

## DP-203 Dumps

### Data Engineering on Microsoft Azure

<https://www.certleader.com/DP-203-dumps.html>



**NEW QUESTION 1**

- (Exam Topic 3)

You are designing a dimension table in an Azure Synapse Analytics dedicated SQL pool.

You need to create a surrogate key for the table. The solution must provide the fastest query performance. What should you use for the surrogate key?

- A. a GUID column
- B. a sequence object
- C. an IDENTITY column

**Answer: C**

**Explanation:**

Use IDENTITY to create surrogate keys using dedicated SQL pool in AzureSynapse Analytics.

Note: A surrogate key on a table is a column with a unique identifier for each row. The key is not generated from the table data. Data modelers like to create surrogate keys on their tables when they design data warehouse models. You can use the IDENTITY property to achieve this goal simply and effectively without affecting load performance.

Reference:

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

**NEW QUESTION 2**

- (Exam Topic 3)

You are monitoring an Azure Stream Analytics job by using metrics in Azure.

You discover that during the last 12 hours, the average watermark delay is consistently greater than the configured late arrival tolerance.

What is a possible cause of this behavior?

- A. Events whose application timestamp is earlier than their arrival time by more than five minutes arrive as inputs.
- B. There are errors in the input data.
- C. The late arrival policy causes events to be dropped.
- D. The job lacks the resources to process the volume of incoming data.

**Answer: D**

**Explanation:**

Watermark Delay indicates the delay of the streaming data processing job.

There are a number of resource constraints that can cause the streaming pipeline to slow down. The watermark delay metric can rise due to:

- Not enough processing resources in Stream Analytics to handle the volume of input events. To scale up resources, see Understand and adjust Streaming Units.
- Not enough throughput within the input event brokers, so they are throttled. For possible solutions, see Automatically scale up Azure Event Hubs throughput units.
- Output sinks are not provisioned with enough capacity, so they are throttled. The possible solutions vary widely based on the flavor of output service being used.

Reference:

<https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-time-handling>

**NEW QUESTION 3**

- (Exam Topic 3)

You plan to create a dimension table in Azure Synapse Analytics that will be less than 1 GB. You need to create the table to meet the following requirements:

- Provide the fastest Query time.
- Minimize data movement during queries. Which type of table should you use?

- A. hash distributed
- B. heap
- C. replicated
- D. round-robin

**Answer: C**

**Explanation:**

A replicated table has a full copy of the table accessible on each Compute node. Replicating a table removes the need to transfer data among Compute nodes before a join or aggregation. Since the table has multiple copies, replicated tables work best when the table size is less than 2 GB compressed. 2 GB is not a hard limit.

Reference:

<https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/design-guidance-for-replicated-tab>

**NEW QUESTION 4**

- (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.

First 30 days:

Archive

Cool

Hot

After 90 days:

Archive

Cool

Hot

After 365 days:

Archive

Cool

Hot

- 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 5**

- (Exam Topic 3)

You are implementing a batch dataset in the Parquet format.

Data tiles will be produced by using Azure Data Factory and stored in Azure Data Lake Storage Gen2. The files will be consumed by an Azure Synapse Analytics serverless SQL pool.

You need to minimize storage costs for the solution. What should you do?

- A. Store all the data as strings in the Parquet tiles.  
B. Use OPENROWSET to query the Parquet files.  
C. Create an external table that contains a subset of columns from the Parquet files.  
D. Use Snappy compression for the files.

**Answer:** C

**Explanation:**

An external table points to data located in Hadoop, Azure Storage blob, or Azure Data Lake Storage. External tables are used to read data from files or write data to files in Azure Storage. With Synapse SQL, you can use external tables to read external data using dedicated SQL pool or serverless SQL pool.

Reference:

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

**NEW QUESTION 6**

- (Exam Topic 3)

You are developing a solution that will stream to Azure Stream Analytics. The solution will have both streaming data and reference data.

Which input type should you use for the reference data?

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

**Answer:** B

**Explanation:**

Stream Analytics supports Azure Blob storage and Azure SQL Database as the storage layer for Reference Data.

Reference:

<https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-use-reference-data>

NEW QUESTION 7

- (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



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Answer Area



NEW QUESTION 8

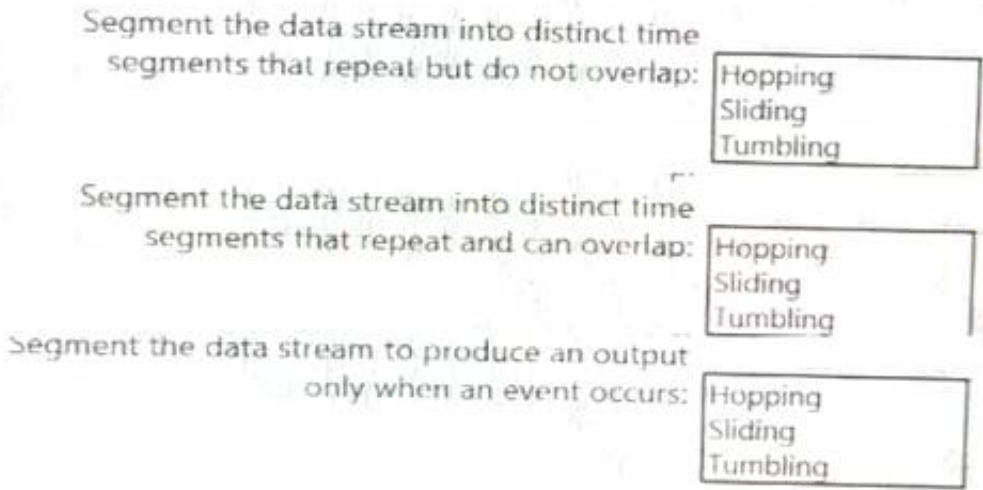
- (Exam Topic 3)

You are implementing Azure Stream Analytics windowing functions.

Which windowing function should you use for each requirement? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

**Answer Area**

Segment the data stream into distinct time segments that repeat but do not overlap: ☐ Hopping ☒ Sliding ☐ Tumbling

Segment the data stream into distinct time segments that repeat and can overlap: ☐ Hopping ☒ Sliding ☐ Tumbling

Segment the data stream to produce an output only when an event occurs: ☐ Hopping ☒ Sliding ☐ Tumbling

**NEW QUESTION 9**

- (Exam Topic 3)

You are designing a real-time dashboard solution that will visualize streaming data from remote sensors that connect to the internet. The streaming data must be aggregated to show the average value of each 10-second interval. The data will be discarded after being displayed in the dashboard.

The solution will use Azure Stream Analytics and must meet the following requirements:

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

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

Azure Stream Analytics input type:

☐ Azure Event Hub
 ☐ Azure SQL Database
 ☒ Azure Stream Analytics
 ☐ Microsoft Power BI

Azure Stream Analytics output type:

☐ Azure Event Hub
 ☐ Azure SQL Database
 ☒ Azure Stream Analytics
 ☐ Microsoft Power BI

Aggregation query location:

☐ Azure Event Hub
 ☐ Azure SQL Database
 ☒ Azure Stream Analytics
 ☐ Microsoft Power BI

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

Reference:

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

**NEW QUESTION 10**

- (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

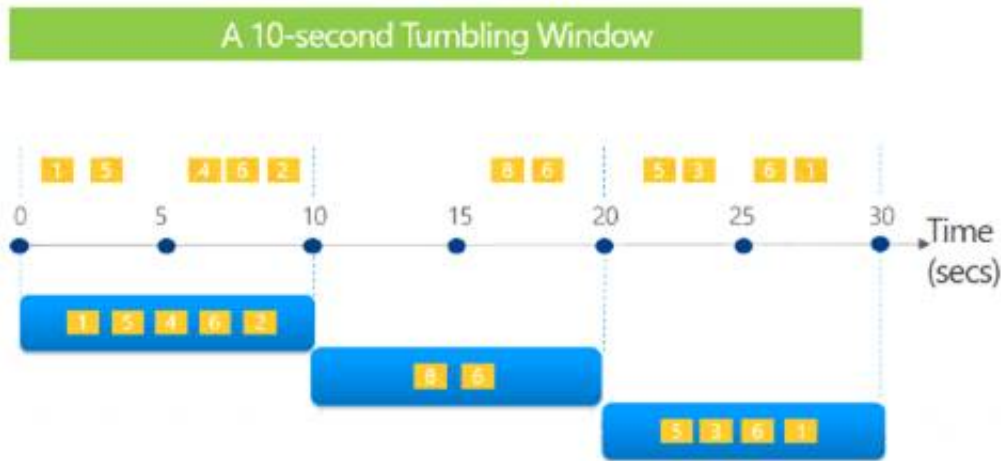
**Answer:** A



**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 10**

- (Exam Topic 3)  
You are building a database in an Azure Synapse Analytics serverless SQL pool. You have data stored in Parquet files in an Azure Data Lake Storage Gen2 container. Records are structured as shown in the following sample.

```
{
  "id": 123,
  "address_housenumber": "19c", "address_line": "Memory Lane", "applicant1_name": "Jane", "applicant2_name": "Dev"
}
```

The records contain two applicants at most.  
You need to build a table that includes only the address fields.  
How should you complete the Transact-SQL statement? To answer, select the appropriate options in the answer area.  
NOTE: Each correct selection is worth one point.

**Answer Area**

▼ applications

CREATE EXTERNAL TABLE

CREATE TABLE

CREATE VIEW

WITH (
 LOCATION = 'applications/',
 DATA\_SOURCE = applications\_ds,
 FILE\_FORMAT = applications\_file\_format
)
AS
SELECT id, [address\_housenumber] as addresshousenumber, [address\_line1] as addressline1
FROM

▼ (BULK 'https://contosol.dfs.core.windows.net/applications/year=/\*.parquet',

CROSS APPLY

OPENJSON

OPENROWSET

FORMAT='PARQUET') AS [r]
GO

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

Box 1: CREATE EXTERNAL TABLE  
An external table points to data located in Hadoop, Azure Storage blob, or Azure Data Lake Storage. External tables are used to read data from files or write data to files in Azure Storage. With Synapse SQL, you can use external tables to read external data using dedicated SQL pool or serverless SQL pool.  
Syntax:  
CREATE EXTERNAL TABLE { database\_name.schema\_name.table\_name | schema\_name.table\_name | table\_name }  
( <column\_definition> [ ,...n ] ) WITH (  
LOCATION = 'folder\_or\_filepath', DATA\_SOURCE = external\_data\_source\_name, FILE\_FORMAT = external\_file\_format\_name  
Box 2. OPENROWSET  
When using serverless SQL pool, CETAS is used to create an external table and export query results to Azure Storage Blob or Azure Data Lake Storage Gen2.  
Example: AS  
SELECT decennialTime, stateName, SUM(population) AS population FROM

OPENROWSET(BULK  
'https://azureopendatastorage.blob.core.windows.net/censusdatacontainer/release/us\_population\_county/year=\*/  
FORMAT='PARQUET') AS [r]  
GROUP BY decennialTime, stateName GO  
Reference:  
<https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/develop-tables-external-tables>

**NEW QUESTION 13**

- (Exam Topic 3)

You have an Azure Data Lake Storage Gen2 account named adls2 that is protected by a virtual network. You are designing a SQL pool in Azure Synapse that will use adls2 as a source.

What should you use to authenticate to adls2?

- A. a shared access signature (SAS)
- B. a managed identity
- C. a shared key
- D. an Azure Active Directory (Azure AD) user

**Answer:** B

**Explanation:**

Managed identity for Azure resources is a feature of Azure Active Directory. The feature provides Azure services with an automatically managed identity in Azure AD. You can use the Managed Identity capability to authenticate to any service that support Azure AD authentication.

Managed Identity authentication is required when your storage account is attached to a VNet. Reference:

<https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/quickstart-bulk-load-copy-tsql-exa>

**NEW QUESTION 14**

- (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 19**

- (Exam Topic 3)

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

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

What should you recommend?

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

**Answer:** A

**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/azure/event-hubs/process-data-azure-stream-analytics>

**NEW QUESTION 23**

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool named SA1 that contains a table named Table1. You need to identify tables that have a high percentage of deleted rows. What should you run?

A)

```
sys.pdw_nodes_column_store_segments
```

B)

```
sys.dm_db_column_store_row_group_operational_stats
```

C)

```
sys.pdw_nodes_column_store_row_groups
```

D)

sys.dm\_db\_column\_store\_row\_group\_physical\_stats

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

Answer: B

NEW QUESTION 25

- (Exam Topic 3)

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

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

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

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

Actions Answer Area

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

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

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

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

Assign Role1 to the Group1 database user.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

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

Place one or more database users into a database role and then assign permissions to the database role. Step 2: Assign Rol1 to the Group database user

Step 3: Assign the Azure role-based access control (Azure RBAC) Reader role for dw1 to Group1 Reference:

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

NEW QUESTION 26

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool named Pool1 that contains a table named Sales. Sales has row-level security (RLS) applied. RLS uses the following predicate filter.

```
CREATE FUNCTION Security.fn_securitypredicate(@SalesRep AS sysname)
    RETURNS TABLE
WITH SCHEMABINDING
AS
    RETURN SELECT 1 AS fn_securitypredicate_result
WHERE @SalesRep = USER_NAME() OR USER_NAME() = 'Manager';
```

A user named SalesUser1 is assigned the db\_datareader role for Pool1.

A user named SalesUser1 is assigned the db\_datareader role for Pool1. Which rows in the Sales table are returned when SalesUser1 queries the table?

- A. only the rows for which the value in the User\_Name column is SalesUser1
- B. all the rows
- C. only the rows for which the value in the SalesRep column is Manager
- D. only the rows for which the value in the SalesRep column is SalesUser1

Answer: C

NEW QUESTION 30

- (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 the answer in  
See below answer.

**Answer Area**

Number of columns: 22

Number of rows: 4

**NEW QUESTION 33**

- (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**

**Answer Area**

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.



- 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 34**

- (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 36**

- (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 37**

- (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:**

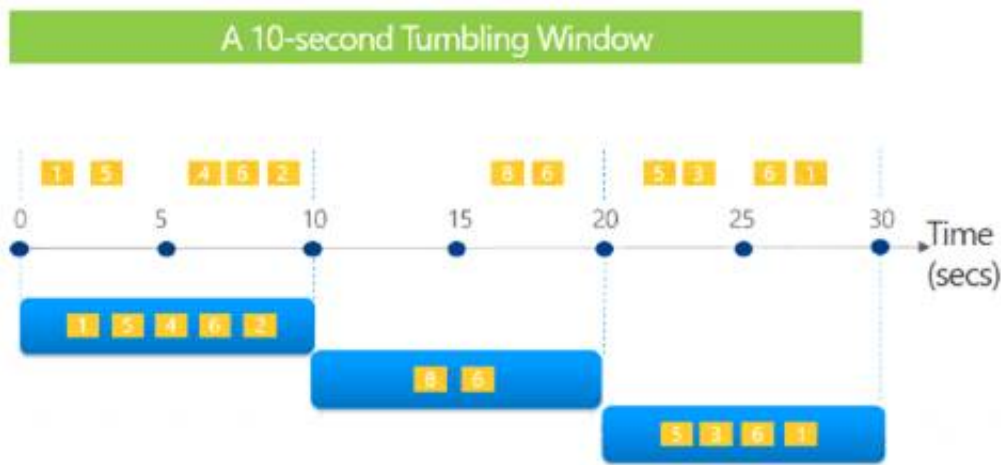
Table Description automatically generated

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 42

- (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 44

- (Exam Topic 3)

You have an Azure subscription that contains the following resources:

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

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

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

To control access to the columns:

	▼
CREATE CRYPTOGRAPHIC PROVIDER	
CREATE PARTITION FUNCTION	
CREATE SECURITY POLICY	
GRANT	

To control access to the rows:

	▼
CREATE CRYPTOGRAPHIC PROVIDER	
CREATE PARTITION FUNCTION	
CREATE SECURITY POLICY	
GRANT	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Text Description automatically generated

Box 1: GRANT

You can implement column-level security with the GRANT T-SQL statement. Box 2: CREATE SECURITY POLICY

Implement Row Level Security by using the CREATE SECURITY POLICY Transact-SQL statement Reference:

<https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/column-level-security>

**NEW QUESTION 49**

- (Exam Topic 3)

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

You have a CSV file in an Azure Data Lake Storage Gen2 container. The file maintains the expected geographical area in which each vehicle should be.

You need to ensure that when a GPS position is outside the expected area, a message is added to another event hub for processing within 30 seconds. The solution must minimize cost.

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

NOTE: Each correct selection is worth one point.

Service:

	▼
An Azure Synapse Analytics Apache Spark pool	
An Azure Synapse Analytics serverless SQL pool	
Azure Data Factory	
Azure Stream Analytics	

Window:

	▼
Hopping	
No window	
Session	
Tumbling	

Analysis type:

	▼
Event pattern matching	
Lagged record comparison	
Point within polygon	
Polygon overlap	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Box 1: Azure Stream Analytics Box 2: Hopping

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



hop size to be the same as the window size.  
Box 3: Point within polygon Reference:  
<https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-window-functions>

**NEW QUESTION 52**

- (Exam Topic 3)  
You have a Microsoft SQL Server database that uses a third normal form schema.  
You plan to migrate the data in the database to a star schema in an Azure Synapse Analytics dedicated SQL pool.  
You need to design the dimension tables. The solution must optimize read operations.  
What should you include in the solution? to answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Transform data for the dimension tables by:

Maintaining to a third normal form

Normalizing to a fourth normal form

Denormalizing to a second normal form

For the primary key columns in the dimension tables, use:

New IDENTITY columns

A new computed column

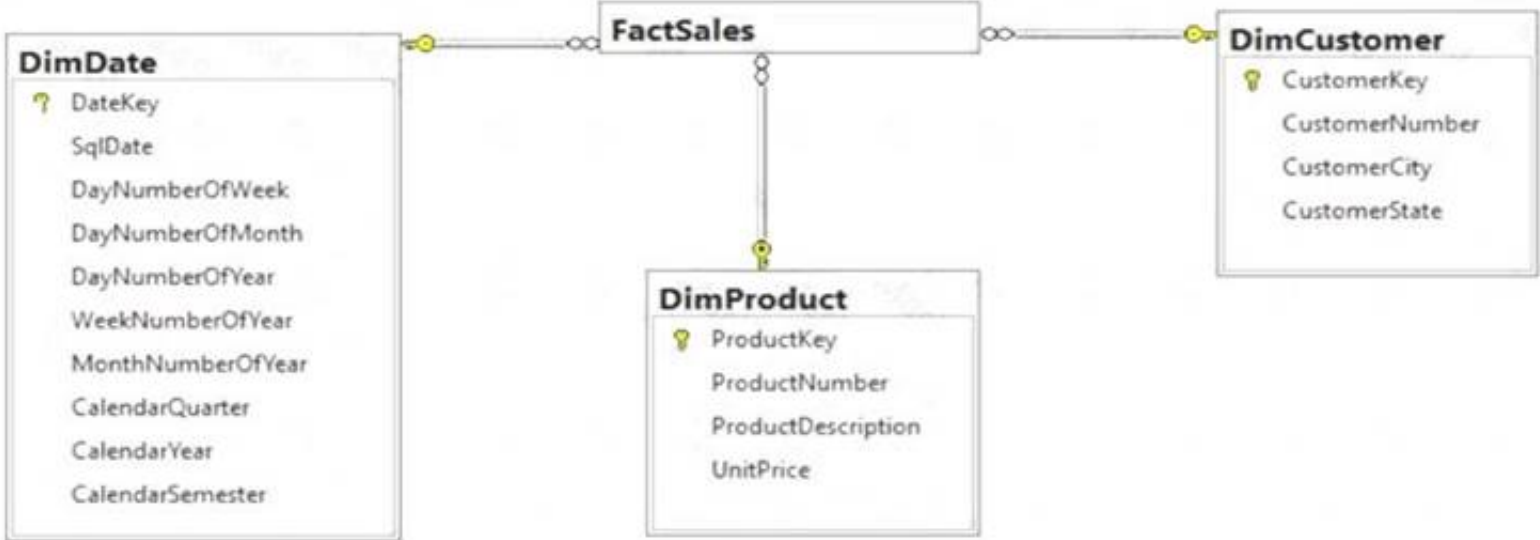
The business key column from the source sys

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

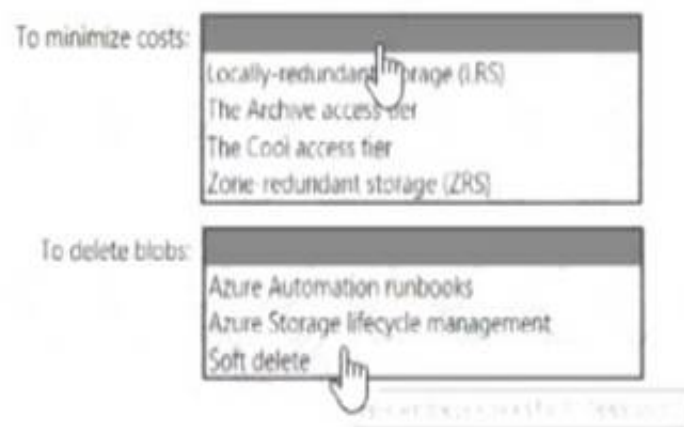
Text, table Description automatically generated  
Box 1: Denormalize to a second normal form  
Denormalization is the process of transforming higher normal forms to lower normal forms via storing the join of higher normal form relations as a base relation. Denormalization increases the performance in data retrieval at cost of bringing update anomalies to a database.  
Box 2: New identity columns  
The collapsing relations strategy can be used in this step to collapse classification entities into component entities to obtain at dimension tables with single-part keys that connect directly to the fact table. The single-part key is a surrogate key generated to ensure it remains unique over time.  
Example:  
Diagram Description automatically generated



Note: A surrogate key on a table is a column with a unique identifier for each row. The key is not generated from the table data. Data modelers like to create surrogate keys on their tables when they design data warehouse models. You can use the IDENTITY property to achieve this goal simply and effectively without affecting load performance.  
Reference:  
<https://www.mssqltips.com/sqlservertip/5614/explore-the-role-of-normal-forms-in-dimensional-modeling/> <https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-tables-identity>

**NEW QUESTION 55**

- (Exam Topic 3)  
You have an Azure subscription.  
You need to deploy an Azure Data Lake Storage Gen2 Premium account. The solution must meet the following requirements:  
• Blobs that are older than 365 days must be deleted.  
• Administrator efforts must be minimized.  
• Costs must be minimized  
What should you use? To answer, select the appropriate options in the answer area. NOTE Each correct selection is worth one point.

**Answer Area**

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

<https://learn.microsoft.com/en-us/azure/storage/blobs/premium-tier-for-data-lake-storage>

**NEW QUESTION 60**

- (Exam Topic 3)

You have an Azure subscription that contains an Azure Synapse Analytics dedicated SQL pool named SQLPool1. SQLPool1 is currently paused.

You need to restore the current state of SQLPool1 to a new SQL pool. What should you do first?

- A. Create a workspace.  
B. Create a user-defined restore point.  
C. Resume SQLPool1.  
D. Create a new SQL pool.

**Answer:** B

**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-restore-active>

**NEW QUESTION 64**

- (Exam Topic 3)

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

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

- A. nonclustered columnstore  
B. clustered columnstore  
C. nonclustered  
D. clustered

**Answer:** B

**Explanation:**

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

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

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

**NEW QUESTION 68**

- (Exam Topic 3)

You have an Azure subscription that contains an Azure Synapse Analytics workspace named workspace1. Workspace1 connects to an Azure DevOps repository named repo1. Repo1 contains a collaboration branch named main and a development branch named branch1. Branch1 contains an Azure Synapse pipeline named pipeline1.

In workspace1, you complete testing of pipeline1. You need to schedule pipeline1 to run daily at 6 AM.

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

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

Actions

Answer Area

Create a new branch in Repo1.

Merge the changes from branch1 into main.

Associate the schedule trigger with pipeline1.

Switch to Synapse live mode.

Create a schedule trigger.

Publish the contents of main.

>

<

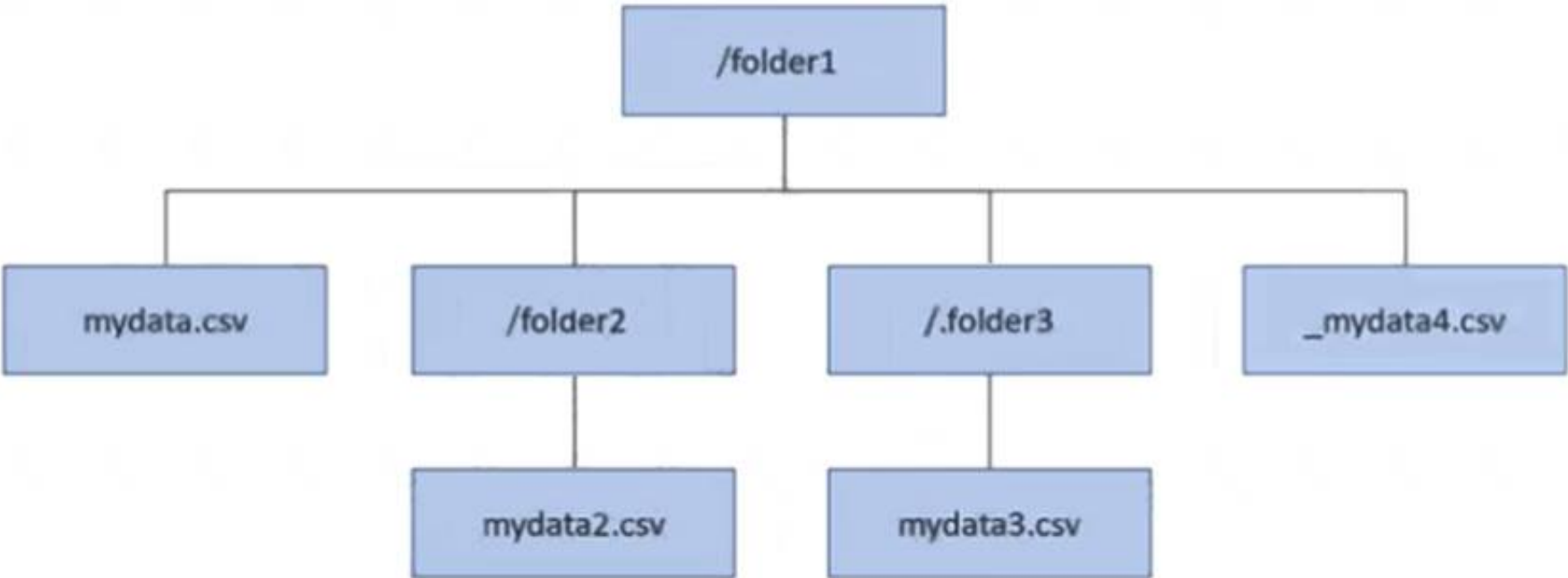
- A. Mastered  
B. Not Mastered

Answer: A

Explanation:  
Timeline Description automatically generated

NEW QUESTION 73

- (Exam Topic 3)  
You have an Azure Data Lake Storage Gen2 account that contains a container named container1. You have an Azure Synapse Analytics serverless SQL pool that contains a native external table named dbo.Table1. The source data for dbo.Table1 is stored in container1. The folder structure of container1 is shown in the following exhibit.



The external data source is defined by using the following statement.

```
CREATE EXTERNAL DATA SOURCE DataLake
WITH
(
    LOCATION          = 'https://mydatalake.dfs.core.windows.net/container1/folder1/**'
    , CREDENTIAL = DataLakeCred
);
```

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
When selecting all the rows in dbo.Table1, data from the mydata2.csv file will be returned.	<input type="radio"/>	<input type="radio"/>
When selecting all the rows in dbo.Table1, data from the mydata3.csv file will be returned.	<input type="radio"/>	<input type="radio"/>
When selecting all the rows in dbo.Table1, data from the _mydata4.csv file will be returned.	<input type="radio"/>	<input type="radio"/>

- A. Mastered

B. Not Mastered

**Answer:** A

**Explanation:**

Box 1: Yes

In the serverless SQL pool you can also use recursive wildcards /logs/\*\* to reference Parquet or CSV files in any sub-folder beneath the referenced folder.

Box 2: Yes

Box 3: No

Reference: <https://learn.microsoft.com/en-us/azure/synapse-analytics/sql/develop-tables-external-tables>

**NEW QUESTION 76**

- (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



**NEW QUESTION 81**

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool.

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

What should you do?

A. Enable encryption at rest for the Azure Data Lake Storage Gen2 account.

B. Enable Transparent Data Encryption (TDE) for the pool.

C. Use a customer-managed key to enable double encryption for the Azure Synapse workspace.

D. Create an Azure key vault in the Azure subscription grant access to the pool.

**Answer:** B

**Explanation:**

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

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

**NEW QUESTION 85**

- (Exam Topic 3)

You are planning a streaming data solution that will use Azure Databricks. The solution will stream sales transaction data from an online store. The solution has the following specifications:

\* The output data will contain items purchased, quantity, line total sales amount, and line total tax amount.

\* Line total sales amount and line total tax amount will be aggregated in Databricks.

\* Sales transactions will never be updated. Instead, new rows will be added to adjust a sale.

You need to recommend an output mode for the dataset that will be processed by using Structured Streaming. The solution must minimize duplicate data.

What should you recommend?

A. Append

B. Update

C. Complete

**Answer:** B

**Explanation:**

By default, streams run in append mode, which adds new records to the table. <https://docs.databricks.com/delta/delta-streaming.html>

**NEW QUESTION 89**

- (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 93**

- (Exam Topic 3)

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

Table	Comment
EventDate	One million records are added to the table each day
EventTypeID	The table contains 10 million records for each event type.
WarehouseID	The table contains 100 million records for each warehouse.
ProductCategoryTypeID	The table contains 25 million records for each product category type.

You identify the following usage patterns:

- Analysts will most commonly analyze transactions for a warehouse.
- Queries will summarize by product category type, date, and/or inventory event type. You need to recommend a partition strategy for the table to minimize query times.

On which column should you partition the table?

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

**Answer: C**

**Explanation:**

The number of records for each warehouse is big enough for a good partitioning.

Note: Table partitions enable you to divide your data into smaller groups of data. In most cases, table partitions are created on a date column.

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 distributed databases.

**NEW QUESTION 95**

- (Exam Topic 3)

You are designing a star schema for a dataset that contains records of online orders. Each record includes an order date, an order due date, and an order ship date.

You need to ensure that the design provides the fastest query times of the records when querying for arbitrary date ranges and aggregating by fiscal calendar attributes.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Create a date dimension table that has a DateTime key.
- B. Use built-in SQL functions to extract date attributes.
- C. Create a date dimension table that has an integer key in the format of yyyyymmdd.
- D. In the fact table, use integer columns for the date fields.
- E. Use DateTime columns for the date fields.

**Answer: BD**

**NEW QUESTION 96**

- (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 High Concurrency cluster for the jobs. Does this meet the goal?

- A. Yes
- B. No

**Answer:** A

**Explanation:**

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

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

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

Reference:

<https://docs.azuredatabricks.net/clusters/configure.html>

**NEW QUESTION 99**

- (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 103**

- (Exam Topic 3)

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

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

What should you do?

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

**Answer:** A

**NEW QUESTION 106**

- (Exam Topic 3)

You have an Azure Synapse Analytics pipeline named Pipeline1 that contains a data flow activity named Dataflow1.

Pipeline1 retrieves files from an Azure Data Lake Storage Gen 2 account named storage1.

Dataflow1 uses the AutoResolveIntegrationRuntime integration runtime configured with a core count of 128. You need to optimize the number of cores used by Dataflow1 to accommodate the size of the files in storage1. What should you configure? To answer, select the appropriate options in the answer area.

To Pipeline1, add:

A custom activity

A Get Metadata activity

An If Condition activity

For Dataflow1, set the core count by using:

Dynamic content

Parameters

User properties

- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**  
Box 1: A Get Metadata activity  
Dynamically size data flow compute at runtime  
The Core Count and Compute Type properties can be set dynamically to adjust to the size of your incoming source data at runtime. Use pipeline activities like Lookup or Get Metadata in order to find the size of the source dataset data. Then, use Add Dynamic Content in the Data Flow activity properties.  
Box 2: Dynamic content  
Reference: <https://docs.microsoft.com/en-us/azure/data-factory/control-flow-execute-data-flow-activity>

NEW QUESTION 107

- (Exam Topic 3)  
You need to create a partitioned table in an Azure Synapse Analytics dedicated SQL pool.  
How should you complete the Transact-SQL statement? To answer, drag the appropriate values to the correct targets. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.  
NOTE: Each correct selection is worth one point.

Values

CLUSTERED INDEX

COLLATE

DISTRIBUTION

PARTITION

PARTITION FUNCTION

PARTITION SCHEME

Answer Area

```
CREATE TABLE table1
(
    ID INTEGER,
    col1 VARCHAR(10),
    col2 VARCHAR(10)
) WITH
(
    [ ] = HASH(ID),
    [ ] (ID RANGE LEFT FOR VALUES (1, 1000000, 2000000))
);
```

- A. Mastered
- B. Not Mastered

Answer: A

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

NEW QUESTION 109

- (Exam Topic 3)  
You develop a dataset named DBTBL1 by using Azure Databricks. DBTBL1 contains the following columns:

- > SensorTypeID
- > GeographyRegionID
- > Year
- > Month
- > Day
- > Hour

- > Minute
- > Temperature
- > WindSpeed
- > Other

You need to store the data to support daily incremental load pipelines that vary for each GeographyRegionID. The solution must minimize storage costs. How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

df.write

▼

.bucketBy

.format

.partitionBy

.sortBy

▼

("\*")

("GeographyRegionID")

("GeographyRegionID", "Year", "Month", "Day")

("Year", "Month", "Day", "GeographyRegionID")

.mode ("append")

▼

.csv("/DBTBL1")

.json("/DBTBL1")

.parquet("/DBTBL1")

.saveAsTable("/DBTBL1")

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Graphical user interface, text, application Description automatically generated

NEW QUESTION 114

- (Exam Topic 3)

You configure version control for an Azure Data Factory instance as shown in the following exhibit.

Home

Connections

Linked services

Integration runtimes

Source control

**Git configuration**

ARM template

Parameterization template

Author

Triggers

Global parameters

Security

Customer managed key

Managed private endpoints

Git repository

Git repository information associated with your data factory. [CI/CD best practices](#)

Setting

Disconnect

Repository type

Azure DevOps Git

Azure DevOps Account

CONTOSO

Project name

Data

Repository name

dwh\_batchetl

Collaboration branch

main

Publish branch

adf\_publish

Root folder

/

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



Azure Resource Manager (ARM) templates for the pipeline assets are stored in [answer choice]

	▼
/	
adf_publish	
main	
Parameterization template	

A Data Factory Azure Resource Manager (ARM) template named contososales can be found in [answer choice]

	▼
/	
/contososales	
/dwh_batchetl/adf_publish/contososales	
/main	

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Letter Description automatically generated

Box 1: adf\_publish

The Publish branch is the branch in your repository where publishing related ARM templates are stored and updated. By default, it's adf\_publish.

Box 2: / dwh\_batchetl/adf\_publish/contososales

Note: RepositoryName (here dwh\_batchetl): Your Azure Repos code repository name. Azure Repos projects contain Git repositories to manage your source code as your project grows. You can create a new repository or use an existing repository that's already in your project.

Reference:

<https://docs.microsoft.com/en-us/azure/data-factory/source-control>

**NEW QUESTION 115**

- (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.	<input type="radio"/>	<input type="radio"/>
The Databricks cluster minimizes costs when running scheduled jobs that execute notebooks.	<input type="radio"/>	<input type="radio"/>
The Databricks cluster supports the creation of a Delta Lake table.	<input type="radio"/>	<input type="radio"/>

- 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 117**

- (Exam Topic 3)

You have a C# application that process data from an Azure IoT hub and performs complex transformations. You need to replace the application with a real-time solution. The solution must reuse as much code as possible from the existing application.

- A. Azure Databricks  
B. Azure Event Grid  
C. Azure Stream Analytics  
D. Azure Data Factory

**Answer:** C

**Explanation:**

Azure Stream Analytics on IoT Edge empowers developers to deploy near-real-time analytical intelligence closer to IoT devices so that they can unlock the full value of device-generated data. UDF are available in C# for IoT Edge jobs

Azure Stream Analytics on IoT Edge runs within the Azure IoT Edge framework. Once the job is created in Stream Analytics, you can deploy and manage it using IoT Hub.

References:

<https://docs.microsoft.com/en-us/azure/stream-analytics/stream-analytics-edge>

**NEW QUESTION 118**

- (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 122**

- (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 124**

- (Exam Topic 2)

Which Azure Data Factory components should you recommend using together to import the daily inventory data from the SQL server to Azure Data Lake Storage?

To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Integration runtime type:

Azure integration runtime

Azure-SSIS integration runtime

Self-hosted integration runtime

Trigger type:

Event-based trigger

Schedule trigger

Tumbling window trigger

Activity type:

Copy activity

Lookup activity

Stored procedure activity

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Box 1: Self-hosted integration runtime

A self-hosted IR is capable of running copy activity between a cloud data stores and a data store in private network.

Box 2: Schedule trigger Schedule every 8 hours Box 3: Copy activity Scenario:

- > Customer data, including name, contact information, and loyalty number, comes from Salesforce and can be imported into Azure once every eight hours. Row modified dates are not trusted in the source table.
- > Product data, including product ID, name, and category, comes from Salesforce and can be imported into Azure once every eight hours. Row modified dates are not trusted in the source table.

**NEW QUESTION 127**

- (Exam Topic 1)

You need to design a data ingestion and storage solution for the Twitter feeds. The solution must meet the customer sentiment analytics requirements.

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

**Answer Area**

To increase the throughput of ingesting the Twitter feeds:

Configure Event Hubs partitions.  
Enable Auto-Inflate in Event Hubs.  
Use Event Hubs Dedicated.

To store the Twitter feed data, use:

An Azure Data Lake Storage Gen2 account  
An Azure Databricks high concurrency cluster  
An Azure General-purpose v2 storage account in the Premium tier

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

Graphical user interface, text Description automatically generated

Box 1: Configure Evegnet Hubs partitions

Scenario: Maximize the throughput of ingesting Twitter feeds from Event Hubs to Azure Storage without purchasing additional throughput or capacity units.

Event Hubs is designed to help with processing of large volumes of events. Event Hubs throughput is scaled by using partitions and throughput-unit allocations.

Event Hubs traffic is controlled by TUs (standard tier). Auto-inflate enables you to start small with the minimum required TUs you choose. The feature then scales automatically to the maximum limit of TUs you need, depending on the increase in your traffic.

Box 2: An Azure Data Lake Storage Gen2 account

Scenario: Ensure that the data store supports Azure AD-based access control down to the object level. Azure Data Lake Storage Gen2 implements an access control model that supports both Azure role-based access control (Azure RBAC) and POSIX-like access control lists (ACLs).

Reference:

<https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-features> <https://docs.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-access-control>

**NEW QUESTION 131**

- (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

CREATE EXTERNAL DATA SOURCE

CREATE EXTERNAL FILE FORMAT

CREATE EXTERNAL TABLE

CREATE EXTERNAL TABLE AS SELECT

CREATE DATABASE SCOPED CREDENTIAL

Answer Area

- 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 132

- (Exam Topic 1)

You need to design a data retention solution for the Twitter feed data records. The solution must meet the customer sentiment analytics requirements.

Which Azure Storage functionality should you include in the solution?

- A. time-based retention
- B. change feed
- C. soft delete
- D. lifecycle management

**Answer: D**

### NEW QUESTION 137

- (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 141

- (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 143**

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