streaming units (SUs).
C. Remove any named consumer groups from the connection and use $default.
D. Create an additional output stream for the existing input stream.

Answer: B

Explanation:
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. You should increase the Streaming Units.
Note: Streaming Units (SUs) represents the computing resources that are allocated to execute a Stream Analytics job. The higher the number of SUs, the more CPU and memory resources are allocated for your job.
Reference:
https://docs.microsoft.com/bs-cyrl-ba/azure/stream-analytics/stream-analytics-monitoring

NEW QUESTION 91
- (Exam Topic 3)
You are creating a new notebook in Azure Databricks that will support R as the primary language but will also support Scale and SOL Which switch should you use to switch between languages?

A. @<Language>
B. %<Language>
C. \\(<Language>)
D. \\(<Language>)

Answer: B

Explanation:
To change the language in Databricks' cells to either Scala, SQL, Python or R, prefix the cell with '%', followed by the language.
%python //or r, scala, sql Reference:
https://www.theta.co.nz/news-blogs/tech-blog/enhancing-digital-twins-part-3-predictive-maintenance-with-azur

NEW QUESTION 94
- (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 less than 1 MB. Does this meet the goal?

A. Yes
B. No

Answer: A

Explanation:
When exporting data into an ORC File Format, you might get Java out-of-memory errors when there are large text columns. To work around this limitation, export only a subset of the columns.
References:
https://docs.microsoft.com/en-us/azure/sql-data-warehouse/guidance-for-loading-data

NEW QUESTION 97
- (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 102
- (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 107
- (Exam Topic 2)
What should you recommend to prevent users outside the Litware on-premises network from accessing the analytical data store?

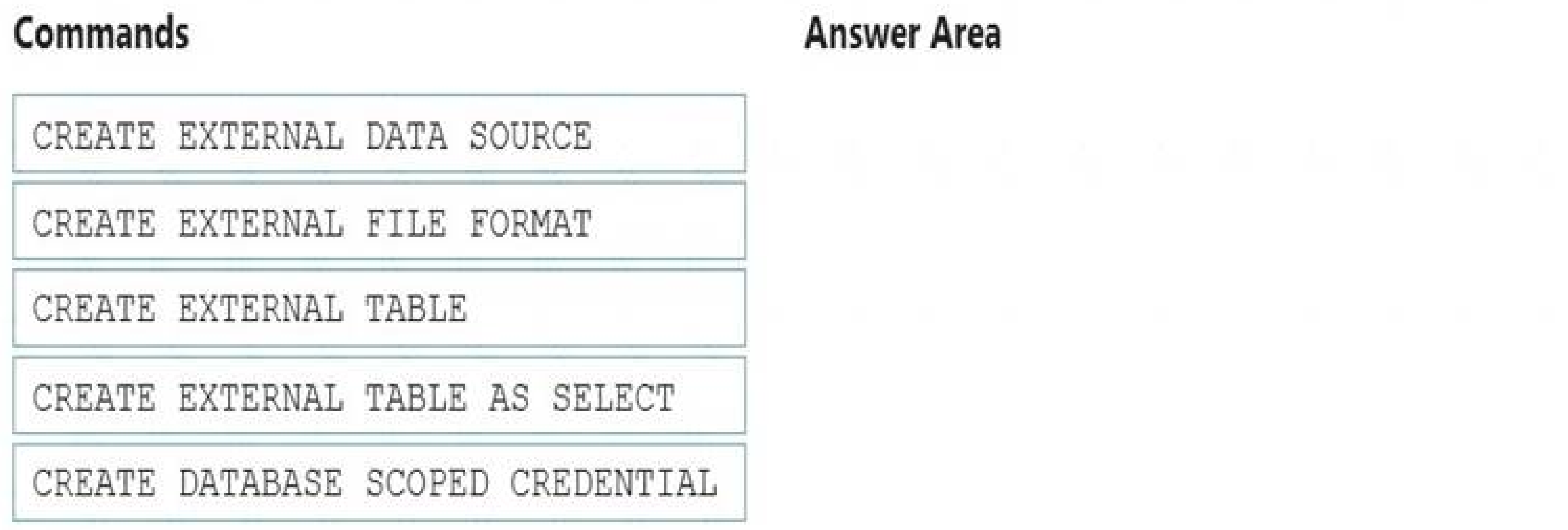
A. a server-level virtual network rule
B. a database-level virtual network rule
C. a database-level firewall IP rule
D. a server-level firewall IP rule

Answer: A

Explanation:
Virtual network rules are one firewall security feature that controls whether the database server for your single databases and elastic pool in Azure SQL Database or for your databases in SQL Data Warehouse accepts communications that are sent from particular subnets in virtual networks.
Server-level, not database-level: Each virtual network rule applies to your whole Azure SQL Database server, not just to one particular database on the server. In other words, virtual network rule applies at the serverlevel, not at the database-level.
References:
https://docs.microsoft.com/en-us/azure/sql-database/sql-database-vnet-service-endpoint-rule-overview

NEW QUESTION 109
- (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

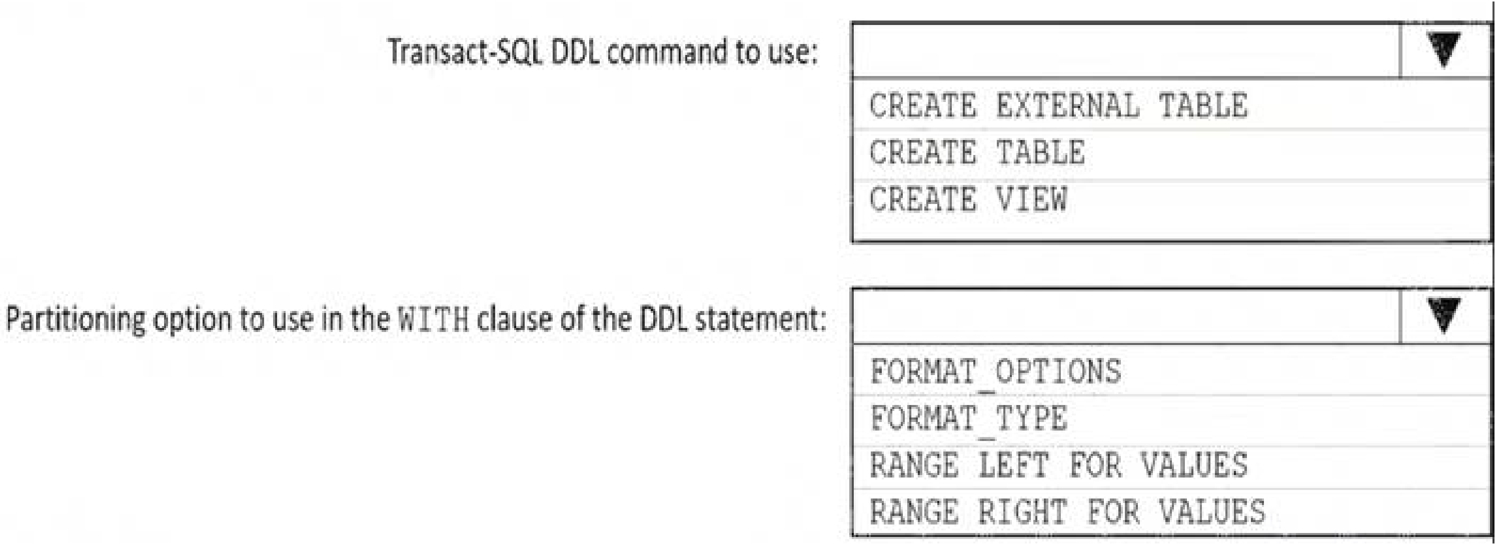
CREATE DATABASE SCOPED CREDENTIAL

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 114
- (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.



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:
Graphical user interface, text, application, table Description automatically generated
Box 1: Create table
Scenario: Load the sales transaction dataset to Azure Synapse Analytics Box 2: RANGE RIGHT FOR VALUES
Scenario: 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.
RANGE RIGHT: Specifies the boundary value belongs to the partition on the right (higher values). FOR VALUES (boundary_value [,...n]): Specifies the boundary values for the partition.
Scenario: Load the sales transaction dataset to Azure Synapse Analytics. Contoso identifies the following requirements for the sales transaction dataset:
> 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.
> Ensure that queries joining and filtering sales transaction records based on product ID complete as quickly as possible.

- Implement a surrogate key to account for changes to the retail store addresses.
- Ensure that data storage costs and performance are predictable.
- Minimize how long it takes to remove old records. Reference:

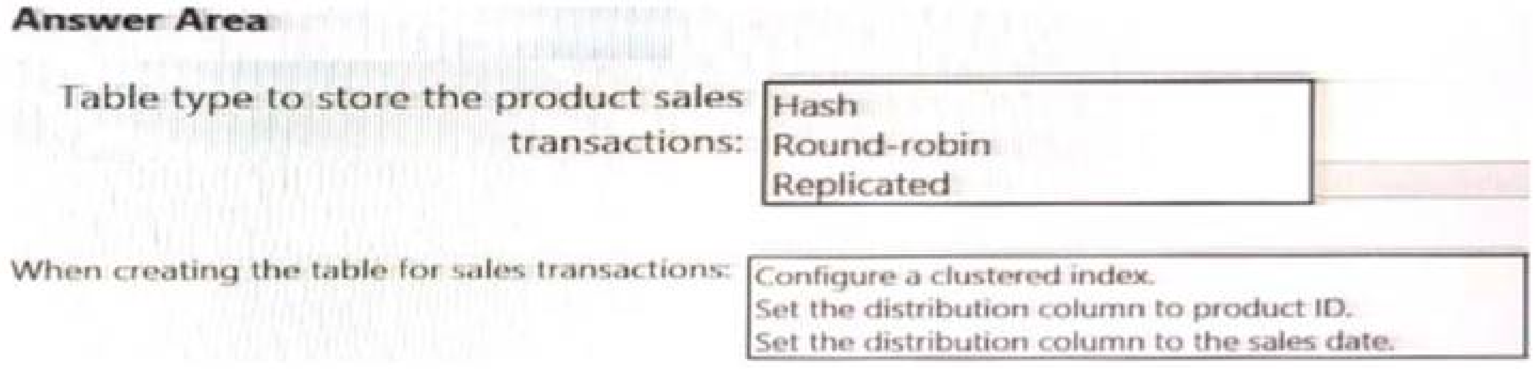
https://docs.microsoft.com/en-us/sql/t-sql/statements/create-table-azure-sql-data-warehouse

NEW QUESTION 115
- (Exam Topic 1)
You need to integrate the on-premises data sources and Azure Synapse Analytics. The solution must meet the data integration requirements.
Which type of integration runtime should you use?

A. Azure-SSIS integration runtime
B. self-hosted integration runtime
C. Azure integration runtime

Answer: C

NEW QUESTION 120
- (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 transactions:
Hash
Round-robin
Replicated

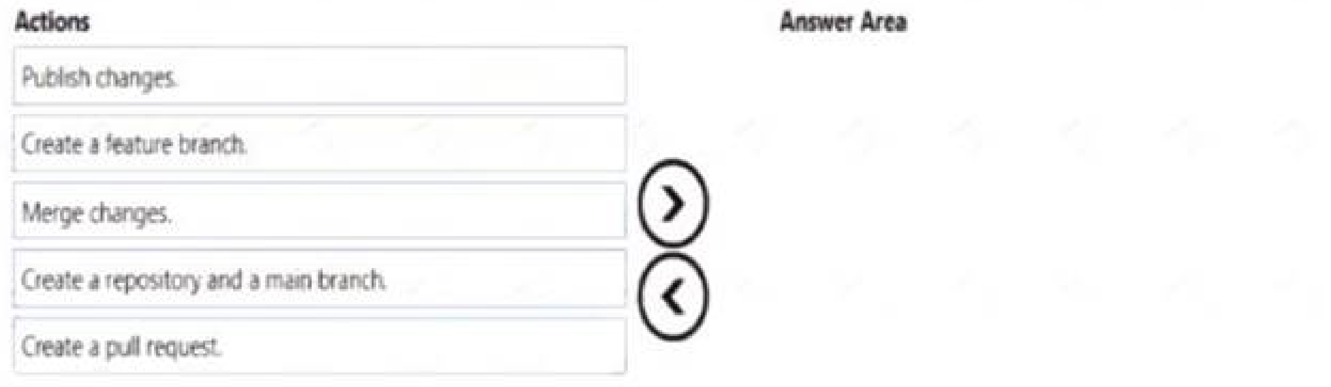
When creating the table for sales transactions:
Configure a clustered index.
Set the distribution column to product ID.
Set the distribution column to the sales date.

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, text, application, chat or text message Description automatically generated
Box 1: Hash Scenario:
Ensure that queries joining and filtering sales transaction records based on product ID complete as quickly as possible.
A hash distributed table can deliver the highest query performance for joins and aggregations on large tables. Box 2: Set the distribution column to the sales date.
Scenario: 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.
Reference:
https://rajanieshkaushikk.com/2020/09/09/how-to-choose-right-data-distribution-strategy-for-azure-synapse/

NEW QUESTION 125
- (Exam Topic 1)
You need to implement versioned changes to the integration pipelines. The solution must meet the data integration requirements.
In which order should you perform the actions? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.



Actions
Publish changes.
Create a feature branch.
Merge changes.
Create a repository and a main branch.
Create a pull request.

Answer Area

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, application Description automatically generated
Scenario: Identify a process to ensure that changes to the ingestion and transformation activities can be version-controlled and developed independently by multiple data engineers.
Step 1: Create a repository and a main branch
You need a Git repository in Azure Pipelines, TFS, or GitHub with your app. Step 2: Create a feature branch
Step 3: Create a pull request Step 4: Merge changes
Merge feature branches into the main branch using pull requests. Step 5: Publish changes
Reference:

https://docs.microsoft.com/en-us/azure/devops/pipelines/repos/pipeline-options-for-git

NEW QUESTION 129
- (Exam Topic 1)
You need to design an analytical storage solution for the transactional data. 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.

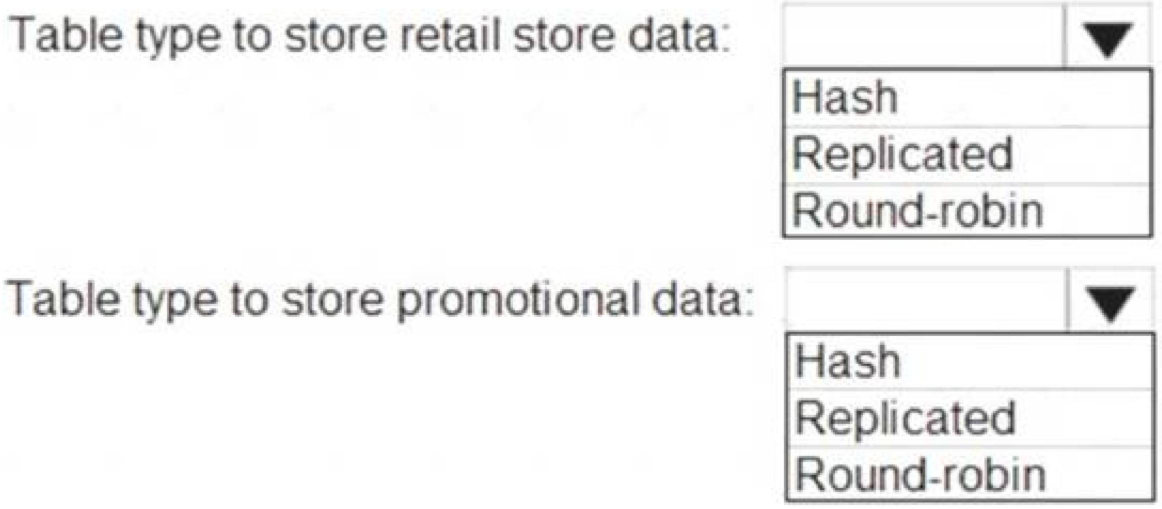


Table type to store retail store data:
- Hash
- Replicated
- Round-robin

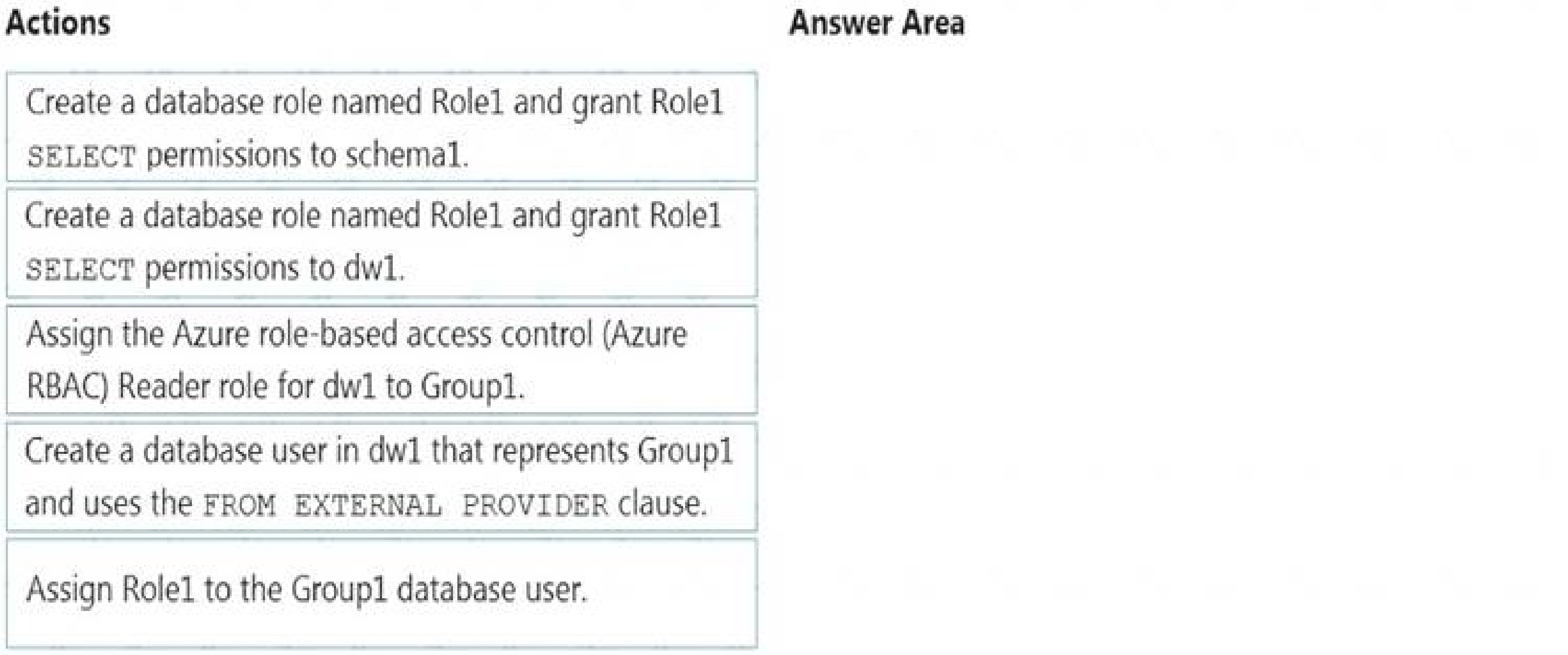
Table type to store promotional data:
- Hash
- Replicated
- Round-robin

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, text, application, table Description automatically generated
Box 1: Round-robin
Round-robin tables are useful for improving loading speed.
Scenario: Partition data that contains sales transaction records. Partitions must be designed to provide efficient loads by month.
Box 2: Hash
Hash-distributed tables improve query performance on large fact tables. Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-tables-distribu

NEW QUESTION 132
- (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

- 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.

Answer Area

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 136
- (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 have an Azure Storage account that contains 100 GB of files. The files contain rows of 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 copy the files to a table that has a columnstore index. Does this meet the goal?

A. Yes
B. No

Answer: B

Explanation:
Instead convert the files to compressed delimited text files. Reference:
https://docs.microsoft.com/en-us/azure/sql-data-warehouse/guidance-for-loading-data

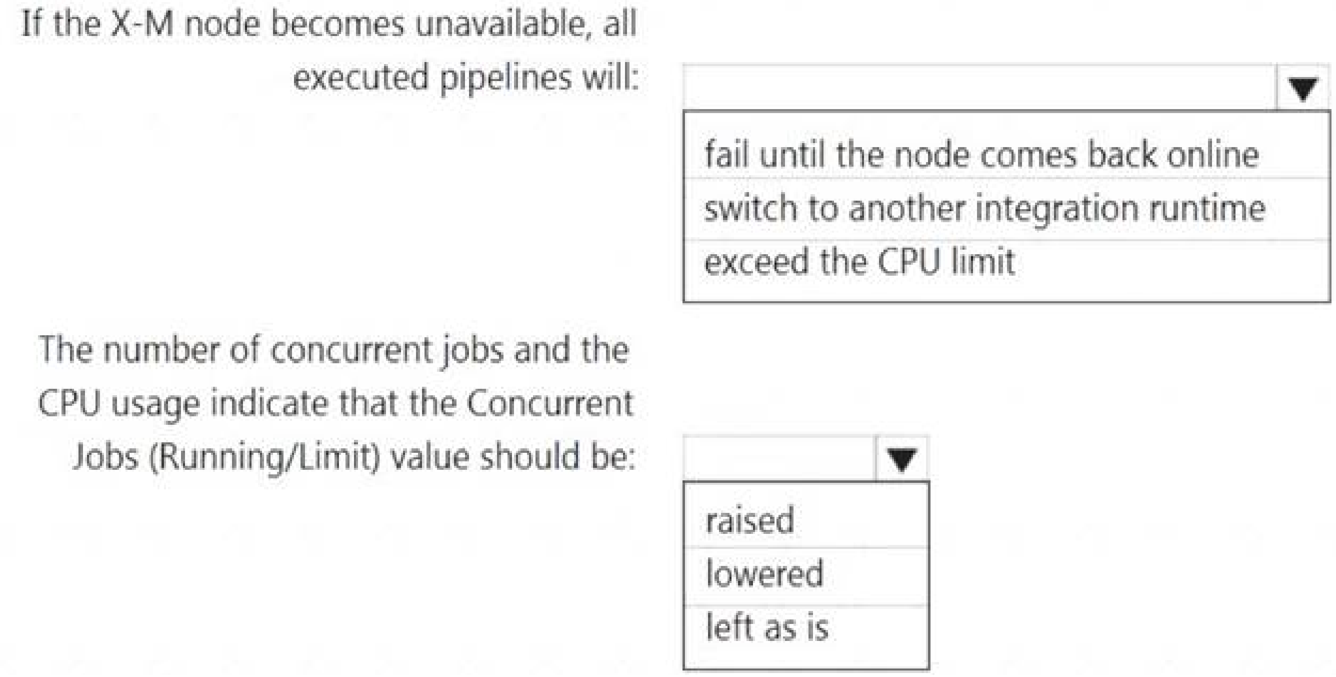
NEW QUESTION 138
- (Exam Topic 3)
You have a self-hosted integration runtime in Azure Data Factory.
The current status of the integration runtime has the following configurations:

- 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.



If the X-M node becomes unavailable, all executed pipelines will:

- fail until the node comes back online
- switch to another integration runtime
- exceed the CPU limit

The number of concurrent jobs and the CPU usage indicate that the Concurrent Jobs (Running/Limit) value should be:

- raised
- lowered
- left as is

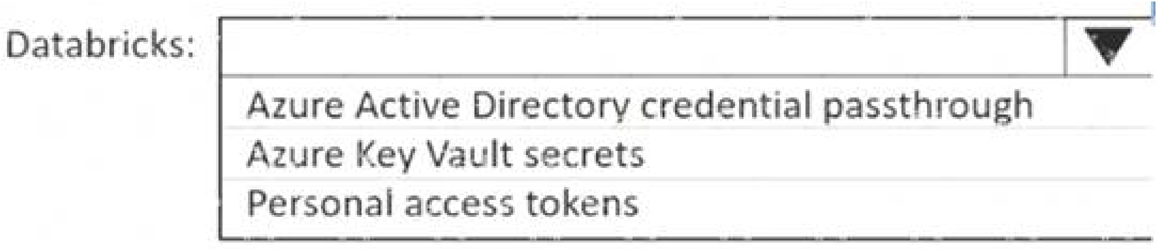
A. Mastered
B. Not Mastered

Answer: A

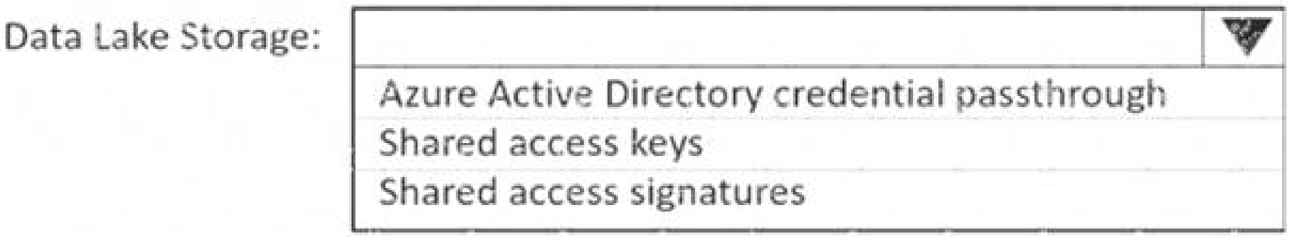
Explanation:
Box 1: fail until the node comes back online We see: High Availability Enabled: False
Note: Higher availability of the self-hosted integration runtime so that it's no longer the single point of failure in your big data solution or cloud data integration with Data Factory.
Box 2: lowered 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 143
- (Exam Topic 3)
You use Azure Data Lake Storage Gen2 to store data that data scientists and data engineers will query by using Azure Databricks interactive notebooks. Users will have access only to the Data Lake Storage folders that relate to the projects on which they work.
You need to recommend which authentication methods to use for Databricks and Data Lake Storage to provide the users with the appropriate access. The solution must minimize administrative effort and development effort.
Which authentication method should you recommend for each Azure service? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.



Databricks:
- Azure Active Directory credential passthrough
- Azure Key Vault secrets
- Personal access tokens



Data Lake Storage:
- Azure Active Directory credential passthrough
- Shared access keys
- Shared access signatures

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Table Description automatically generated
Box 1: Personal access tokens
You can use storage shared access signatures (SAS) to access an Azure Data Lake Storage Gen2 storage account directly. With SAS, you can restrict access to a storage account using temporary tokens with fine-grained access control.
You can add multiple storage accounts and configure respective SAS token providers in the same Spark session.
Box 2: Azure Active Directory credential passthrough
You can authenticate automatically to Azure Data Lake Storage Gen1 (ADLS Gen1) and Azure Data Lake Storage Gen2 (ADLS 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.
After configuring Azure Data Lake Storage credential passthrough and creating storage containers, you can access data directly in Azure Data Lake Storage Gen1 using an adl:// path and Azure Data Lake Storage Gen2 using an abfss:// path:
Reference:
https://docs.microsoft.com/en-us/azure/databricks/data/data-sources/azure/adls-gen2/azure-datalake-gen2-sas-ac https://docs.microsoft.com/en-us/azure/databricks/security/credential-passthrough/adls-passthrough

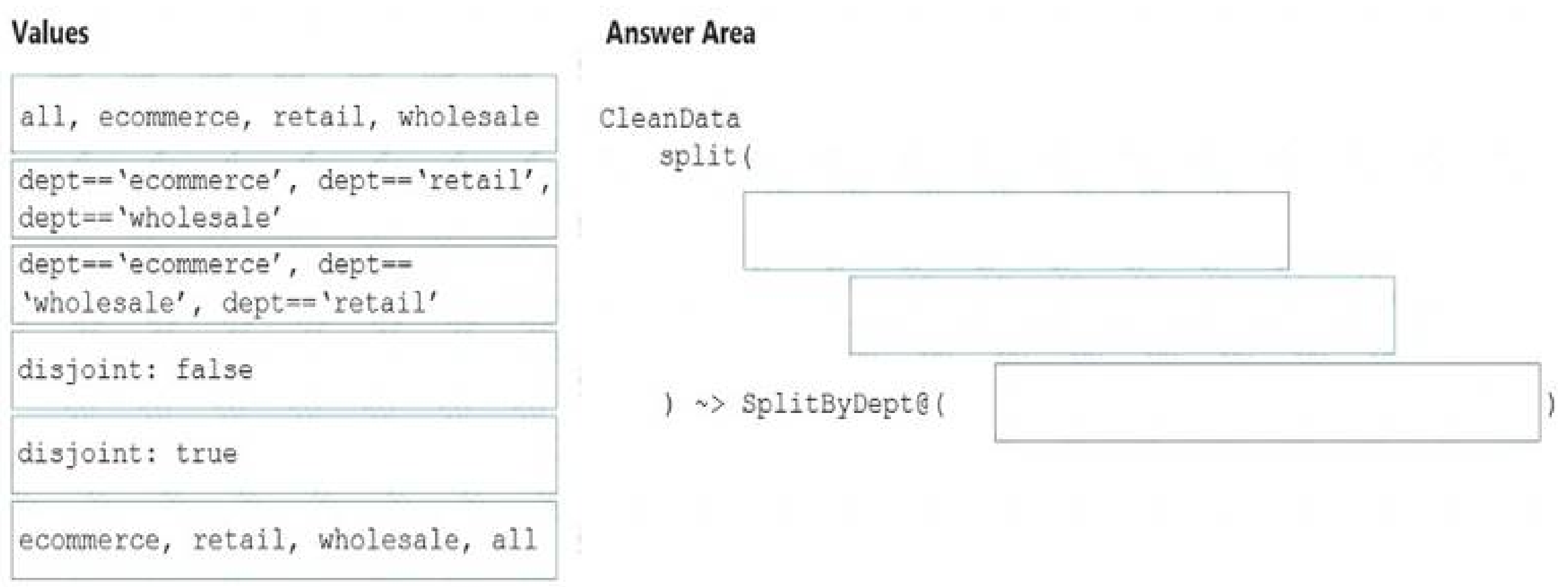
NEW QUESTION 146
- (Exam Topic 3)
You are designing a solution that will copy Parquet files stored in an Azure Blob storage account to an Azure Data Lake Storage Gen2 account.
The data will be loaded daily to the data lake and will use a folder structure of {Year}/{Month}/{Day}/. You need to design a 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: BD

Explanation:
Copy data from one place to another. The requirements are : 1- need to minimize transfert and 2- need to adapte data to the destination folder structure. Filter on LastModifiedDate will copy everything that have changed since the latest load while minimizing the data transfert. Specifying the file naming pattern allows to copy data at the right place to the destination Data Lake.

NEW QUESTION 150
- (Exam Topic 3)
You need to create an Azure Data Factory pipeline to process data for the following three departments at your company: Ecommerce, retail, and wholesale. The solution must ensure that data can also be processed for the entire company.
How should you complete the Data Factory data flow script? 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.



Values

- all, ecommerce, retail, wholesale
- dept==‘ecommerce’, dept==‘retail’, dept==‘wholesale’
- dept==‘ecommerce’, dept== ‘wholesale’, dept==‘retail’
- disjoint: false
- disjoint: true
- ecommerce, retail, wholesale, all

Answer Area

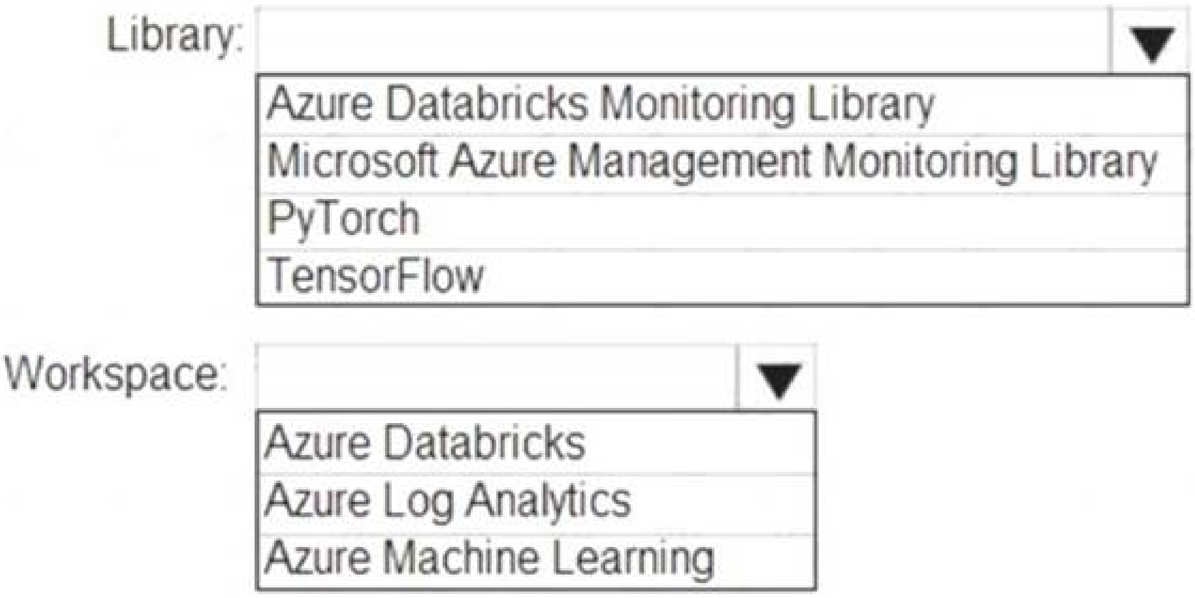
```
CleanData
    split(
           [          ]
               [          ]
    ) ~> SplitByDept@( [          ] )
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:
The conditional split transformation routes data rows to different streams based on matching conditions. The conditional split transformation is similar to a CASE decision structure in a programming language. The transformation evaluates expressions, and based on the results, directs the data row to the specified stream.
Box 1: dept=='ecommerce', dept=='retail', dept=='wholesale'
First we put the condition. The order must match the stream labeling we define in Box 3. Syntax:
<incomingStream> split(
<conditionalExpression1>
<conditionalExpression2> disjoint: {true | false}
) ~> <splitTx>@(stream1, stream2, ..., <defaultStream>)
Box 2: discount : false
disjoint is false because the data goes to the first matching condition. All remaining rows matching the third condition go to output stream all.
Box 3: ecommerce, retail, wholesale, all Label the streams
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/data-flow-conditional-split

NEW QUESTION 155
- (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.



Library: ▼
- Azure Databricks Monitoring Library
- Microsoft Azure Management Monitoring Library
- PyTorch
- TensorFlow

Workspace: ▼
- Azure Databricks
- Azure Log Analytics
- Azure Machine Learning

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 156
- (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: B

Explanation:
Dynamic data masking helps prevent unauthorized access to sensitive data by enabling customers to designate how much of the sensitive data to reveal with minimal impact on the application layer. It’s a policy-based security feature that hides the sensitive data in the result set of a query over designated database fields, while the data in the database is not changed.
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/dynamic-data-masking-overview

NEW QUESTION 161
- (Exam Topic 3)
You are designing a highly available Azure Data Lake Storage solution that will include geo-zone-redundant storage (GZRS).
You need to monitor for replication delays that can affect the recovery point objective (RPO). What should you include in the monitoring solution?

A. availability
B. Average Success E2E Latency
C. 5xx: Server Error errors
D. Last Sync Time

Answer: D

Explanation:
Because geo-replication is asynchronous, it is possible that data written to the primary region has not yet been written to the secondary region at the time an outage occurs. The Last Sync Time property indicates the last time that data from the primary region was written successfully to the secondary region. All writes made to the primary region before the last sync time are available to be read from the secondary location. Writes made to the primary region after the last sync time property may or may not be available for reads yet.
Reference:
https://docs.microsoft.com/en-us/azure/storage/common/last-sync-time-get

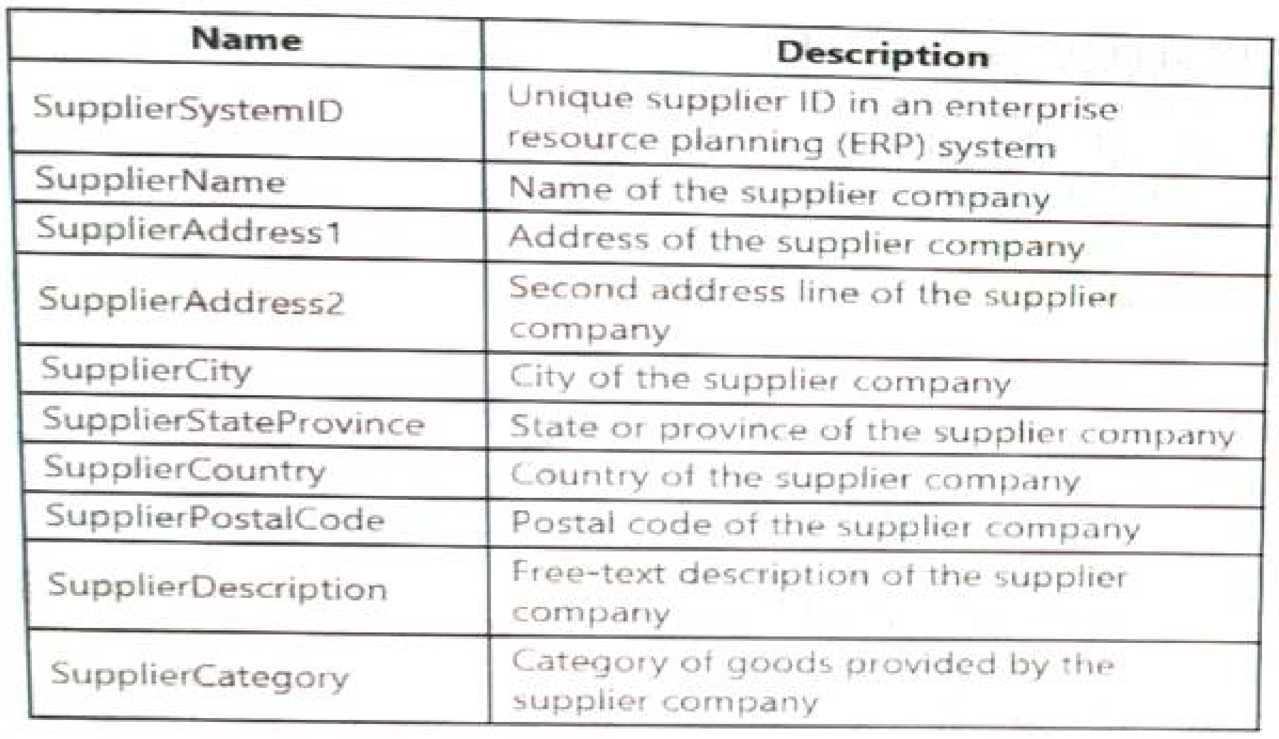
NEW QUESTION 166
- (Exam Topic 3)
You are designing a highly available Azure Data Lake Storage solution that will induce geo-zone-redundant storage (GZRS).
You need to monitor for replication delays that can affect the recovery point objective (RPO). What should you include m the monitoring solution?

A. Last Sync Time
B. Average Success Latency
C. Error errors
D. availability

Answer: A

Explanation:
Because geo-replication is asynchronous, it is possible that data written to the primary region has not yet been written to the secondary region at the time an outage occurs. The Last Sync Time property indicates the last time that data from the primary region was written successfully to the secondary region. All writes made to the primary region before the last sync time are available to be read from the secondary location. Writes made to the primary region after the last sync time property may or may not be available for reads yet.
Reference:
https://docs.microsoft.com/en-us/azure/storage/common/last-sync-time-get

NEW QUESTION 169
- (Exam Topic 3)
You are designing a slowly changing dimension (SCD) for supplier data in an Azure Synapse Analytics dedicated SQL pool.
You plan to keep a record of changes to the available fields. The supplier data contains the following columns.



Name	Description
SupplierSystemID	Unique supplier ID in an enterprise resource planning (ERP) system
SupplierName	Name of the supplier company
SupplierAddress1	Address of the supplier company
SupplierAddress2	Second address line of the supplier company
SupplierCity	City of the supplier company
SupplierStateProvince	State or province of the supplier company
SupplierCountry	Country of the supplier company
SupplierPostalCode	Postal code of the supplier company
SupplierDescription	Free-text description of the supplier company
SupplierCategory	Category of goods provided by the supplier company

Which three additional columns should you add to the data to create a Type 2 SCD? Each correct answer presents part of the solution.
NOTE: Each correct selection is worth one point.

A. surrogate primary key
B. foreign key
C. effective start date
D. effective end date
E. last modified date
F. business key

Answer: CDF

Explanation:
Reference:
https://docs.microsoft.com/en-us/sql/integration-services/data-flow/transformations/slowly-changing-dimension

NEW QUESTION 170
- (Exam Topic 3)
You have two Azure Data Factory instances named ADFdev and ADFprod. ADFdev connects to an Azure DevOps Git repository.
You publish changes from the main branch of the Git repository to ADFdev. You need to deploy the artifacts from ADFdev to ADFprod.
What should you do first?

A. From ADFdev, modify the Git configuration.
B. From ADFdev, create a linked service.
C. From Azure DevOps, create a release pipeline.
D. From Azure DevOps, update the main branch.

Answer: C

Explanation:
In Azure Data Factory, continuous integration and delivery (CI/CD) means moving Data Factory pipelines from one environment (development, test, production) to another.
Note:
The following is a guide for setting up an Azure Pipelines release that automates the deployment of a data factory to multiple environments.

- In Azure DevOps, open the project that's configured with your data factory.
- On the left side of the page, select Pipelines, and then select Releases.
- Select New pipeline, or, if you have existing pipelines, select New and then New release pipeline.
- In the Stage name box, enter the name of your environment.
- Select Add artifact, and then select the git repository configured with your development data factory.

Select the publish branch of the repository for the Default branch. By default, this publish branch is adf_publish.

- Select the Empty job template. Reference:

https://docs.microsoft.com/en-us/azure/data-factory/continuous-integration-deployment

NEW QUESTION 172
- (Exam Topic 3)
You plan to perform batch processing in Azure Databricks once daily. Which type of Databricks cluster should you use?

A. High Concurrency
B. automated
C. interactive

Answer: C

Explanation:
Azure Databricks has two types of clusters: interactive and automated. You use interactive clusters to analyze data collaboratively with interactive notebooks. You use automated clusters to run fast and robust automated jobs.
Example: Scheduled batch workloads (data engineers running ETL jobs)
This scenario involves running batch job JARs and notebooks on a regular cadence through the Databricks platform.
The suggested best practice is to launch a new cluster for each run of critical jobs. This helps avoid any issues (failures, missing SLA, and so on) due to an existing workload (noisy neighbor) on a shared cluster.
Reference:
https://docs.databricks.com/administration-guide/cloud-configurations/aws/cmbp.html#scenario-3-scheduled-bat

NEW QUESTION 177
- (Exam Topic 3)
You have an Azure Databricks workspace and an Azure Data Lake Storage Gen2 account named storage! New files are uploaded daily to storage1.
• Incrementally process new files as they are upkorage1 as a structured streaming source. The solution must meet the following requirements:
• Minimize implementation and maintenance effort.
• Minimize the cost of processing millions of files.
• Support schema inference and schema drift. Which should you include in the recommendation?

A. Auto Loader
B. Apache Spark FileStreamSource
C. COPY INTO
D. Azure Data Factory

Answer: D

NEW QUESTION 178
- (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?

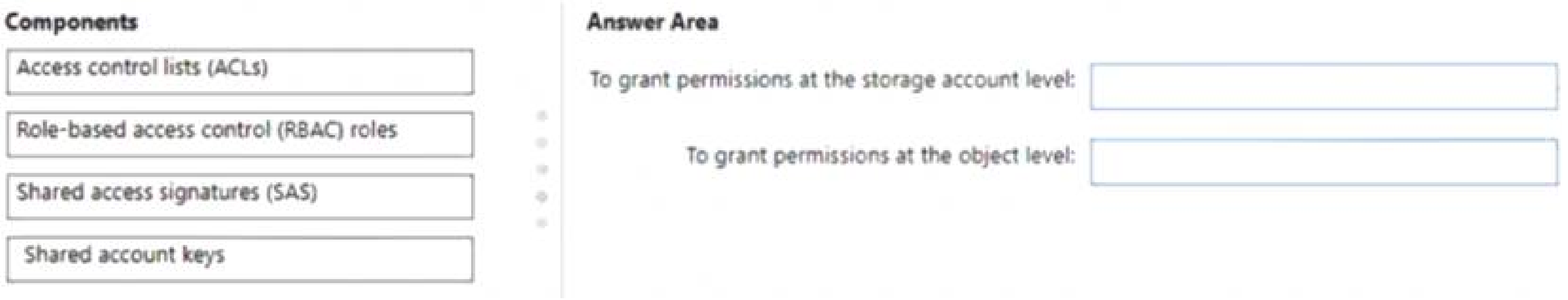
A. JOIN
B. WHERE
C. DISTINCT
D. GROUP BY

Answer: B

NEW QUESTION 181
- (Exam Topic 3)
You have an Azure Data Lake Storage Gen 2 account named storage1.
You need to recommend a solution for accessing the content in storage1. The solution must meet the following requirements:

- List and read permissions must be granted at the storage account level.
- Additional permissions can be applied to individual objects in storage1.
- Security principals from Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra, must be used for authentication.

What should you use? To answer, drag the appropriate components to the correct requirements. Each component 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.



Components

Access control lists (ACLs)
Role-based access control (RBAC) roles
Shared access signatures (SAS)
Shared account keys

Answer Area

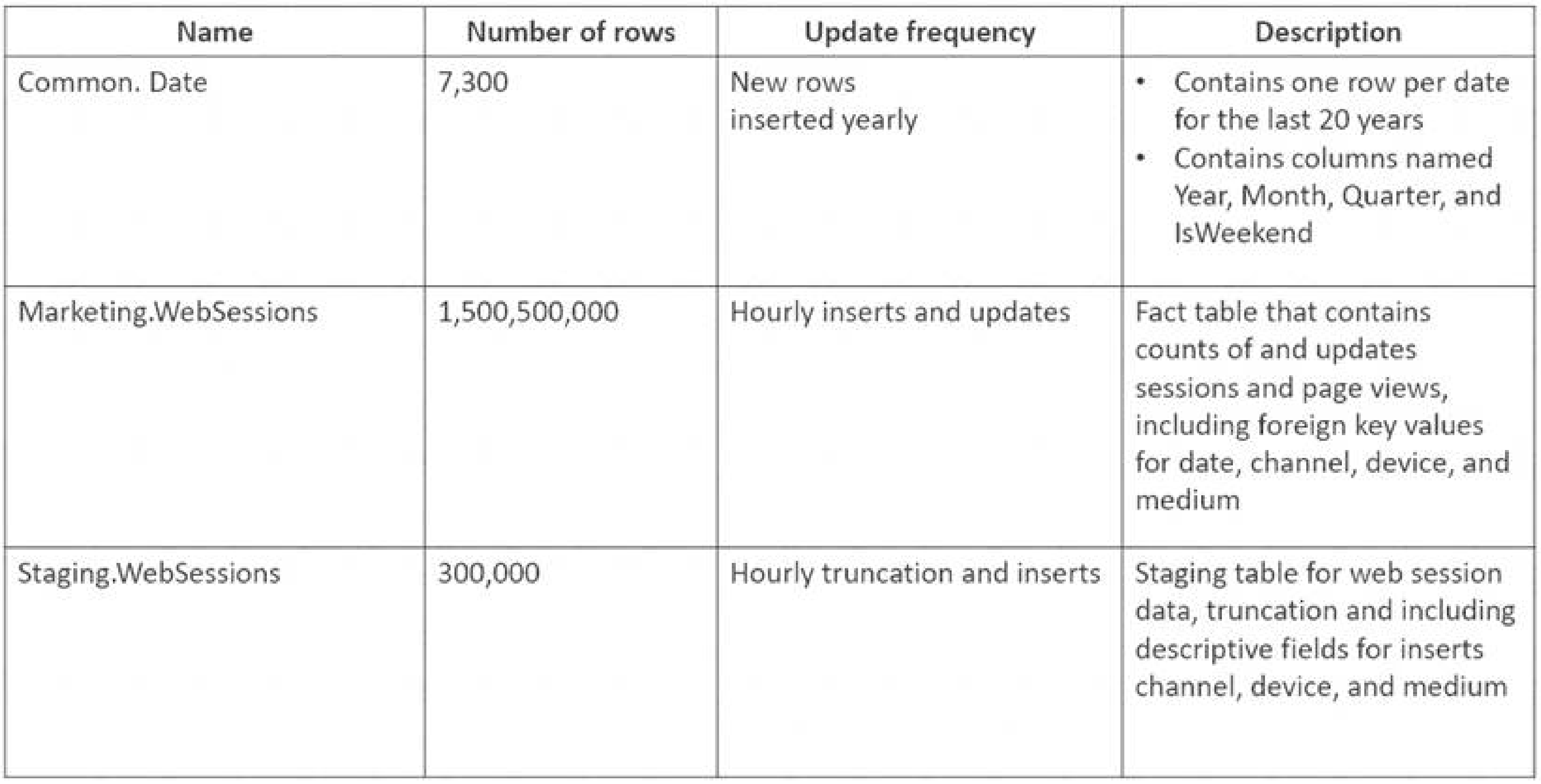
To grant permissions at the storage account level:
To grant permissions at the object level:

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Box 1: Role-based access control (RBAC) roles
List and read permissions must be granted at the storage account level.
Security principals from Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra, must be used for authentication.
Role-based access control (Azure RBAC)
Azure RBAC uses role assignments to apply sets of permissions to security principals. A security principal is an object that represents a user, group, service principal, or managed identity that is defined in Azure Active Directory (AD). A permission set can give a security principal a "coarse-grain" level of access such as read or write access to all of the data in a storage account or all of the data in a container.
Box 2: Access control lists (ACLs)
Additional permissions can be applied to individual objects in storage1. Access control lists (ACLs)
ACLs give you the ability to apply "finer grain" level of access to directories and files. An ACL is a permission construct that contains a series of ACL entries. Each ACL entry associates security principal with an access level.
Reference: https://learn.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-access-control-model

NEW QUESTION 184
- (Exam Topic 3)
You have an Azure subscription.
You plan to build a data warehouse in an Azure Synapse Analytics dedicated SQL pool named pool1 that will contain staging tables and a dimensional model.
Pool1 will contain the following tables.



Name	Number of rows	Update frequency	Description
Common. Date	7,300	New rows inserted yearly	• Contains one row per date for the last 20 years • Contains columns named Year, Month, Quarter, and IsWeekend
Marketing.WebSessions	1,500,500,000	Hourly inserts and updates	Fact table that contains counts of and updates sessions and page views, including foreign key values for date, channel, device, and medium
Staging.WebSessions	300,000	Hourly truncation and inserts	Staging table for web session data, truncation and including descriptive fields for inserts channel, device, and medium

You need to design the table storage for pool1. The solution must meet the following requirements:

- Maximize the performance of data loading operations to Staging.WebSessions.
- Minimize query times for reporting queries against the dimensional model.

Which type of table distribution should you use for each table? To answer, drag the appropriate table distribution types to the correct tables. Each table distribution type 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.

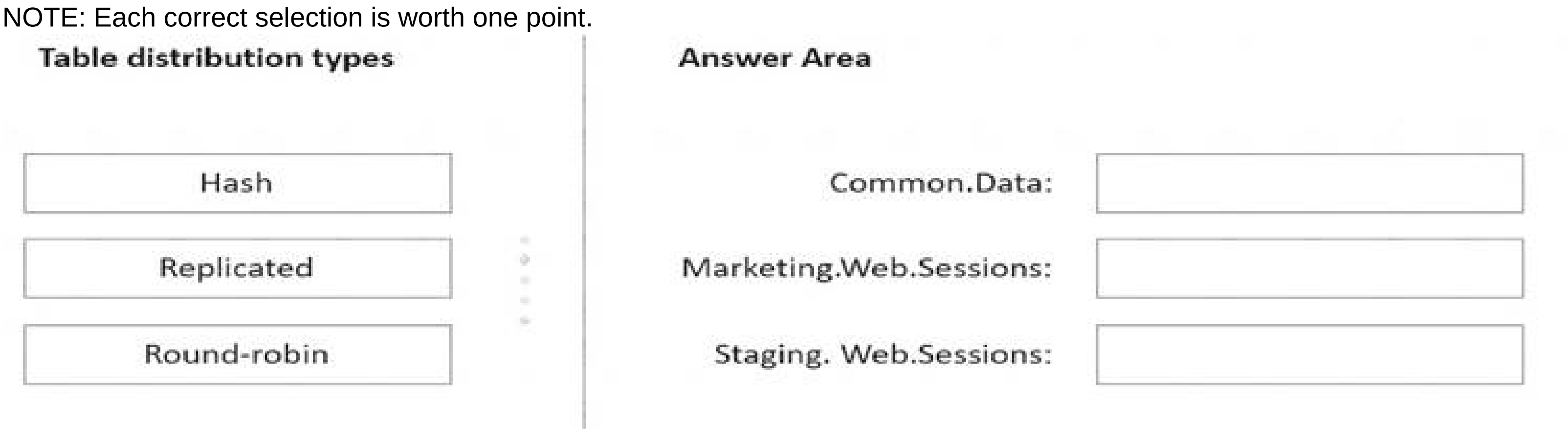


Table distribution types

Hash

Replicated

Round-robin

Answer Area

Common.Data:

Marketing.Web.Sessions:

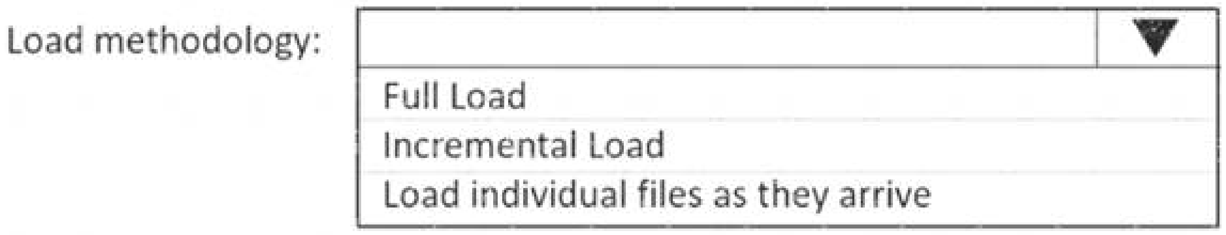
Staging. Web.Sessions:

A. Mastered
B. Not Mastered

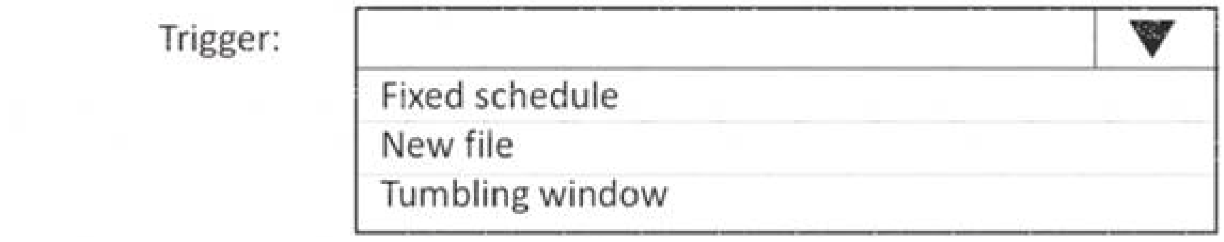
Answer: A

Explanation:
Box 1: Replicated
The best table storage option for a small table is to replicate it across all the Compute nodes. Box 2: Hash
Hash-distribution improves query performance on large fact tables. Box 3: Round-robin
Round-robin distribution is 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 187
- (Exam Topic 3)
You have an Azure Storage account that generates 200,000 new files daily. The file names have a format of {YYYY}/{MM}/{DD}/{HH}/{CustomerID}.csv.
You need to design an Azure Data Factory solution that will load new data from the storage account to an Azure Data Lake once hourly. The solution must minimize load times and costs.
How should you configure the solution? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.



Load methodology:
- Full Load
- Incremental Load
- Load individual files as they arrive

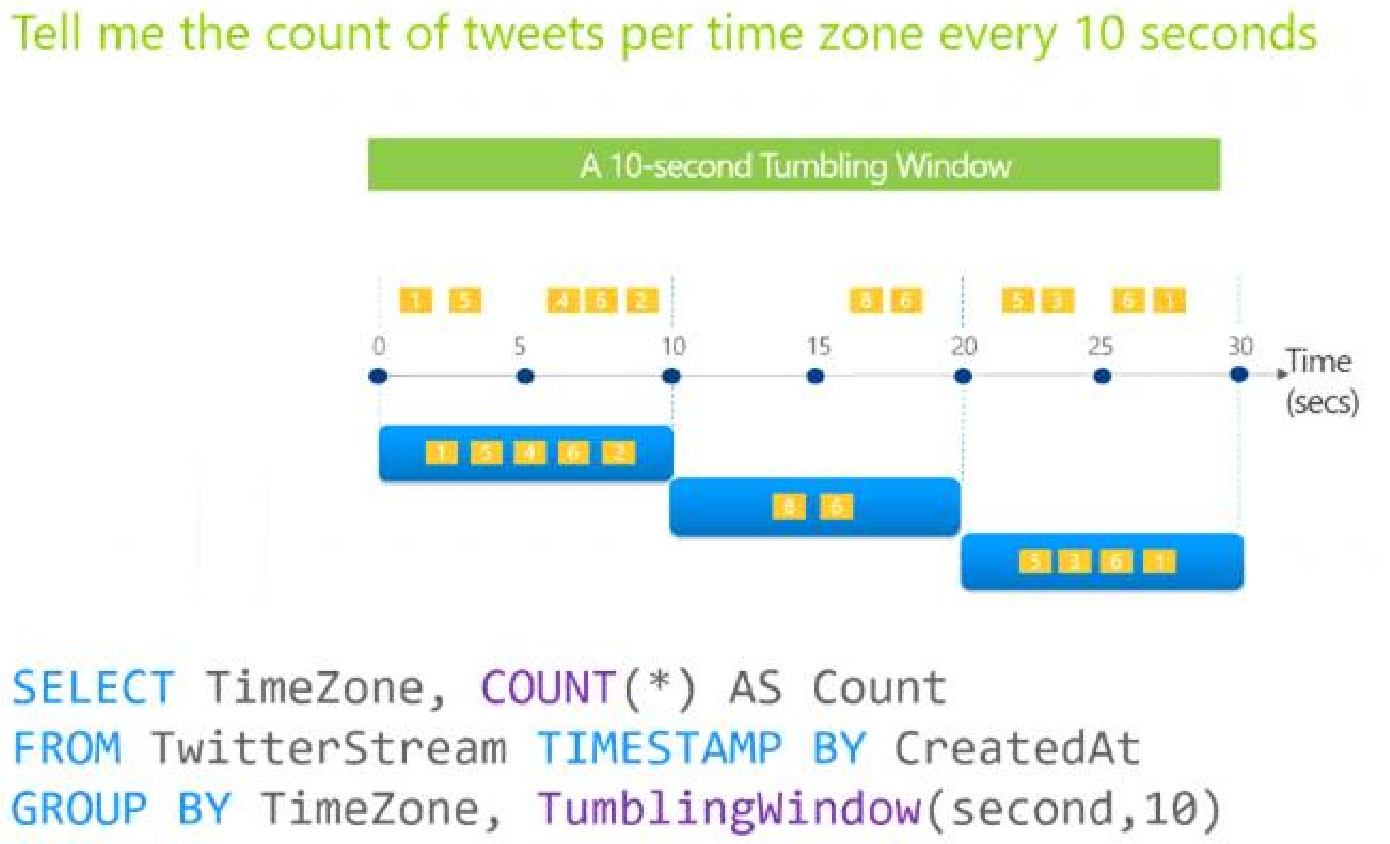


Trigger:
- Fixed schedule
- New file
- Tumbling window

A. Mastered
B. Not Mastered

Answer: A

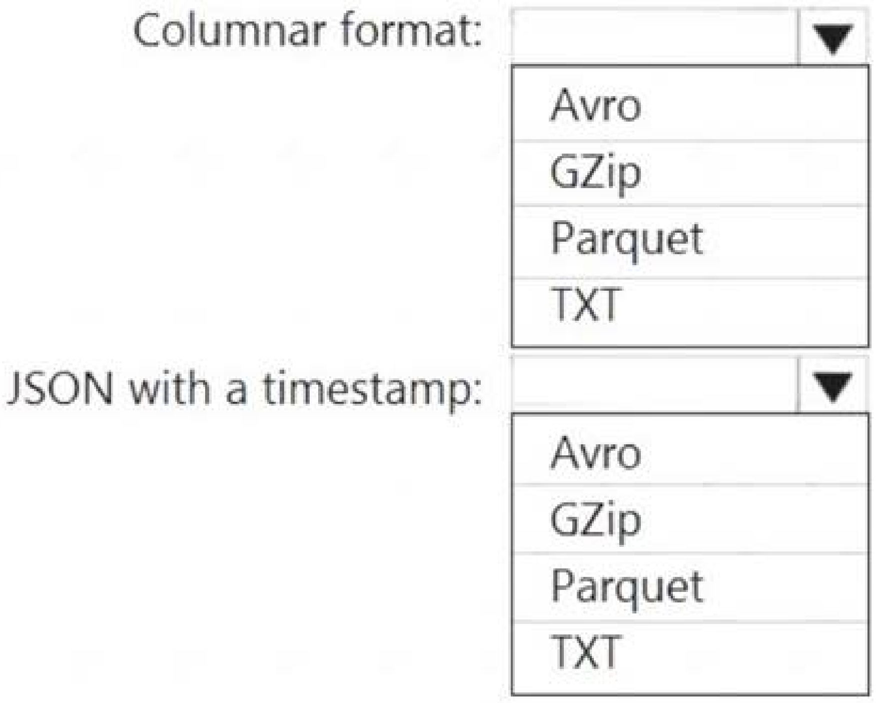
Explanation:
Table Description automatically generated
Box 1: Incremental load Box 2: Tumbling window
Tumbling windows are a series of fixed-sized, non-overlapping and contiguous time intervals. The following diagram illustrates a stream with a series of events and how they are mapped into 10-second tumbling windows.
Timeline Description automatically generated


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 190
- (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

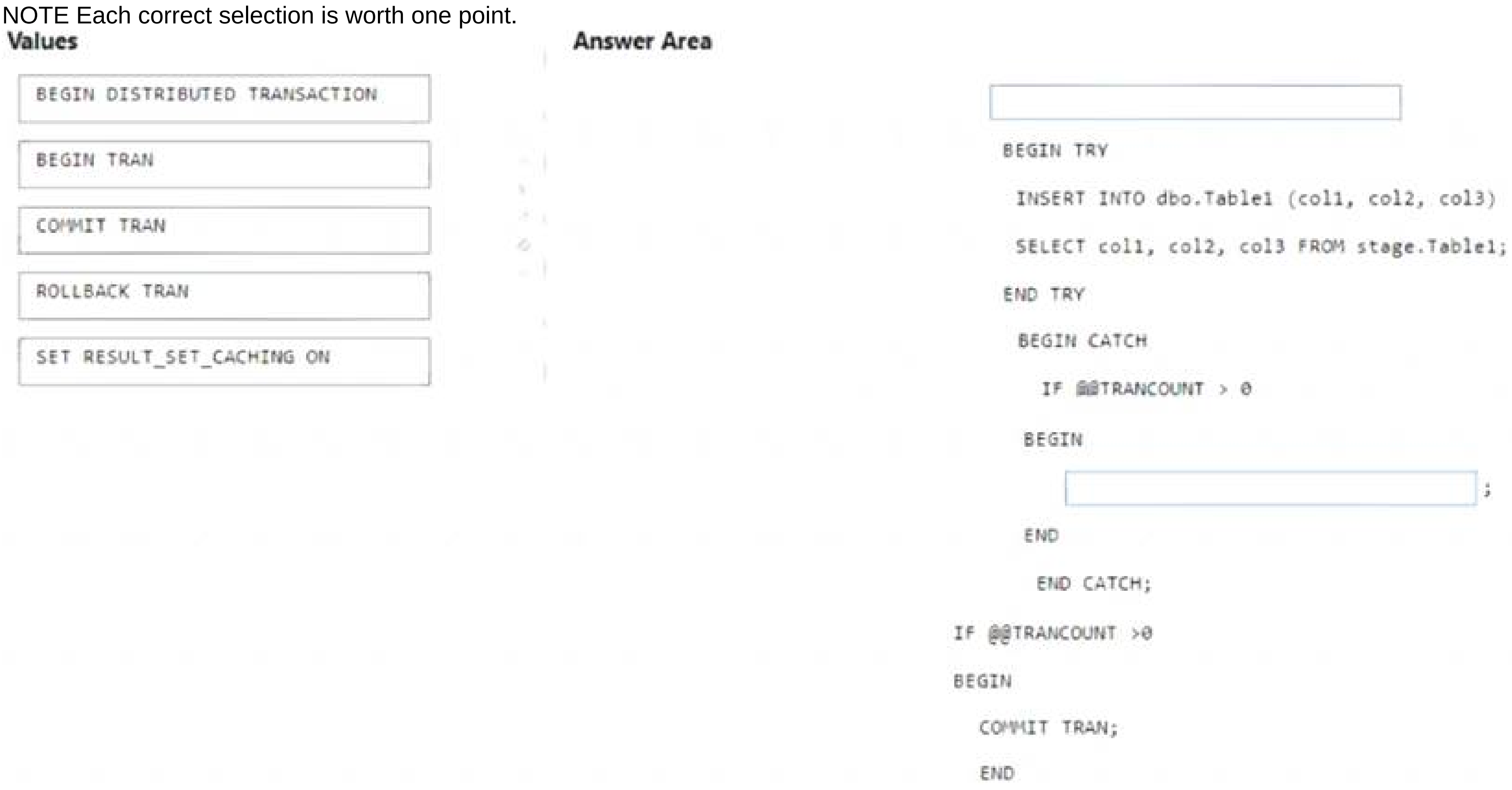
NEW QUESTION 191
- (Exam Topic 3)
You have an Azure Synapse Analytics dedicated SQL pool named Pool1. Pool1 contains a table named table1. You load 5 TB of data intotable1.
You need to ensure that columnstore compression is maximized for table1. Which statement should you execute?

A. ALTER INDEX ALL on table1 REORGANIZE
B. ALTER INDEX ALL on table1 REBUILD
C. DBCC DBREINOEX (table1)
D. DBCC INDEXDEFRAG (pool1,tablel)

Answer: B

Explanation:
Columnstore and columnstore archive compression
Columnstore tables and indexes are always stored with columnstore compression. You can further reduce the size of columnstore data by configuring an additional compression called archival compression. To perform archival compression, SQL Server runs the Microsoft XPRESS compression algorithm on the data. Add or remove archival compression by using the following data compression types:
Use COLUMNSTORE_ARCHIVE data compression to compress columnstore data with archival compression.
Use COLUMNSTORE data compression to decompress archival compression. The resulting data continue to be compressed with columnstore compression.
To add archival compression, use ALTER TABLE (Transact-SQL) or ALTER INDEX (Transact-SQL) with the REBUILD option and DATA COMPRESSION = COLUMNSTORE_ARCHIVE.
Reference: https://learn.microsoft.com/en-us/sql/relational-databases/data-compression/data-compression

NEW QUESTION 192
- (Exam Topic 3)
You are batch loading a table in an Azure Synapse Analytics dedicated SQL pool.
You need to load data from a staging table to the target table. The solution must ensure that if an error occurs while loading the data to the target table, all the inserts in that batch are undone.
How should you complete the Transact-SQL code? 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.



Values

- BEGIN DISTRIBUTED TRANSACTION
- BEGIN TRAN
- COMMIT TRAN
- ROLLBACK TRAN
- SET RESULT_SET_CACHING ON

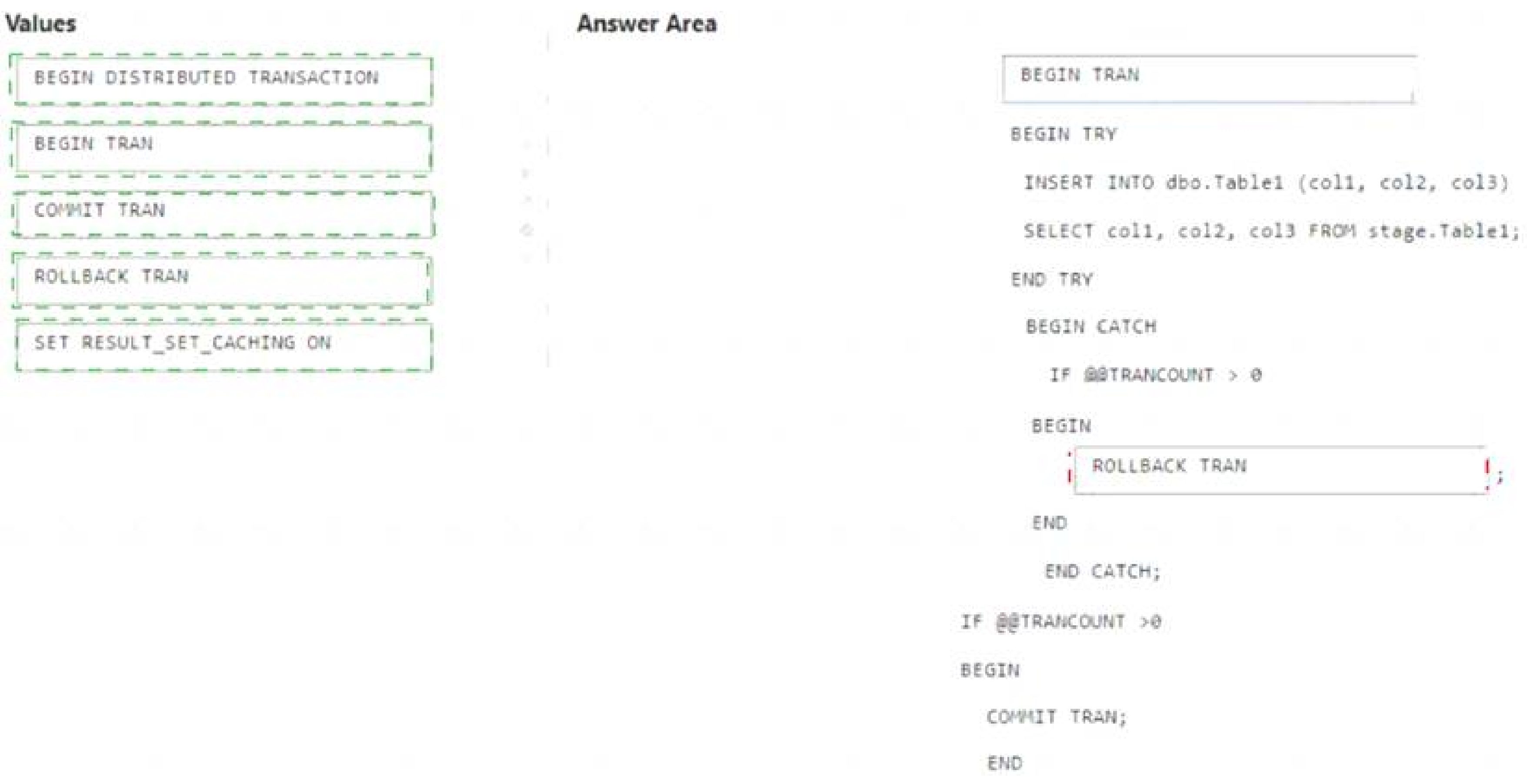
Answer Area

```
  
 BEGIN TRY
  INSERT INTO dbo.Table1 (col1, col2, col3)
  SELECT col1, col2, col3 FROM stage.Table1;
 END TRY
  BEGIN CATCH
    IF @@TRANCOUNT > 0
   BEGIN
                                   ;
   END
    END CATCH;
IF @@TRANCOUNT >0
BEGIN
  COMMIT TRAN;
  END
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:



Values

- BEGIN DISTRIBUTED TRANSACTION
- BEGIN TRAN
- COMMIT TRAN
- ROLLBACK TRAN
- SET RESULT_SET_CACHING ON

Answer Area

```
        BEGIN TRAN

        BEGIN TRY
         INSERT INTO dbo.Table1 (col1, col2, col3)
         SELECT col1, col2, col3 FROM stage.Table1;
        END TRY
         BEGIN CATCH
           IF @@TRANCOUNT > 0
          BEGIN
              ROLLBACK TRAN ;
          END
            END CATCH;
    IF @@TRANCOUNT >0
    BEGIN
      COMMIT TRAN;
      END
```

NEW QUESTION 195
- (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

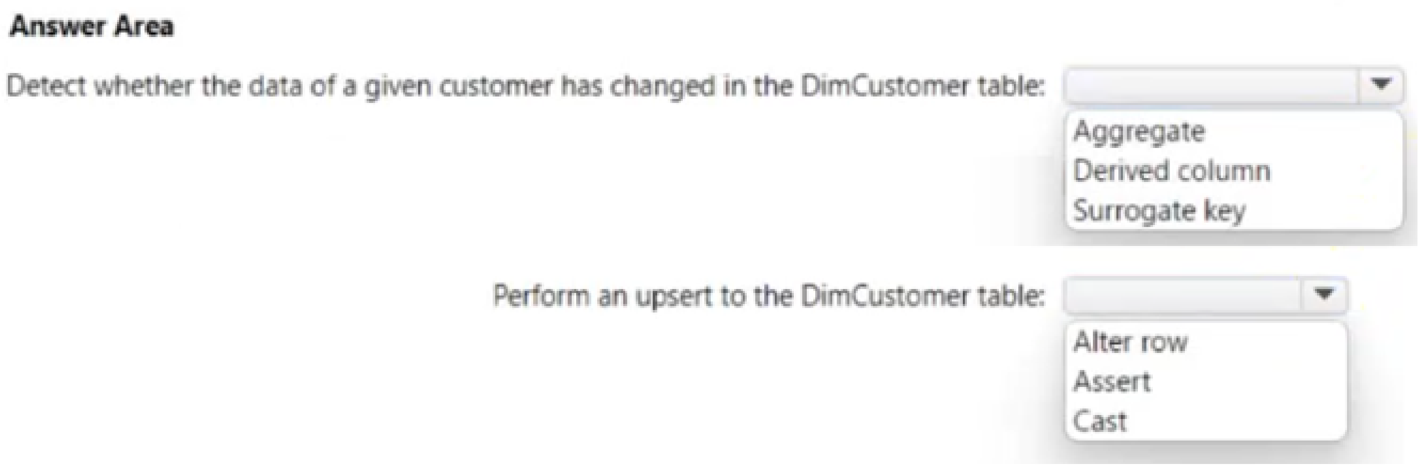
Explanation:
Instead use a tumbling window. Tumbling windows are a series of fixed-sized, non-overlapping and contiguous time intervals.
Reference:
https://docs.microsoft.com/en-us/stream-analytics-query/tumbling-window-azure-stream-analytics

NEW QUESTION 199
- (Exam Topic 3)
You have an Azure data factory named ADM that contains a pipeline named Pipelwe1 Pipeline! must execute every 30 minutes with a 15-minute offset.
Vou need to create a trigger for Pipehne1. The trigger must meet the following requirements:
• Backfill data from the beginning of the day to the current time.
• If Pipeline1 fairs, ensure that the pipeline can re-execute within the same 30-mmute period.
• Ensure that only one concurrent pipeline execution can occur.
• Minimize de4velopment and configuration effort Which type of trigger should you create?

A. schedule
B. event-based
C. manual
D. tumbling window

Answer: A

NEW QUESTION 200
- (Exam Topic 3)
You are developing an Azure Synapse Analytics pipeline that will include a mapping data flow named Dataflow1. Dataflow1 will read customer data from an external source and use a Type 1 slowly changing dimension (SCO) when loading the data into a table named DimCustomer1 in an Azure Synapse Analytics dedicated SQL pool.
You need to ensure that Dataflow1 can perform the following tasks:
* Detect whether the data of a given customer has changed in the DimCustomer table.
• Perform an upsert to the DimCustomer table.
Which type of transformation should you use for each task? To answer, select the appropriate options in the answer area
NOTE; Each correct selection is worth one point.



Answer Area

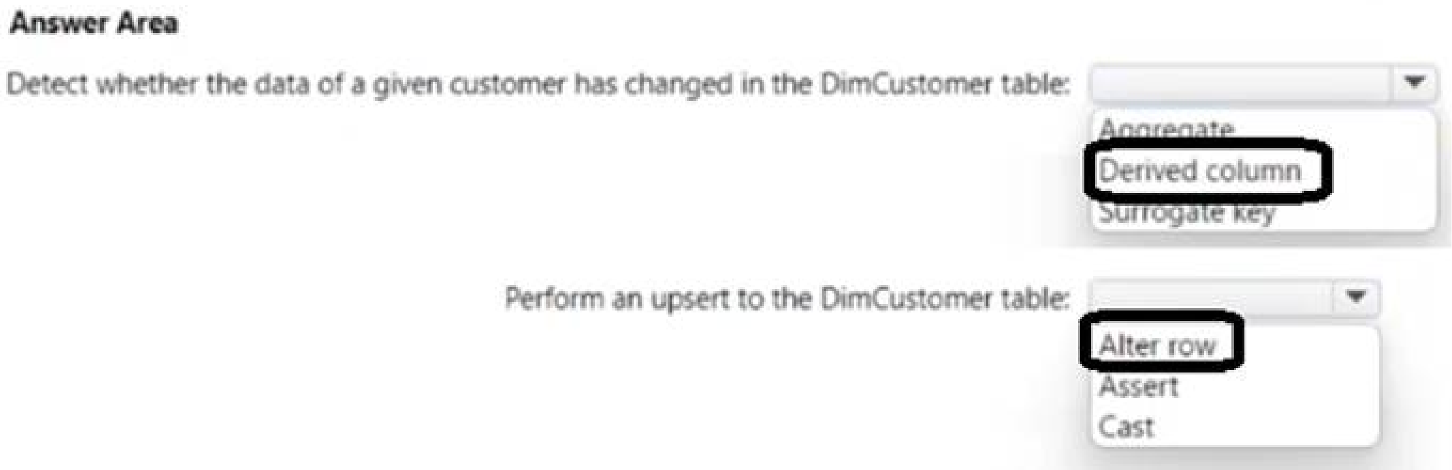
Detect whether the data of a given customer has changed in the DimCustomer table:

Perform an upsert to the DimCustomer table:

A. Mastered
B. Not Mastered

Answer: A

Explanation:

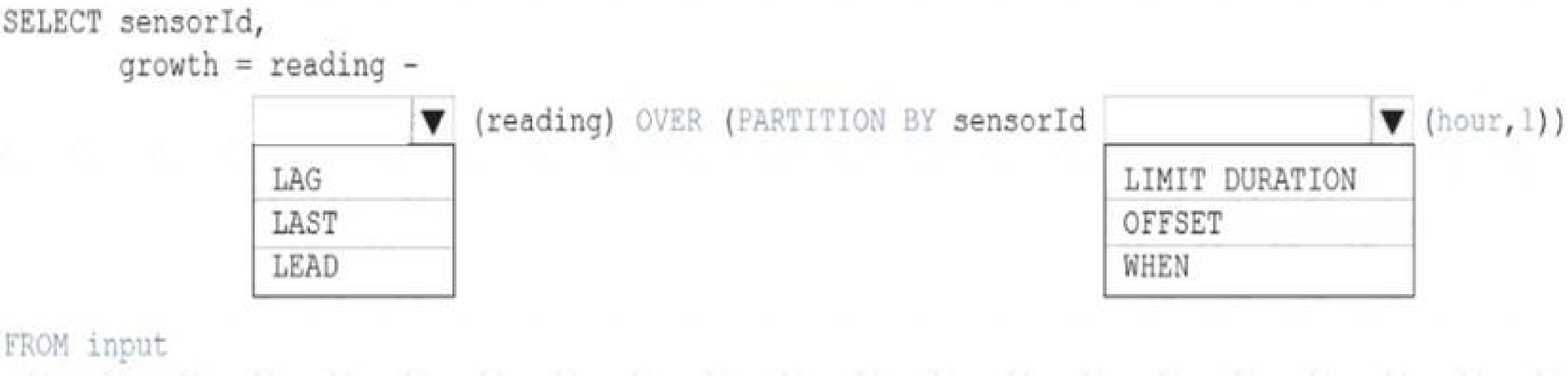


Answer Area

Detect whether the data of a given customer has changed in the DimCustomer table: Derived column

Perform an upsert to the DimCustomer table: Alter row

NEW QUESTION 202
- (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.



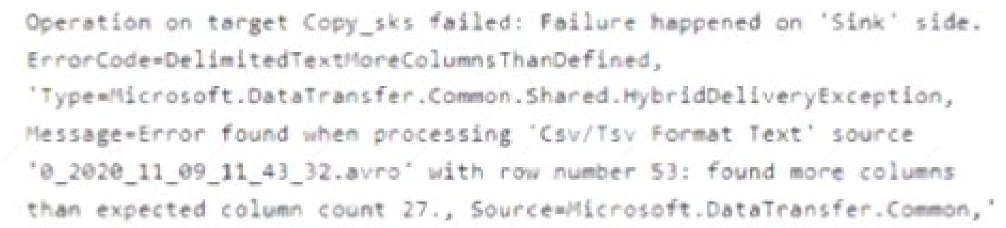
```
SELECT sensorId,
       growth = reading -
                [          ▼] (reading) OVER (PARTITION BY sensorId [               ▼] (hour,1))
FROM input
```

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 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 203
- (Exam Topic 3)
You have an Azure Data Lake Storage Gen2 account that contains two folders named Folder and Folder2. You use Azure Data Factory to copy multiple files from Folder1 to Folder2.



```
Operation on target Copy_sks failed: Failure happened on 'Sink' side.
ErrorCode=DelimitedTextMoreColumnsThanDefined,
'Type=Microsoft.DataTransfer.Common.Shared.HybridDeliveryException,
Message=Error found when processing 'Csv/Tsv Format Text' source
'0_2020_11_09_11_43_32.avro' with row number 53: found more columns
than expected column count 27., Source=Microsoft.DataTransfer.Common,'
```

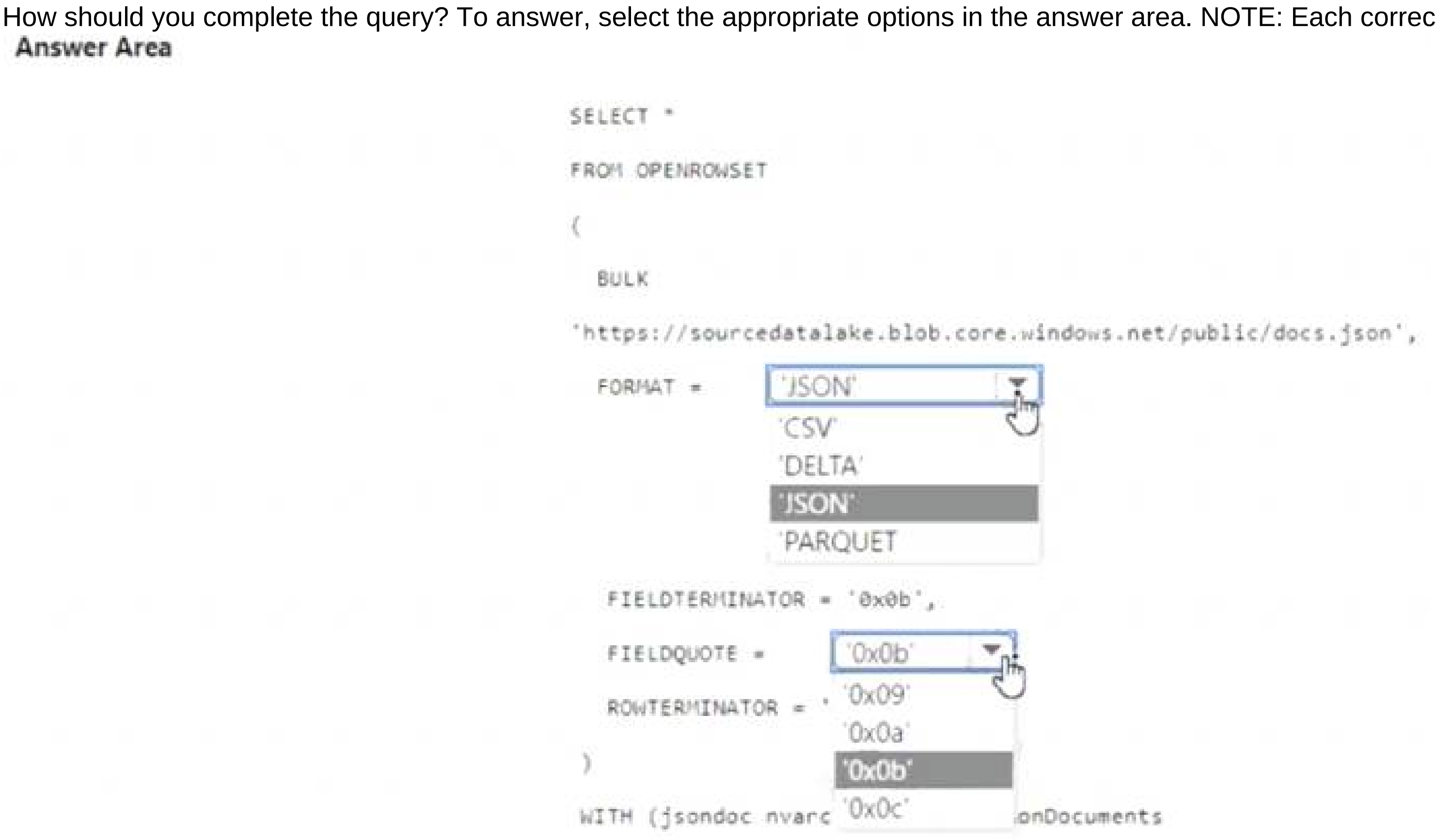
You receive the following error.
What should you do to resolve the error.

A. Add an explicit mapping.
B. Enable fault tolerance to skip incompatible rows.
C. Lower the degree of copy parallelism
D. Change the Copy activity setting to Binary Copy

Answer: A

Explanation:
Reference:
https://knowledge.informatica.com/s/article/Microsoft-Azure-Data-Lake-Store-Gen2-target-file-names-not-gene

NEW QUESTION 208
- (Exam Topic 3)
You have an Azure Synapse serverless SQL pool.
You need to read JSON documents from a file by using the OPENROWSET function.
How should you complete the query? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.



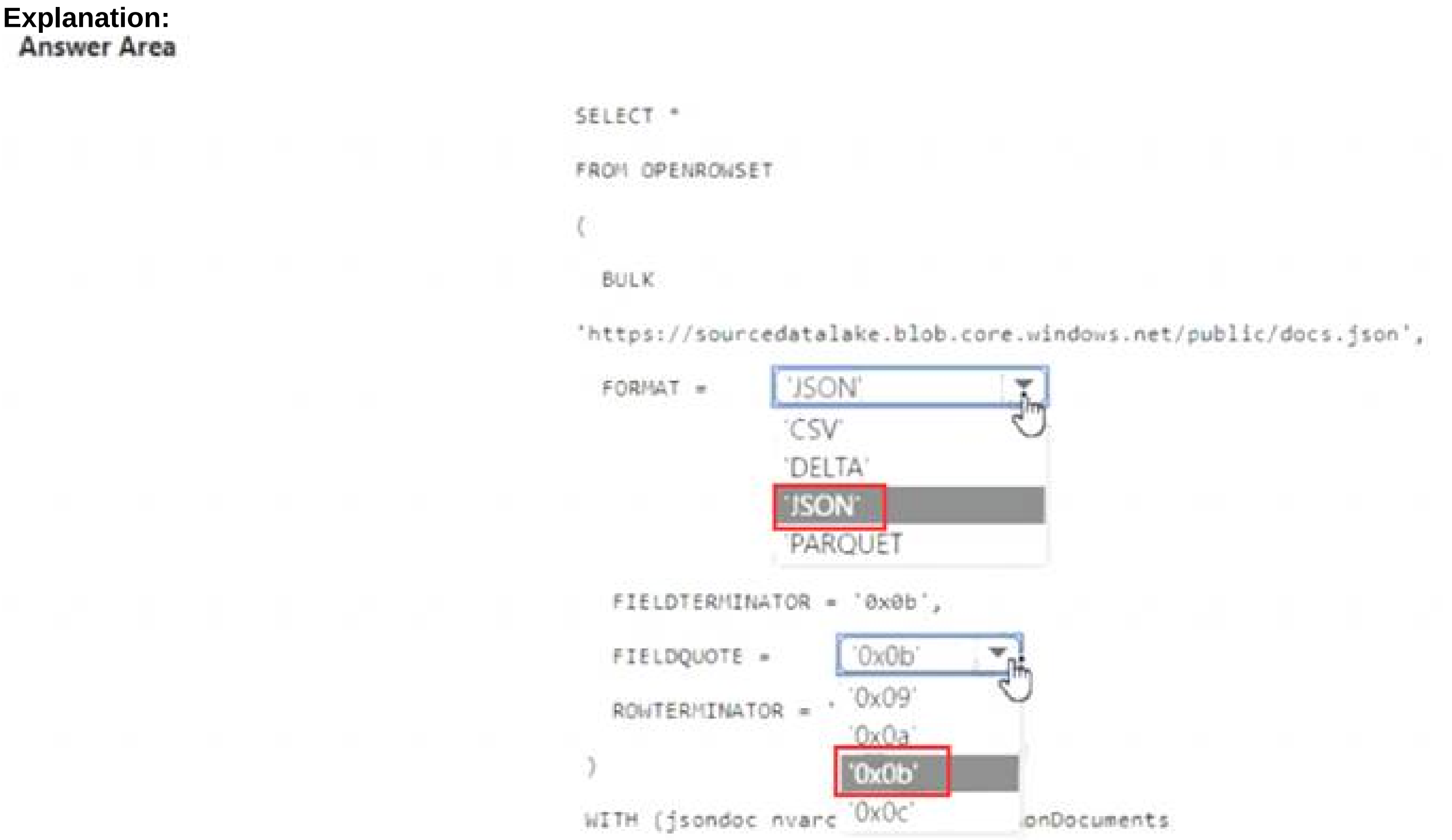
Answer Area

```
SELECT *
FROM OPENROWSET
(
  BULK
'https://sourcedatalake.blob.core.windows.net/public/docs.json',
  FORMAT = 'JSON'
   FIELDTERMINATOR = '0x0b',
   FIELDQUOTE = '0x0b'
   ROWTERMINATOR = '
 )
 WITH (jsondoc nvarc                onDocuments
```

A. Mastered
B. Not Mastered

Answer: A

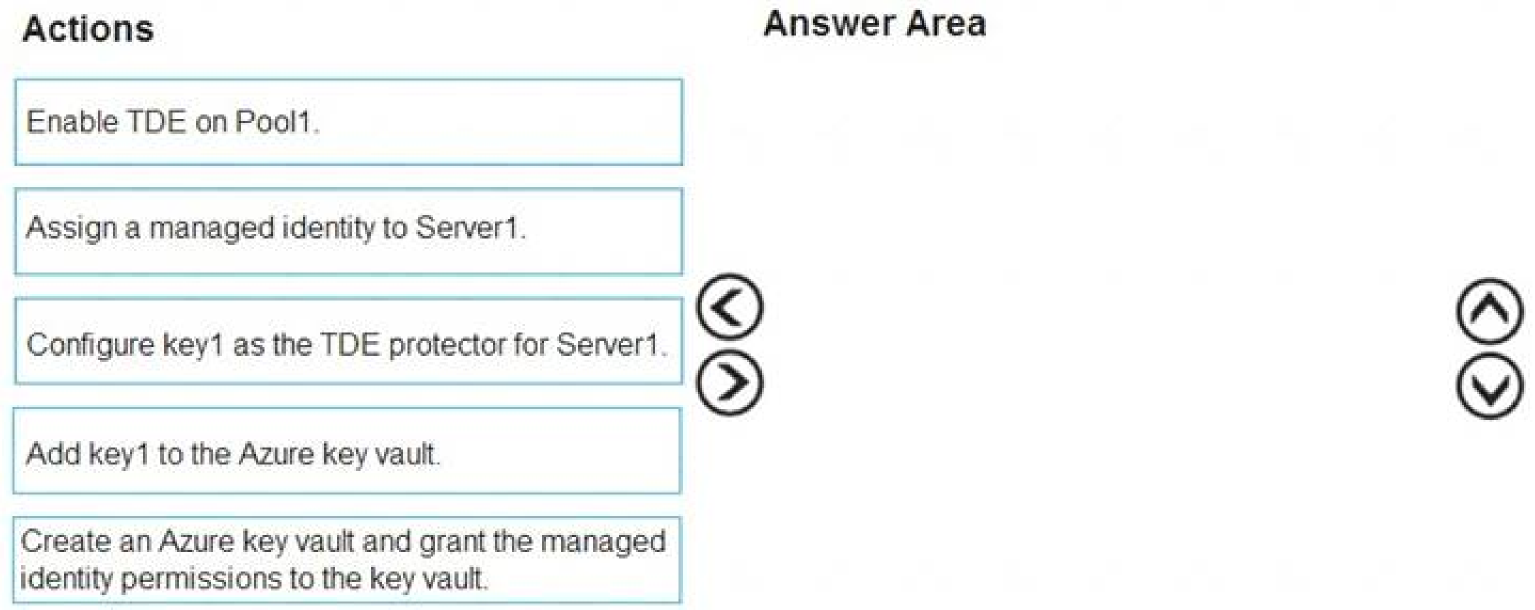
Explanation:



Answer Area

```
SELECT *
FROM OPENROWSET
(
  BULK
'https://sourcedatalake.blob.core.windows.net/public/docs.json',
  FORMAT = 'JSON'
   FIELDTERMINATOR = '0x0b',
   FIELDQUOTE = '0x0b'
   ROWTERMINATOR = '
 )
 WITH (jsondoc nvarc                onDocuments
```

NEW QUESTION 212
- (Exam Topic 3)
You have an Azure Synapse Analytics SQL pool named Pool1 on a logical Microsoft SQL server named Server1.
You need to implement Transparent Data Encryption (TDE) on Pool1 by using a custom key named key1. Which five 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.



Actions

Enable TDE on Pool1.

Assign a managed identity to Server1.

Configure key1 as the TDE protector for Server1.

Add key1 to the Azure key vault.

Create an Azure key vault and grant the managed identity permissions to the key vault.

Answer Area

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface, text, application Description automatically generated
Step 1: Assign a managed identity to Server1
You will need an existing Managed Instance as a prerequisite.
Step 2: Create an Azure key vault and grant the managed identity permissions to the vault Create Resource and setup Azure Key Vault.
Step 3: Add key1 to the Azure key vault
The recommended way is to import an existing key from a .pfx file or get an existing key from the vault. Alternatively, generate a new key directly in Azure Key Vault.
Step 4: Configure key1 as the TDE protector for Server1 Provide TDE Protector key
Step 5: Enable TDE on Pool1 Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/managed-instance/scripts/transparent-data-encryption-byok-po

NEW QUESTION 216
- (Exam Topic 3)
You have an Azure Storage account and a data warehouse in Azure Synapse Analytics in the UK South region. You need to copy blob data from the storage account to the data warehouse by using Azure Data Factory. The solution must meet the following requirements:

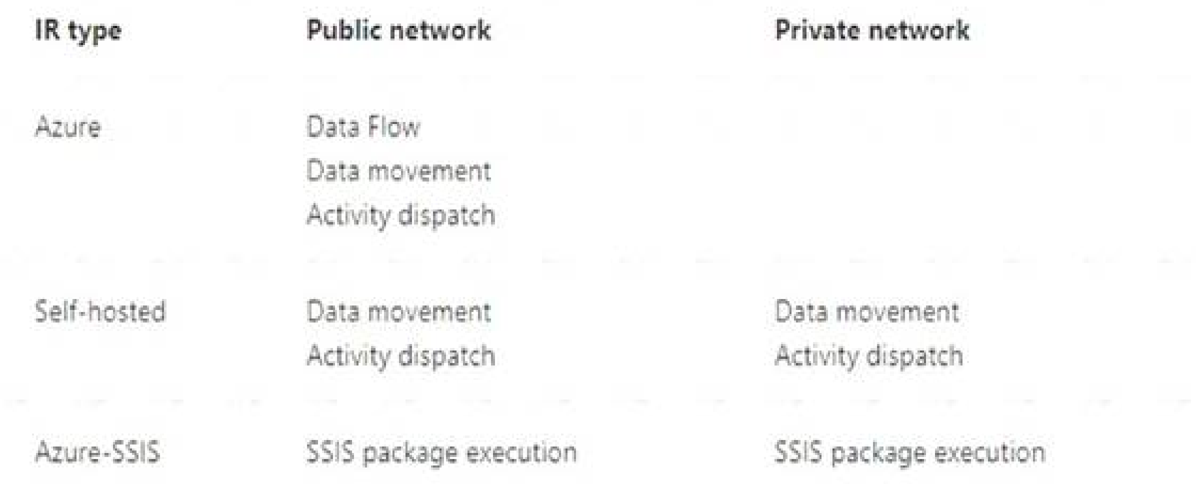
- Ensure that the data remains in the UK South region at all times.
- Minimize administrative effort.

Which type of integration runtime should you use?

A. Azure integration runtime
B. Azure-SSIS integration runtime
C. Self-hosted integration runtime

Answer: A

Explanation:



IR type	Public network	Private network
Azure	Data Flow Data movement Activity dispatch	
Self-hosted	Data movement Activity dispatch	Data movement Activity dispatch
Azure-SSIS	SSIS package execution	SSIS package execution

Reference:
https://docs.microsoft.com/en-us/azure/data-factory/concepts-integration-runtime

NEW QUESTION 218
- (Exam Topic 3)
You have a data warehouse in Azure Synapse Analytics.
You need to ensure that the data in the data warehouse is encrypted at rest. What should you enable?

A. Advanced Data Security for this database
B. Transparent Data Encryption (TDE)
C. Secure transfer required
D. Dynamic Data Masking

Answer: B

Explanation:
Azure SQL Database currently supports encryption at rest for Microsoft-managed service side and client-side encryption scenarios.

- Support for server encryption is currently provided through the SQL feature called Transparent Data Encryption.
- Client-side encryption of Azure SQL Database data is supported through the Always Encrypted feature. Reference:

https://docs.microsoft.com/en-us/azure/security/fundamentals/encryption-atrest

NEW QUESTION 221
- (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: https://docs.databricks.com/clusters/configure.html

NEW QUESTION 224
- (Exam Topic 3)
You have an Azure Databricks workspace that contains a Delta Lake dimension table named Tablet. Table1 is a Type 2 slowly changing dimension (SCD) table.
You need to apply updates from a source table to Table1. Which Apache Spark SQL operation should you use?

A. CREATE
B. UPDATE
C. MERGE
D. ALTER

Answer: C

Explanation:
The Delta provides the ability to infer the schema for data input which further reduces the effort required in managing the schema changes. The Slowly Changing Data(SCD) Type 2 records all the changes made to each key in the dimensional table. These operations require updating the existing rows to mark the previous values of the keys as old and then inserting new rows as the latest values. Also, Given a source table with the updates and the target table with dimensional data, SCD Type 2 can be expressed with the merge.
Example:

```
// Implementing SCD Type 2 operation using merge function customersTable
as("customers") merge(
stagedUpdates.as("staged_updates"), "customers.customerId = mergeKey")
whenMatched("customers.current = true AND customers.address <> staged_updates.address") updateExpr(Map(
"current" -> "false",
"endDate" -> "staged_updates.effectiveDate")) whenNotMatched()
insertExpr(Map(
"customerid" -> "staged_updates.customerId", "address" -> "staged_updates.address", "current" -> "true",
"effectiveDate" -> "staged_updates.effectiveDate",
"endDate" -> "null")) execute()
}
```

Reference:
https://www.projectpro.io/recipes/what-is-slowly-changing-data-scd-type-2-operation-delta-table-databricks

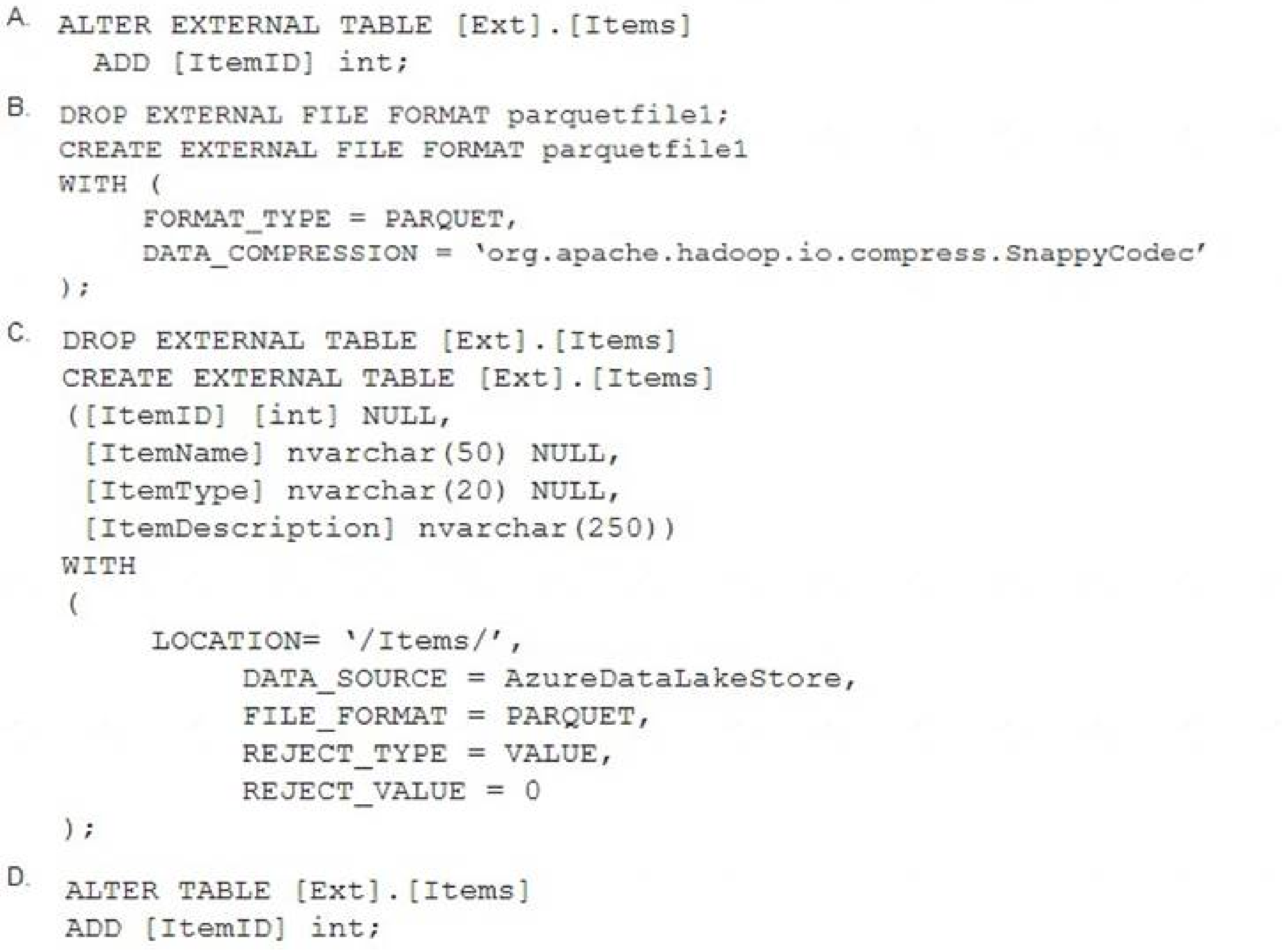
NEW QUESTION 227
- (Exam Topic 3)
You have an Azure Synapse Analytics dedicated SQL pool that contains a table named Table1. You have files that are ingested and loaded into an Azure Data

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 231
- (Exam Topic 3)
You have an enterprise data warehouse in Azure Synapse Analytics.
Using PolyBase, you create an external table named [Ext].[Items] to query Parquet files stored in Azure Data Lake Storage Gen2 without importing the data to the data warehouse.
The external table has three columns.
You discover that the Parquet files have a fourth column named ItemID.
Which command should you run to add the ItemID column to the external table?



A.
```
ALTER EXTERNAL TABLE [Ext].[Items]
  ADD [ItemID] int;
```

B.
```
DROP EXTERNAL FILE FORMAT parquetfile1;
CREATE EXTERNAL FILE FORMAT parquetfile1
WITH (
     FORMAT_TYPE = PARQUET,
     DATA_COMPRESSION = 'org.apache.hadoop.io.compress.SnappyCodec'
);
```

C.
```
DROP EXTERNAL TABLE [Ext].[Items]
CREATE EXTERNAL TABLE [Ext].[Items]
([ItemID] [int] NULL,
 [ItemName] nvarchar(50) NULL,
 [ItemType] nvarchar(20) NULL,
 [ItemDescription] nvarchar(250))
WITH
(
     LOCATION= '/Items/',
          DATA_SOURCE = AzureDataLakeStore,
          FILE_FORMAT = PARQUET,
          REJECT_TYPE = VALUE,
          REJECT_VALUE = 0
);
```

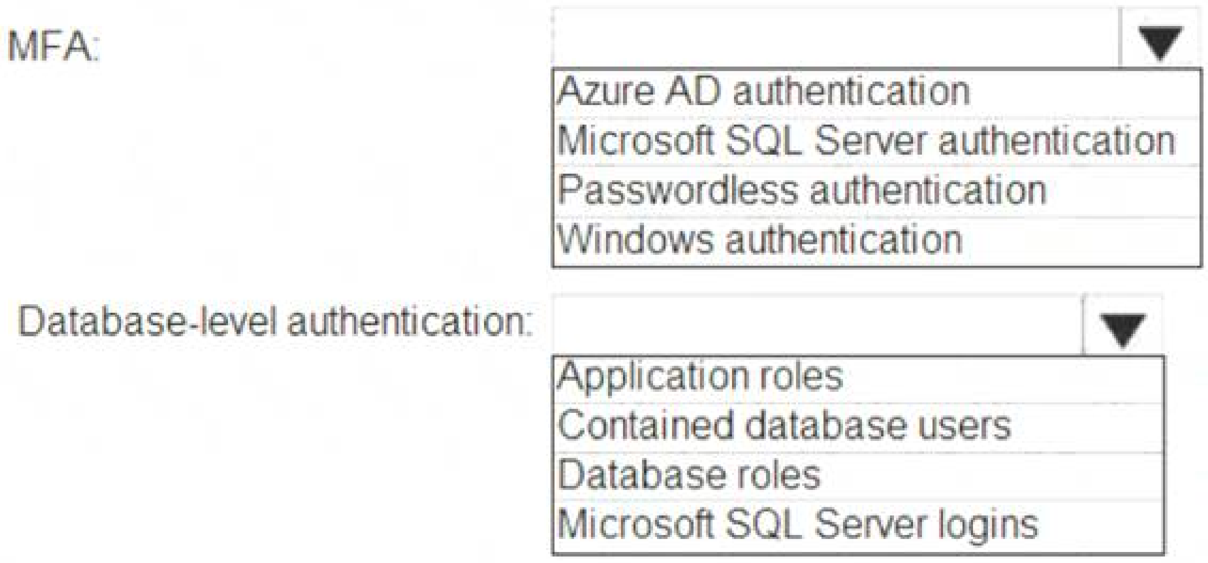
D.
```
ALTER TABLE [Ext].[Items]
ADD [ItemID] int;
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: C

Explanation:
https://docs.microsoft.com/en-us/sql/t-sql/statements/create-external-table-transact-sql

NEW QUESTION 236
- (Exam Topic 3)
You have an Azure subscription that is linked to a hybrid Azure Active Directory (Azure AD) tenant. The subscription contains an Azure Synapse Analytics SQL pool named Pool1.
You need to recommend an authentication solution for Pool1. The solution must support multi-factor authentication (MFA) and database-level authentication.
Which authentication solution or solutions should you include in the recommendation? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.



MFA:
- Azure AD authentication
- Microsoft SQL Server authentication
- Passwordless authentication
- Windows authentication

Database-level authentication:
- Application roles
- Contained database users
- Database roles
- Microsoft SQL Server logins

A. Mastered
B. Not Mastered

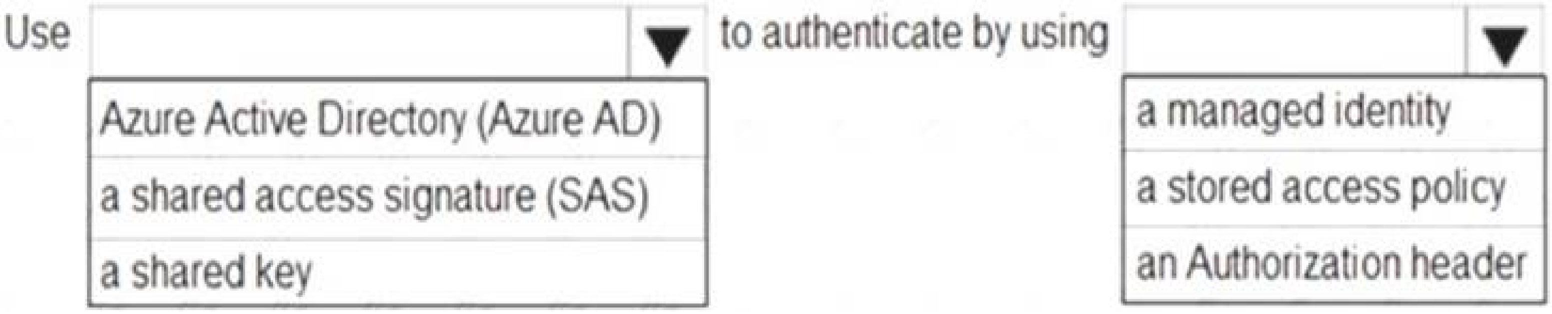
Answer: A

Explanation:
Graphical user interface, text, application, chat or text message Description automatically generated
Box 1: Azure AD authentication
Azure Active Directory authentication supports Multi-Factor authentication through Active Directory Universal Authentication.
Box 2: Contained database users
Azure Active Directory Uses contained database users to authenticate identities at the database level. Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-authentication

NEW QUESTION 238
- (Exam Topic 3)
You have an Azure subscription that contains an Azure Data Lake Storage account. The storage account contains a data lake named DataLake1.
You plan to use an Azure data factory to ingest data from a folder in DataLake1, transform the data, and land the data in another folder.
You need to ensure that the data factory can read and write data from any folder in the DataLake1 file system. The solution must meet the following requirements:

- Minimize the risk of unauthorized user access.
- Use the principle of least privilege.
- Minimize maintenance effort.

How should you configure access to the storage account for the data factory? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.



Use ▼ to authenticate by using ▼

- Azure Active Directory (Azure AD)
- a shared access signature (SAS)
- a shared key

- a managed identity
- a stored access policy
- an Authorization header

A. Mastered
B. Not Mastered

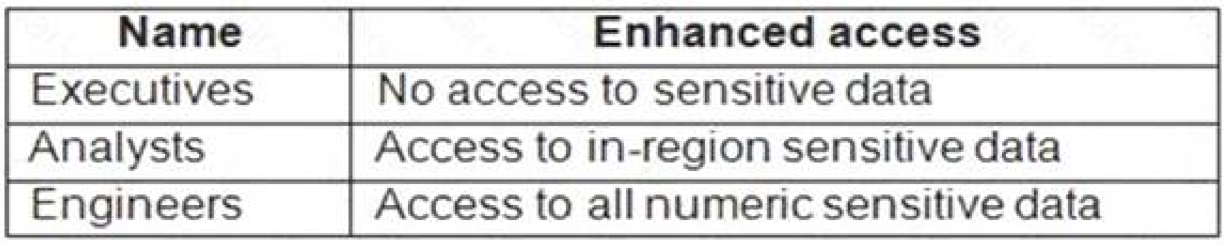
Answer: A

Explanation:
Text Description automatically generated with low confidence
Box 1: Azure Active Directory (Azure AD)
On Azure, managed identities eliminate the need for developers having to manage credentials by providing an identity for the Azure resource in Azure AD and using it to obtain Azure Active Directory (Azure AD) tokens.
Box 2: a managed identity
A data factory can be associated with a managed identity for Azure resources, which represents this specific data factory. You can directly use this managed identity for Data Lake Storage Gen2 authentication, similar to using your own service principal. It allows this designated factory to access and copy data to or from your Data Lake Storage Gen2.
Note: The Azure Data Lake Storage Gen2 connector supports the following authentication types.

- Account key authentication
- Service principal authentication
- Managed identities for Azure resources authentication Reference:

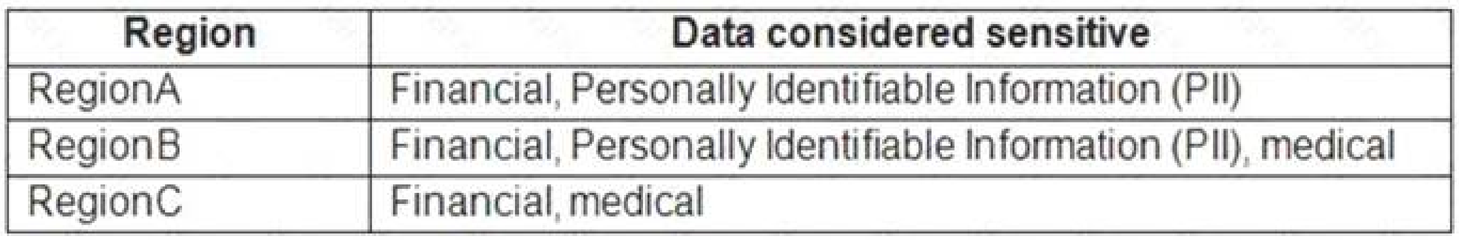
https://docs.microsoft.com/en-us/azure/active-directory/managed-identities-azure-resources/overview https://docs.microsoft.com/en-us/azure/data-factory/connector-azure-data-lake-storage

NEW QUESTION 239
- (Exam Topic 3)
You are designing an Azure Synapse Analytics dedicated SQL pool.
Groups will have access to sensitive data in the pool as shown in the following table.



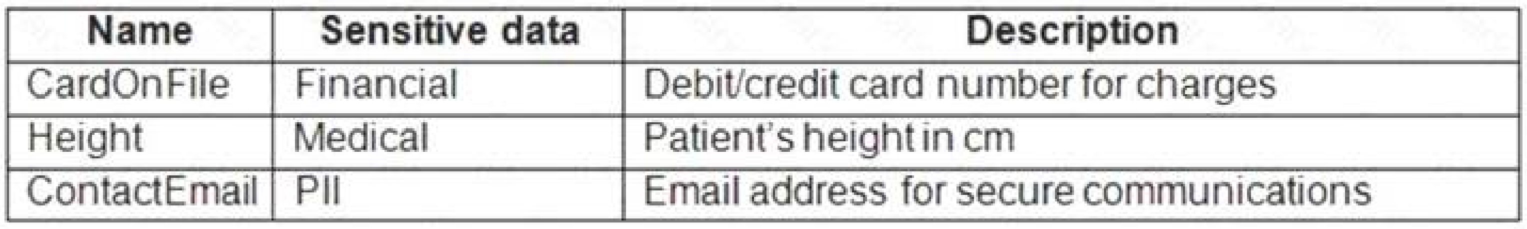
Name	Enhanced access
Executives	No access to sensitive data
Analysts	Access to in-region sensitive data
Engineers	Access to all numeric sensitive data

You have policies for the sensitive data. The policies vary be region as shown in the following table.



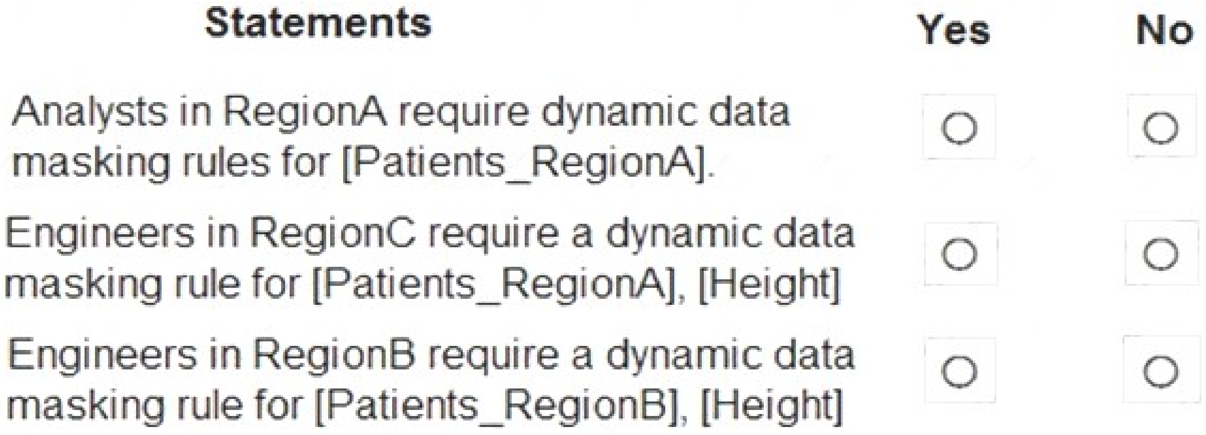
Region	Data considered sensitive
RegionA	Financial, Personally Identifiable Information (PII)
RegionB	Financial, Personally Identifiable Information (PII), medical
RegionC	Financial, medical

You have a table of patients for each region. The tables contain the following potentially sensitive columns.



Name	Sensitive data	Description
CardOnFile	Financial	Debit/credit card number for charges
Height	Medical	Patient's height in cm
ContactEmail	PII	Email address for secure communications

You are designing dynamic data masking to maintain compliance.
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.



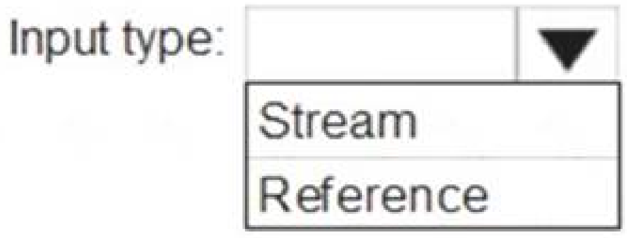
Statements	Yes	No
Analysts in RegionA require dynamic data masking rules for [Patients_RegionA].	○	○
Engineers in RegionC require a dynamic data masking rule for [Patients_RegionA], [Height]	○	○
Engineers in RegionB require a dynamic data masking rule for [Patients_RegionB], [Height]	○	○

A. Mastered
B. Not Mastered

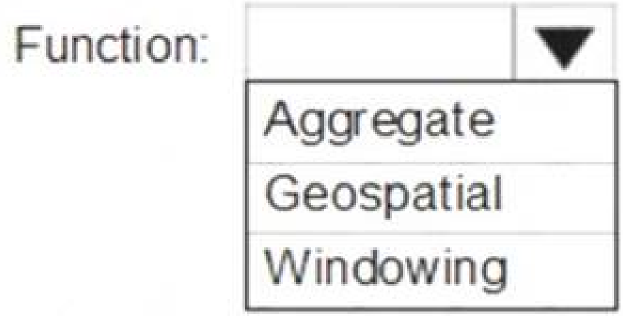
Answer: A

Explanation:
Text Description automatically generated
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/dynamic-data-masking-overview

NEW QUESTION 241
- (Exam Topic 3)
You plan to create a real-time monitoring app that alerts users when a device travels more than 200 meters away from a designated location.
You need to design an Azure Stream Analytics job to process the data for the planned app. The solution must minimize the amount of code developed and the number of technologies used.
What should you include in the Stream Analytics job? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.



Input type:
- Stream
- Reference



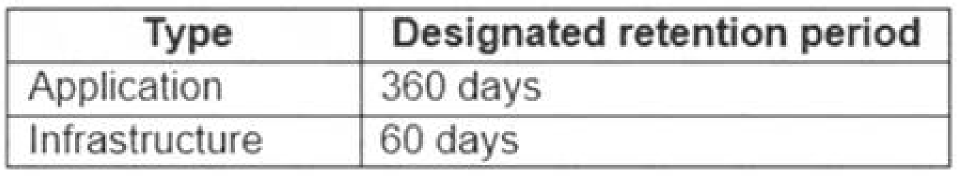
Function:
- Aggregate
- Geospatial
- Windowing

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Diagram, table Description automatically generated
Input type: Stream
You can process real-time IoT data streams with Azure Stream Analytics. Function: Geospatial
With built-in geospatial functions, you can use Azure Stream Analytics to build applications for scenarios such as fleet management, ride sharing, connected cars, and asset tracking.
Note: In a real-world scenario, you could have hundreds of these sensors generating events as a stream. Ideally, a gateway device would run code to push these events to Azure Event Hubs or Azure IoT Hubs.
Reference:
https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-get-started-with-azure-stream-analytic https://docs.microsoft.com/en-us/azure/stream-analytics/geospatial-scenarios

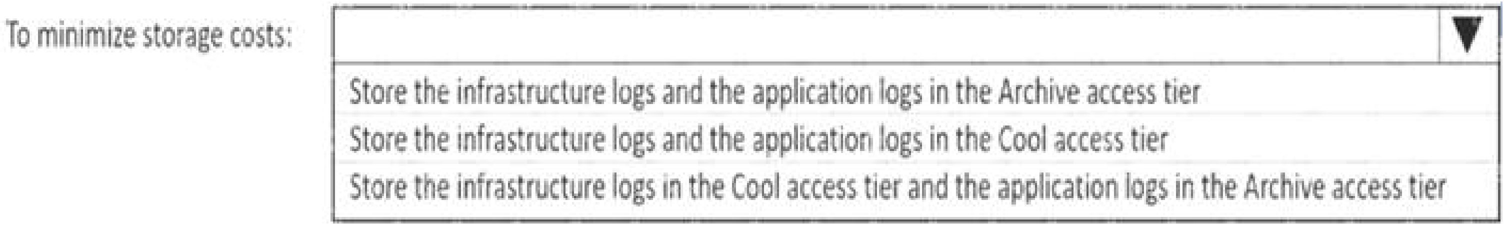
NEW QUESTION 244
- (Exam Topic 3)
You have an Azure Data Lake Storage Gen2 account named account1 that stores logs as shown in the following table.



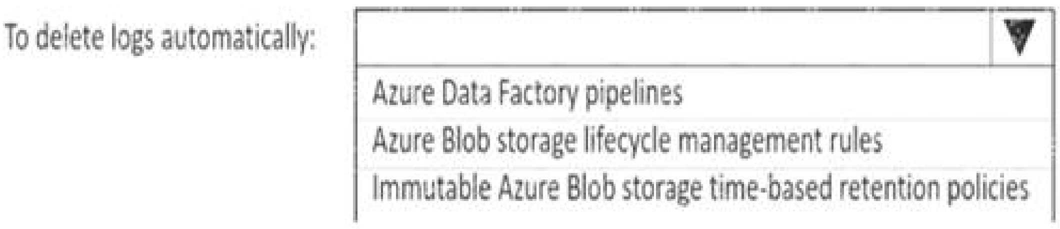
Type	Designated retention period
Application	360 days
Infrastructure	60 days

You do not expect that the logs will be accessed during the retention periods.
You need to recommend a solution for account1 that meets the following requirements:
- Automatically deletes the logs at the end of each retention period
- Minimizes storage costs

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.



To minimize storage costs:
- Store the infrastructure logs and the application logs in the Archive access tier
- Store the infrastructure logs and the application logs in the Cool access tier
- Store the infrastructure logs in the Cool access tier and the application logs in the Archive access tier



To delete logs automatically:
- Azure Data Factory pipelines
- Azure Blob storage lifecycle management rules
- Immutable Azure Blob storage time-based retention policies

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Table Description automatically generated
Box 1: Store the infrastructure logs in the Cool access tier and the application logs in the Archive access tier
For infrastructure logs: Cool tier - An online tier optimized for storing data that is infrequently accessed or modified. Data in the cool tier should be stored for a minimum of 30 days. The cool tier has lower storage costs and higher access costs compared to the hot tier.
For application logs: Archive tier - An offline tier optimized for storing data that is rarely accessed, and that has flexible latency requirements, on the order of hours. Data in the archive tier should be stored for a minimum of 180 days.
Box 2: Azure Blob storage lifecycle management rules
Blob storage lifecycle management offers a rule-based policy that you can use to transition your data to the desired access tier when your specified conditions are met. You can also use lifecycle management to expire data at the end of its life.
Reference:
https://docs.microsoft.com/en-us/azure/storage/blobs/access-tiers-overview

NEW QUESTION 248
- (Exam Topic 3)
You have a SQL pool in Azure Synapse.
You discover that some queries fail or take a long time to complete. You need to monitor for transactions that have rolled back.
Which dynamic management view should you query?

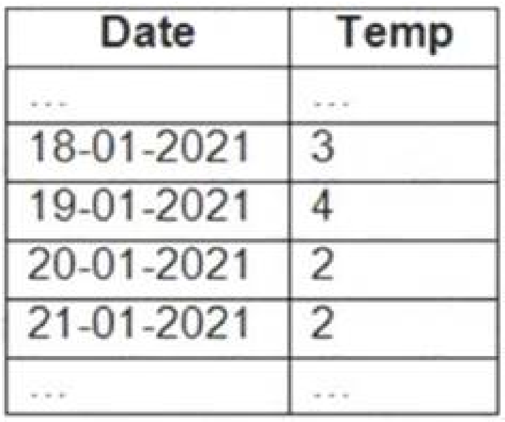
A. sys.dm_pdw_request_steps
B. sys.dm_pdw_nodes_tran_database_transactions
C. sys.dm_pdw_waits
D. sys.dm_pdw_exec_sessions

Answer: B

Explanation:
You can use Dynamic Management Views (DMVs) to monitor your workload including investigating query execution in SQL pool.
If your queries are failing or taking a long time to proceed, you can check and monitor if you have any transactions rolling back.
Example:

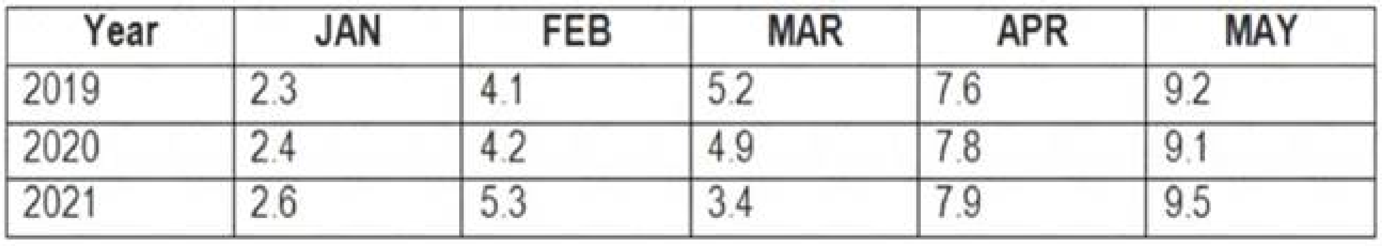
-- Monitor rollback SELECT
SUM(CASE WHEN t.database_transaction_next_undo_lsn IS NOT NULL THEN 1 ELSE 0 END), t.pdw_node_id, nod.[type]
FROM sys.dm_pdw_nodes_tran_database_transactions t
JOIN sys.dm_pdw_nodes nod ON t.pdw_node_id = nod.pdw_node_id GROUP BY t.pdw_node_id, nod.[type]
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-manage-monit

NEW QUESTION 250
- (Exam Topic 3)
You have an Apache Spark DataFrame named temperatures. A sample of the data is shown in the following table.



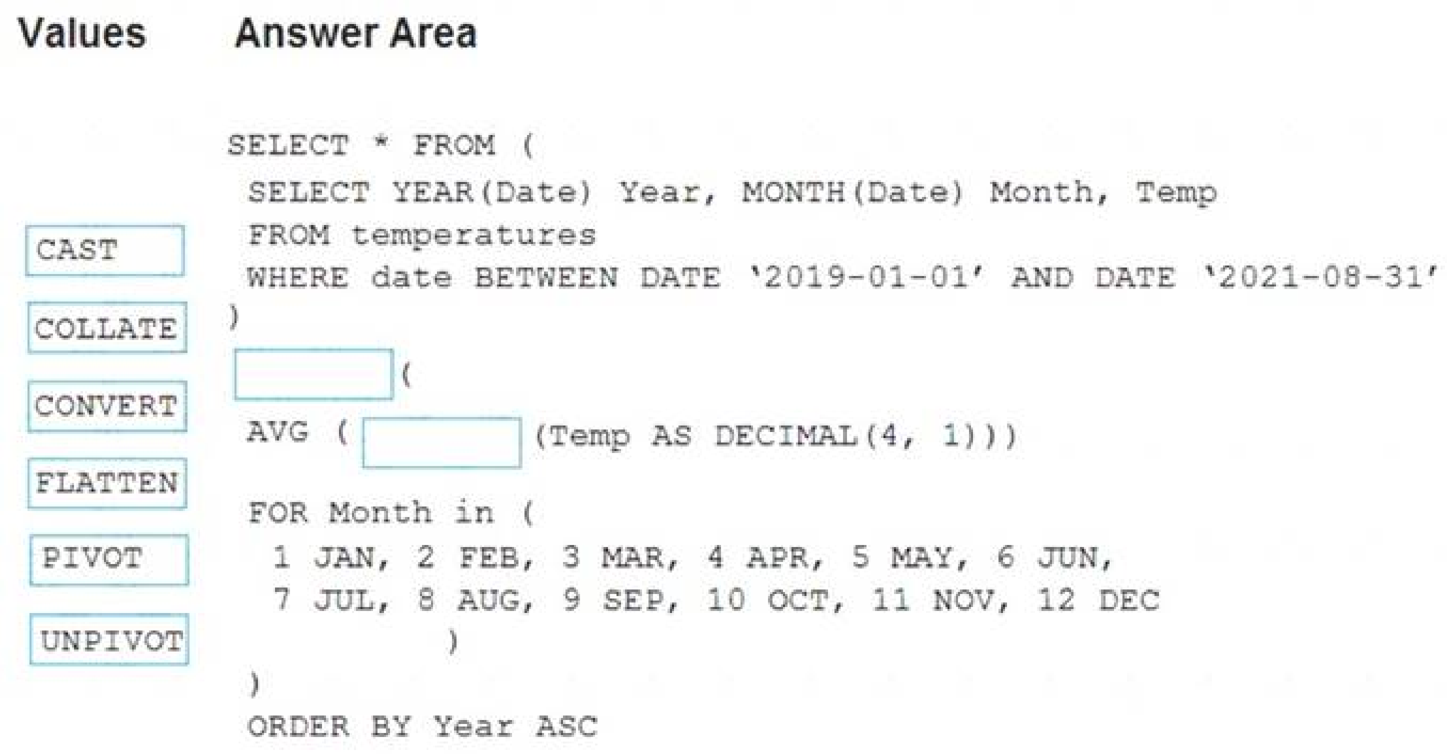
Date	Temp
...	...
18-01-2021	3
19-01-2021	4
20-01-2021	2
21-01-2021	2
...	...

You need to produce the following table by using a Spark SQL query.



Year	JAN	FEB	MAR	APR	MAY
2019	2.3	4.1	5.2	7.6	9.2
2020	2.4	4.2	4.9	7.8	9.1
2021	2.6	5.3	3.4	7.9	9.5

How should you complete the query? 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.



Values

CAST
COLLATE
CONVERT
FLATTEN
PIVOT
UNPIVOT

Answer Area

```
SELECT * FROM (
 SELECT YEAR(Date) Year, MONTH(Date) Month, Temp
 FROM temperatures
 WHERE date BETWEEN DATE '2019-01-01' AND DATE '2021-08-31'
)
[          ] (
 AVG ( [          ] (Temp AS DECIMAL(4, 1)))
 FOR Month in (
  1 JAN, 2 FEB, 3 MAR, 4 APR, 5 MAY, 6 JUN,
  7 JUL, 8 AUG, 9 SEP, 10 OCT, 11 NOV, 12 DEC
         )
 )
 ORDER BY Year ASC
```

A. Mastered
B. Not Mastered

Answer: A

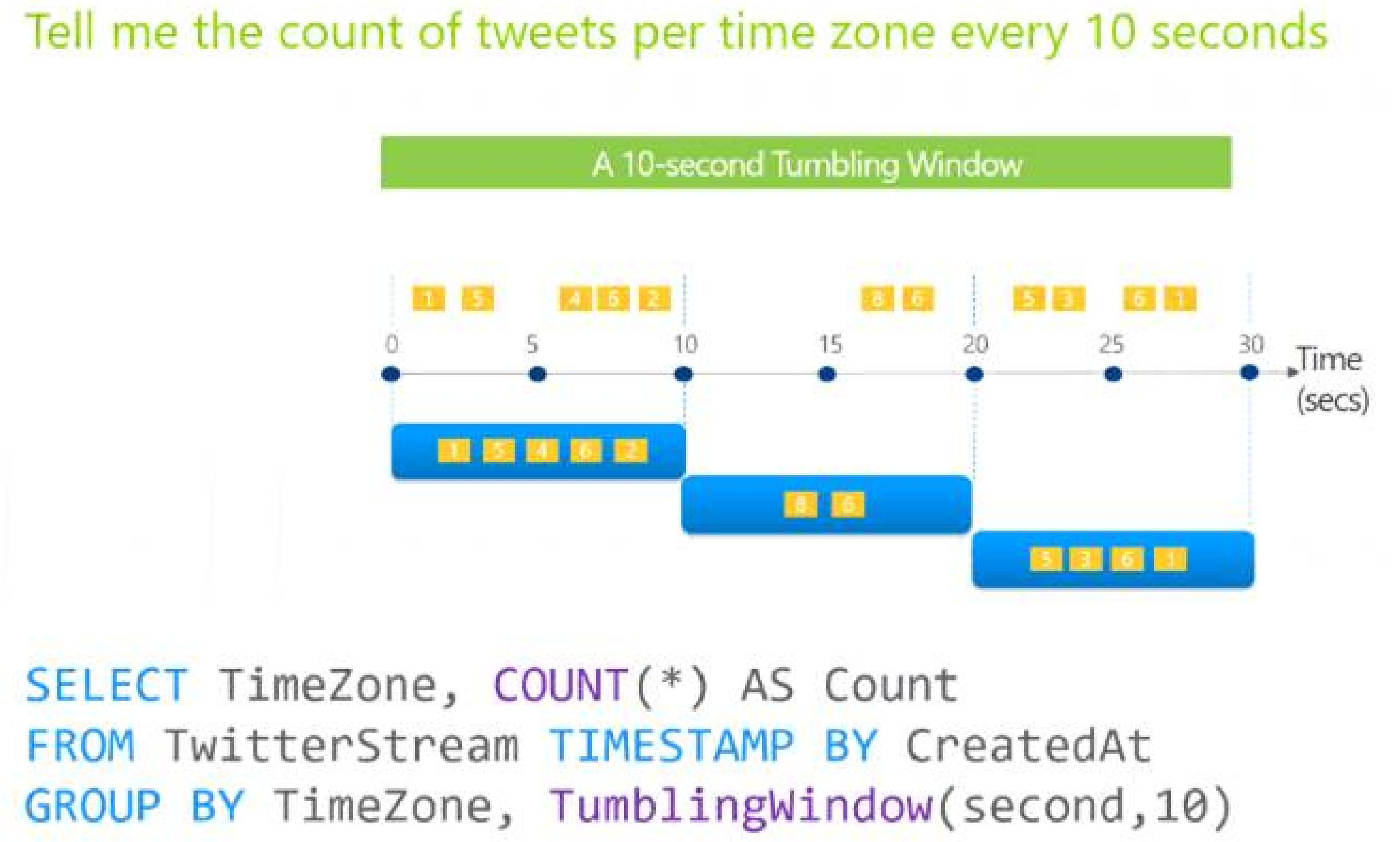
Explanation:
Text Description automatically generated
Box 1: PIVOT
PIVOT rotates a table-valued expression by turning the unique values from one column in the expression into multiple columns in the output. And PIVOT runs aggregations where they're required on any remaining column values that are wanted in the final output.
Reference:
https://learnsql.com/cookbook/how-to-convert-an-integer-to-a-decimal-in-sql-server/ https://docs.microsoft.com/en-us/sql/t-sql/queries/from-using-pivot-and-unpivot

NEW QUESTION 254
- (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 tumbling window, and you set the window size to 10 seconds. 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.

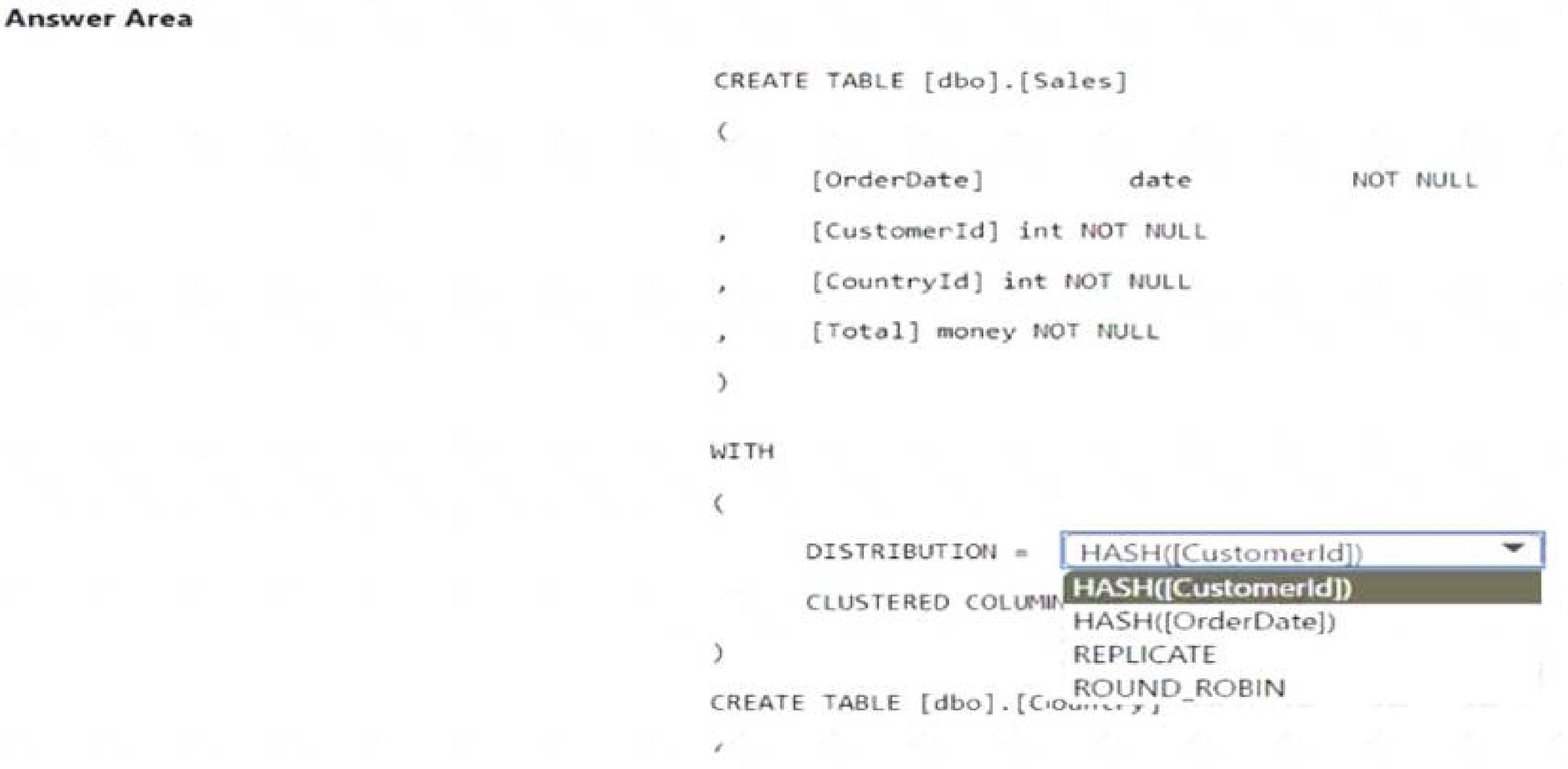


Tell me the count of tweets per time zone every 10 seconds

```
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 258
- (Exam Topic 3)
You have an Azure subscription that contains an Azure Synapse Analytics dedicated SQL pool. You plan to deploy a solution that will analyze sales data and include the following:
• A table named Country that will contain 195 rows
• A table named Sales that will contain 100 million rows
• A query to identify total sales by country and customer from the past 30 days
You need to create the tables. The solution must maximize query performance.
How should you complete the script? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.



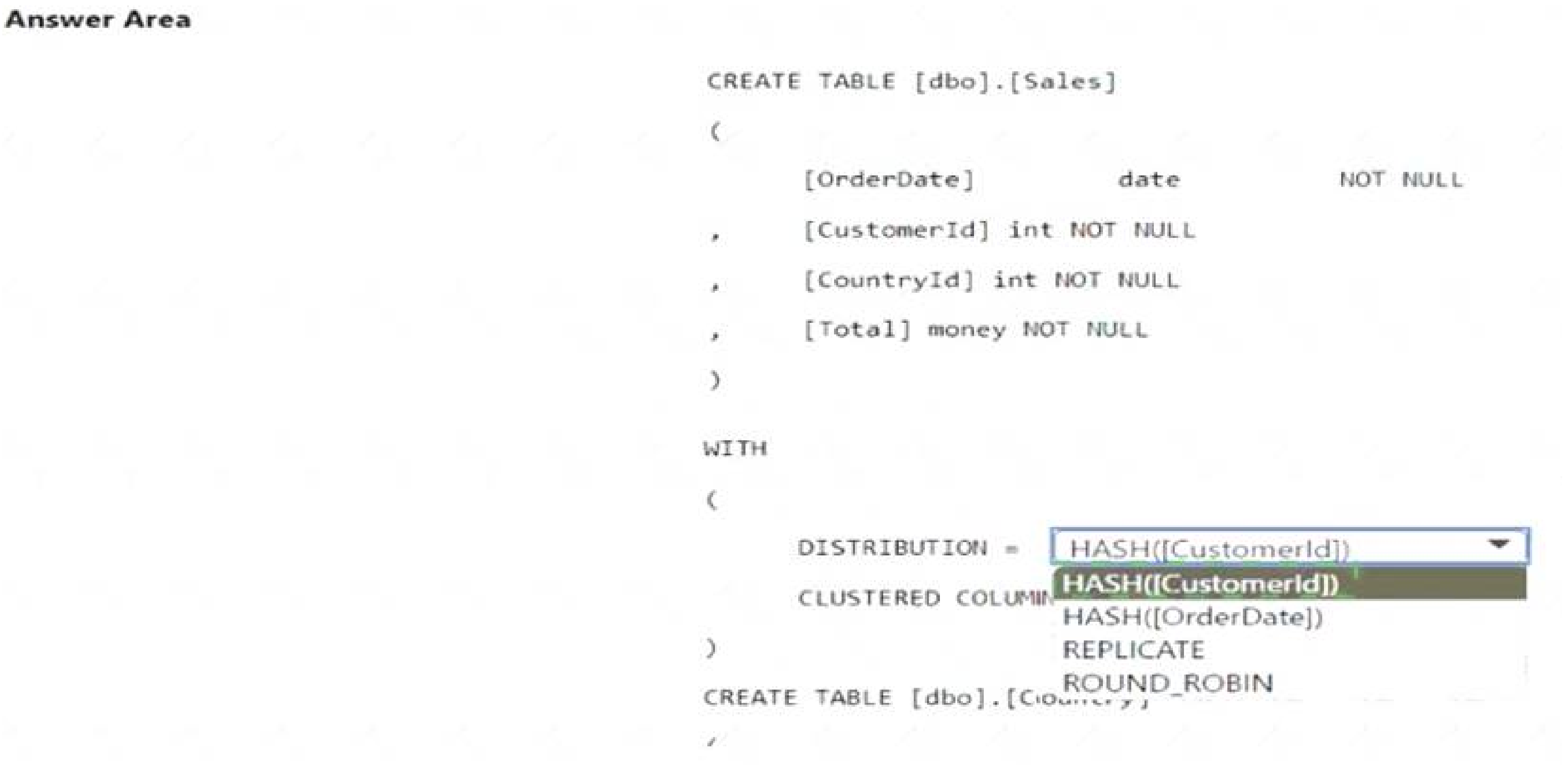
Answer Area

```
CREATE TABLE [dbo].[Sales]
(
        [OrderDate]         date           NOT NULL
,       [CustomerId] int NOT NULL
,       [CountryId] int NOT NULL
,       [Total] money NOT NULL
)
WITH
(
        DISTRIBUTION = HASH([CustomerId])
        CLUSTERED COLUMN
)
CREATE TABLE [dbo].[Country]
(
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:



Answer Area

```
CREATE TABLE [dbo].[Sales]
(
          [OrderDate]          date          NOT NULL
,         [CustomerId] int NOT NULL
,         [CountryId] int NOT NULL
,         [Total] money NOT NULL
)
WITH
(
          DISTRIBUTION =  HASH([CustomerId])
          CLUSTERED COLUMN
)
CREATE TABLE [dbo].[Country]
(
```

NEW QUESTION 263

......