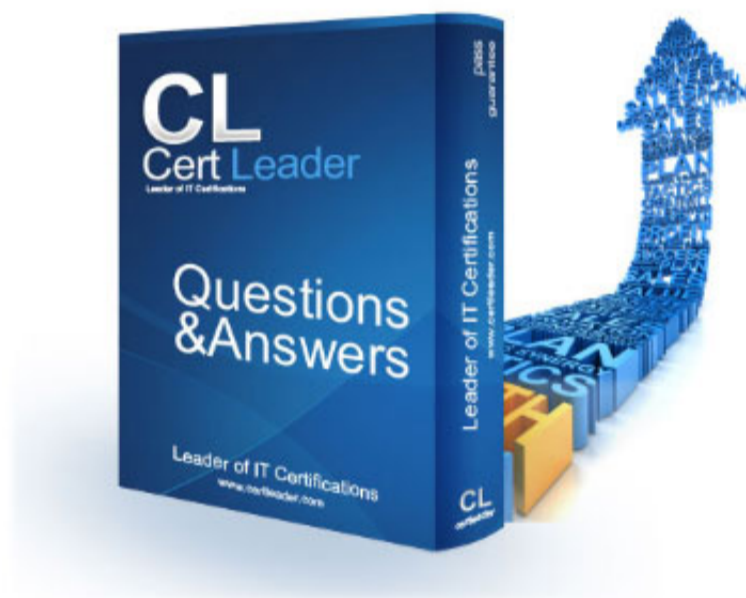


DP-203 Dumps

Data Engineering on Microsoft Azure

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



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



NEW QUESTION 2

- (Exam Topic 3)

You are designing a data mart for the human resources (MR) department at your company. The data mart will contain information and employee transactions. From a source system you have a flat extract that has the following fields:

- EmployeeID
- FirstName
- LastName
- Recipient
- GrossArmount
- TransactionID
- GovernmentID
- NetAmountPaid
- TransactionDate

You need to design a start schema data model in an Azure Synapse analytics dedicated SQL pool for the data mart. Which two tables should you create? Each Correct answer present part of the solution.

- A. a dimension table for employee
- B. a fabric for Employee
- C. a dimension table far EmployeeTransaction
- D. a dimension table for Transaction
- E. a fact table for Transaction

Answer: AE

Explanation:

Reference:

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

NEW QUESTION 3

- (Exam Topic 3)

You have an Azure Data Factory pipeline shown the following exhibit.



The execution log for the first pipeline run is shown in the following exhibit.

Activity runs

Pipeline run ID: 87f89922-14fa-468f-b13f-2f867606f4ff

All status ▾

Showing 1 - 2 items

Activity name	Activity type	Run start	Duration	Status
Web_GetIP	Web	Nov 10, 2022, 11:11:36 a	00:00:02	Failed
Exec_COPY_BLOB	Execute Pipeline	Nov 10, 2022, 11:11:25 a	00:00:11	Succeeded

The execution log for the second pipeline run is shown in the following exhibit.

Activity runs

Pipeline run ID a7b5b522-cfaf-4c09-b3a9-f842986be984

All status ▾

Showing 1 - 3 items

Activity name ↑↓	Activity type ↑↓	Run start ↑↓	Duration ↑↓	Status ↑↓
Set status	Set variable	Nov 10, 2022, 11:13:17 a	00:00:01	 Succeeded
Web_GetIP	Web	Nov 10, 2022, 11:12:59 a	00:00:16	 Succeeded
Exec_COPY_BLOB	Execute Pipeline	Nov 10, 2022, 11:12:48 a	00:00:11	 Skipped

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

Answer Area

Statements	Yes	No
The Retry property of the Web_GetIP activity is set to 1.	<input type="radio"/>	<input type="radio"/>
The waitOnCompletion property of the Exec_COPY_BLOB activity is set to true.	<input type="radio"/>	<input type="radio"/>
The Exec_COPY_BLOB activity was skipped during the second run due to pipeline dependencies.	<input type="radio"/>	<input type="radio"/>

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

Answer Area

Statements	Yes	No
The Retry property of the Web_GetIP activity is set to 1.	<input type="radio"/>	<input checked="" type="radio"/>
The waitOnCompletion property of the Exec_COPY_BLOB activity is set to true.	<input type="radio"/>	<input checked="" type="radio"/>
The Exec_COPY_BLOB activity was skipped during the second run due to pipeline dependencies.	<input type="radio"/>	<input checked="" type="radio"/>

NEW QUESTION 4

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool mat contains a table named dbo.Users.

You need to prevent a group of users from reading user email addresses from dbo.Users. What should you use?

- A. row-level security
B. column-level security
C. Dynamic data masking
D. Transparent Data Encryption (TDD

Answer: B

NEW QUESTION 5

- (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 6

- (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 7

- (Exam Topic 3)

You need to schedule an Azure Data Factory pipeline to execute when a new file arrives in an Azure Data Lake Storage Gen2 container.

Which type of trigger should you use?

- A. on-demand
- B. tumbling window
- C. schedule
- D. storage event

Answer: D

Explanation:

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

Reference:

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

NEW QUESTION 8

- (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 9

- (Exam Topic 3)

You are designing a folder structure for the files in 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 pool
- 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_YYYYMMDD.parquet
- B. \Department\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 10

- (Exam Topic 3)

You are building an Azure Data Factory solution to process data received from Azure Event Hubs, and then ingested into an Azure Data Lake Storage Gen2 container.

The data will be ingested every five minutes from devices into JSON files. The files have the following naming pattern.

`/ {deviceType} / in / {YYYY} / {MM} / {DD} / {HH} / {deviceID} _ {YYYY} {MM} {DD} {HH} {mm} .json`

You need to prepare the data for batch data processing so that there is one dataset per hour per deviceType. The solution must minimize read times.

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

NOTE: Each correct selection is worth one point.

Parameter:

@pipeline(),TriggerTime
@pipeline(),TriggerType
@trigger().outputs.windowStartTime
@trigger().startTime

Naming pattern:

/ {deviceID} / out / {YYYY} / {MM} / {DD} / {HH} .json
/ {YYYY} / {MM} / {DD} / {deviceType} .json
/ {YYYY} / {MM} / {DD} / {HH} .json
/ {YYYY} / {MM} / {DD} / {HH} _ {deviceType} .json

Copy behavior:

Add dynamic content
Flatten hierarchy
Merge files

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Box 1: @trigger().startTime

startTime: A date-time value. For basic schedules, the value of the startTime property applies to the first occurrence. For complex schedules, the trigger starts no sooner than the specified startTime value.

Box 2: / {YYYY} / {MM} / {DD} / {HH} _ {deviceType} .json One dataset per hour per deviceType.

Box 3: Flatten hierarchy

- FlattenHierarchy: All files from the source folder are in the first level of the target folder. The target files have autogenerated names.

Reference:

<https://docs.microsoft.com/en-us/azure/data-factory/concepts-pipeline-execution-triggers> <https://docs.microsoft.com/en-us/azure/data-factory/connector-file-system>

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 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 SQL.
- 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 11

- (Exam Topic 3)

You have an enterprise data warehouse in Azure Synapse Analytics named DW1 on a server named Server1. You need to determine the size of the transaction log file for each distribution of DW1.

What should you do?

- A. On DW1, execute a query against the sys.database_files dynamic management view.
- B. From Azure Monitor in the Azure portal, execute a query against the logs of DW1.
- C. Execute a query against the logs of DW1 by using the Get-AzOperationalInsightsSearchResult PowerShell cmdlet.
- D. On the master database, execute a query against the sys.dm_pdw_nodes_os_performance_counters dynamic management view.

Answer: A

Explanation:

For information about the current log file size, its maximum size, and the autogrow option for the file, you can also use the size, max_size, and growth columns for that log file in sys.database_files.

Reference:

<https://docs.microsoft.com/en-us/sql/relational-databases/logs/manage-the-size-of-the-transaction-log-file>

NEW QUESTION 14

- (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 17

- (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 18

- (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 Standard cluster for the data engineers, and a High Concurrency cluster for the jobs.

Does this meet the goal?

- A. Yes
B. No

Answer: B

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 23

- (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:

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- > 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 25

- (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 28

- (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?

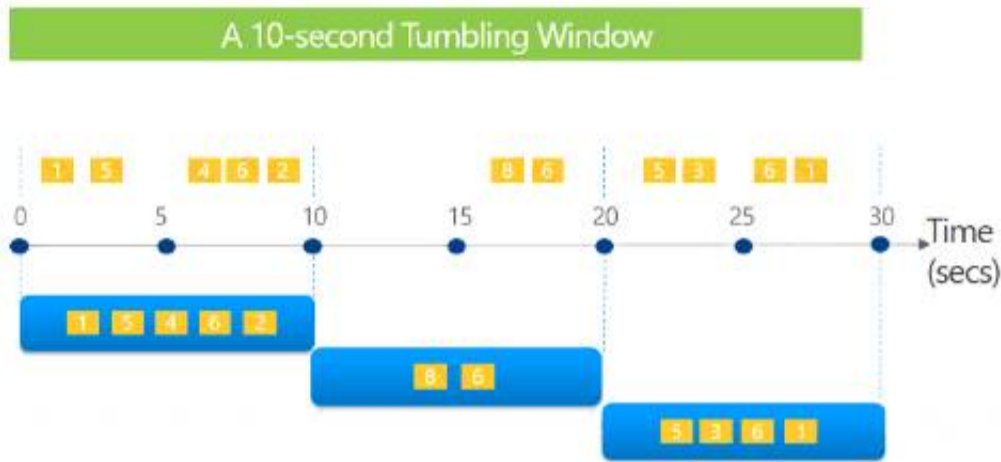
- A. snapshot
- B. tumbling
- C. hopping
- D. sliding

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 33

- (Exam Topic 3)
You have an Azure Synapse Analytics serverless SQL pool.
You have an Azure Data Lake Storage account named aols1 that contains a public container named container1 The container 1 container contains a folder named folder 1.
You need to query the top 100 rows of all the CSV files in folder 1.
How shouk1 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

BULK

DATA_SOURCE

LOCATION

OPENROWSET

Answer Area

```
SELECT TOP 100 *
FROM (
    'https://adls1.dfs.core.windows.net/container1/folder1/*.csv',
    FORMAT = 'CSV') AS rows
```

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Values

BULK

DATA_SOURCE

LOCATION

OPENROWSET

Answer Area

```
SELECT TOP 100 *
FROM OPENROWSET (
    BULK 'https://adls1.dfs.core.windows.net/container1/folder1/*.csv',
    FORMAT = 'CSV') AS rows
```

NEW QUESTION 36

- (Exam Topic 3)
You have an Azure subscription that contains a Microsoft Purview account named MP1, an Azure data factory named DF1, and a storage account named storage.
MP1 is configured
10 scan storage1. DF1 is connected to MP1 and contains 3 dataset named DS1. DS1 references 2 file in storage.

In DF1, you plan to create a pipeline that will process data from DS1.

You need to review the schema and lineage information in MP1 for the data referenced by DS1.

Which two features can you use to locate the information? Each correct answer presents a complete solution. NOTE: Each correct answer is worth one point.

- A. the Storage browser of storage1 in the Azure portal
- B. the search bar in the Azure portal
- C. the search bar in Azure Data Factory Studio
- D. the search bar in the Microsoft Purview governance portal

Answer: CD

Explanation:

➤ The search bar in the Microsoft Purview governance portal: This is a feature that allows you to search for assets in your data estate using keywords, filters, and facets. You can use the search bar to find the files in storage1 that are referenced by DS1, and then view their schema and lineage information in the asset details page12.

➤ The search bar in Azure Data Factory Studio: This is a feature that allows you to search for datasets, linked services, pipelines, and other resources in your data factory. You can use the search bar to find DS1 in DF1, and then view its schema and lineage information in the dataset details page. You can also click on the Open in Purview button to open the corresponding asset in MP13.

The two features that can be used to locate the schema and lineage information for the data referenced by DS1 are the search bar in Azure Data Factory Studio and the search bar in the Microsoft Purview governance portal.

The search bar in Azure Data Factory Studio allows you to search for the dataset DS1 and view its properties and lineage. This can help you locate information about the source and destination data stores, as well as the transformations that were applied to the data.

The search bar in the Microsoft Purview governance portal allows you to search for the storage account and view its metadata, including schema and lineage information. This can help you understand the different data assets that are stored in the storage account and how they are related to each other.

The Storage browser of storage1 in the Azure portal may allow you to view the files that are stored in the storage account, but it does not provide lineage or schema information for those files. Similarly, the search bar in the Azure portal may allow you to search for resources in the Azure subscription, but it does not provide detailed information about the data assets themselves.

References:

- [What is Azure Purview?](#)
- [Use Azure Data Factory Studio](#)

NEW QUESTION 41

- (Exam Topic 1)

You need to implement the surrogate key for the retail store table. The solution must meet the sales transaction dataset requirements.

What should you create?

- A. a table that has an IDENTITY property
- B. a system-versioned temporal table
- C. a user-defined SEQUENCE object
- D. a table that has a FOREIGN KEY constraint

Answer: A

Explanation:

Scenario: Implement a surrogate key to account for changes to the retail store addresses.

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

Reference:

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

NEW QUESTION 44

- (Exam Topic 1)

You need to design a data retention solution for the Twitter teed 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 47

- (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 51

- (Exam Topic 3)
You have an enterprise data warehouse in Azure Synapse Analytics.
You need to monitor the data warehouse to identify whether you must scale up to a higher service level to accommodate the current workloads
Which is the best metric to monitor?
More than one answer choice may achieve the goal. Select the BEST answer.

- A. Data 10 percentage
- B. CPU percentage
- C. DWU used
- D. DWU percentage

Answer: C

NEW QUESTION 53

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

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

Answer: D

Explanation:

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

NEW QUESTION 58

- (Exam Topic 3)
You plan to monitor an Azure data factory by using the Monitor & Manage app.
You need to identify the status and duration of activities that reference a table in a source database.
Which three actions should you perform in sequence? To answer, move the actions from the list of actions to the answer are and arrange them in the correct order.

Actions

From the Data Factory monitoring app, add the Source user property to the Activity Runs table.

From the Data Factory monitoring app, add the Source user property to the Pipeline Runs table.

From the Data Factory authoring UI, publish the pipelines.

From the Data Factory monitoring app, add a linked service to the Pipeline Runs table.

From the Data Factory authoring UI, generate a user property for Source on all activities.

From the Data Factory authoring UI, generate a user property for Source on all datasets.

Answer Area

>

<

↑

↓

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Step 1: From the Data Factory authoring UI, generate a user property for Source on all activities. Step 2: From the Data Factory monitoring app, add the Source user property to Activity Runs table.
You can promote any pipeline activity property as a user property so that it becomes an entity that you can monitor. For example, you can promote the Source and Destination properties of the copy activity in your pipeline as user properties. You can also select Auto Generate to generate the Source and Destination user properties for a copy activity.
Step 3: From the Data Factory authoring UI, publish the pipelines
Publish output data to data stores such as Azure SQL Data Warehouse for business intelligence (BI) applications to consume.
References:
<https://docs.microsoft.com/en-us/azure/data-factory/monitor-visually>

NEW QUESTION 59

- (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 61

- (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 in 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 63

- (Exam Topic 3)

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

- TransactionType: 40 million rows per transaction type
- CustomerSegment: 4 million per customer segment
- TransactionMonth: 65 million rows per month
- AccountType: 500 million per account type

You have the following query requirements:

- Analysts will most commonly analyze transactions for a given month.
- Transactions analysis will typically summarize transactions by transaction type, customer segment, and/or account type

You need to recommend a partition strategy for the table to minimize query times. On which column should you recommend partitioning the table?

- A. CustomerSegment
- B. AccountType
- C. TransactionType
- D. TransactionMonth

Answer: C

Explanation:

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.

Example: 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.

NEW QUESTION 68

- (Exam Topic 3)

From a website analytics system, you receive data extracts about user interactions such as downloads, link clicks, form submissions, and video plays. The data contains the following columns.

Name	Sample value
Date	15 Jan 2021
EventCategory	Videos
EventAction	Play
EventLabel	Contoso Promotional
ChannelGrouping	Social
TotalEvents	150
UniqueEvents	120
SessionWithEvents	99

You need to design a star schema to support analytical queries of the data. The star schema will contain four tables including a date dimension. To which table should you add each column? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

EventCategory:

▼

DimChannel
DimDate
DimEvent
FactEvents

ChannelGrouping:

▼

DimChannel
DimDate
DimEvent
FactEvents

TotalEvents:

▼

DimChannel
DimDate
DimEvent
FactEvents

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Table Description automatically generated

Box 1: DimEvent

Box 2: DimChannel

Box 3: FactEvents

Fact tables store observations or events, and can be sales orders, stock balances, exchange rates, temperatures, etc

Reference:

<https://docs.microsoft.com/en-us/power-bi/guidance/star-schema>

NEW QUESTION 73

- (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 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 are designing an Azure Stream Analytics solution that will analyze Twitter data.
You need to count the tweets in each 10-second window. The solution must ensure that each tweet is counted only once.
Solution: You use a session window that uses a timeout size of 10 seconds. Does this meet the goal?

- A. Yes
- B. No

Answer: A

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 76

- (Exam Topic 3)
You have an Azure Databricks workspace and an Azure Data Lake Storage Gen2 account named storage1. 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 79

- (Exam Topic 3)
You store files in an Azure Data Lake Storage Gen2 container. The container has the storage policy shown in the following exhibit.



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.

The files are [answer choice] after 30 days:

	▼
deleted from the container	
moved to archive storage	
moved to cool storage	
moved to hot storage	

The storage policy applies to [answer choice]:

	▼
container1/contoso.csv	
container1/docs/contoso.json	
container1/mycontoso/contoso.csv	

A. Mastered

B. Not Mastered

Answer: A

Explanation:

Graphical user interface, text, application Description automatically generated

Box 1: moved to cool storage

The ManagementPolicyBaseBlob.TierToCool property gets or sets the function to tier blobs to cool storage. Support blobs currently at Hot tier.

Box 2: container1/contoso.csv As defined by prefixMatch.

prefixMatch: An array of strings for prefixes to be matched. Each rule can define up to 10 case-sensitve prefixes. A prefix string must start with a container name.

Reference:

<https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.management.storage.fluent.models.managementpoli>

NEW QUESTION 82

- (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.

Columnar format:

	▼
Avro	
GZip	
Parquet	
TXT	

JSON with a timestamp:

	▼
Avro	
GZip	
Parquet	
TXT	

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 85

- (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 87

- (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 88

- (Exam Topic 3)

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

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

What should you recommend?

- A. Parquet
- B. Avro
- C. CSV
- D. JSON

Answer: A

Explanation:

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

NEW QUESTION 91

- (Exam Topic 3)

You have an Azure Data Factory version 2 (V2) resource named Df1. Df1 contains a linked service. You have an Azure Key vault named vault1 that contains an encryption key named key1.

You need to encrypt Df1 by using key1. What should you do first?

- A. Add a private endpoint connection to vault 1.
- B. Enable Azure role-based access control on vault 1.
- C. Remove the linked service from Df1.
- D. Create a self-hosted integration runtime.

Answer: C

Explanation:

Linked services are much like connection strings, which define the connection information needed for Data Factory to connect to external resources.

Reference:

<https://docs.microsoft.com/en-us/azure/data-factory/enable-customer-managed-key> <https://docs.microsoft.com/en-us/azure/data-factory/concepts-linked-services>

<https://docs.microsoft.com/en-us/azure/data-factory/create-self-hosted-integration-runtime>

NEW QUESTION 94

- (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 95

- (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 = '0x0a',  
)  
WITH (jsondoc nvarchar(1024)) as Documents
```

- 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 = '0x0a',  
)  
WITH (jsondoc nvarchar(1024)) as Documents
```

NEW QUESTION 96

- (Exam Topic 3)

You are responsible for providing access to an Azure Data Lake Storage Gen2 account.

Your user account has contributor access to the storage account, and you have the application ID and access key.

You plan to use PolyBase to load data into an enterprise data warehouse in Azure Synapse Analytics. You need to configure PolyBase to connect the data warehouse to storage account.

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

Components

a database scoped credential

an asymmetric key

an external data source

a database encryption key

an external file format

Answer Area

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

Components

a database scoped credential

an asymmetric key

an external data source

a database encryption key

an external file format

Answer Area

a database scoped credential

an external data source

an external file format

NEW QUESTION 99

- (Exam Topic 3)

You plan to create a table in an Azure Synapse Analytics dedicated SQL pool.

Data in the table will be retained for five years. Once a year, data that is older than five years will be deleted. You need to ensure that the data is distributed evenly across partitions. The solution must minimize the amount of time required to delete old data.

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

CustomerKey

HASH

ROUND_ROBIN

REPLICATE

OrderDateKey

SalesOrderNumber

Answer Area

```
CREATE TABLE [dbo].[FactSales]
(
    [ProductKey]          int          NOT NULL
,   [OrderDateKey]       int          NOT NULL
,   [CustomerKey]        int          NOT NULL
,   [SalesOrderNumber]   nvarchar ( 20 ) NOT NULL
,   [OrderQuantity]      smallint    NOT NULL
,   [UnitPrice]          money        NOT NULL
)
WITH
(    CLUSTERED           COLUMNSTORE           INDEX
,   DISTRIBUTION = Value ([ProductKey])
,   PARTITION ( [ Value ] RANGE RIGHT FOR VALUES
                (20170101,20180101,20190101,20200101,20210101)
              )
)
```

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

Box 1: HASH

Box 2: OrderDateKey

In most cases, table partitions are created on a date column.

A way to eliminate rollbacks is to use Metadata Only operations like partition switching for data management. For example, rather than execute a DELETE statement to delete all rows in a table where the order_date was in October of 2001, you could partition your data early. Then you can switch out the partition with data for an empty partition from another table.

Reference:

<https://docs.microsoft.com/en-us/sql/t-sql/statements/create-table-azure-sql-data-warehouse> <https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/best-practices-dedicated-sql-pool>

NEW QUESTION 104

- (Exam Topic 3)

You are designing a security model for an Azure Synapse Analytics dedicated SQL pool that will support multiple companies. You need to ensure that users from each company can view only the data of their respective company. Which two objects should you include in the solution? Each correct answer presents part of the solution

NOTE: Each correct selection is worth one point.

- A. a custom role-based access control (RBAC) role.
- B. asymmetric keys
- C. a predicate function
- D. a column encryption key
- E. a security policy

Answer: AE

Explanation:

Reference:

<https://docs.microsoft.com/en-us/sql/relational-databases/security/row-level-security> <https://docs.microsoft.com/en-us/azure/synapse-analytics/security/synapse-workspace-access-control-overview>

NEW QUESTION 108

- (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 110

- (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 113

- (Exam Topic 3)

You have an Azure subscription that contains an Azure Data Lake Storage account named myaccount1. The myaccount1 account contains two containers named container1 and contained. The subscription is linked to an Azure Active Directory (Azure AD) tenant that contains a security group named Group1.

You need to grant Group1 read access to container1. The solution must use the principle of least privilege. Which role should you assign to Group1?

A. Storage Blob Data Reader for container1

B. Storage Table Data Reader for container1

C. Storage Blob Data Reader for myaccount1

D. Storage Table Data Reader for myaccount1

Answer: A

NEW QUESTION 117

- (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 COLUMNSTORE INDEX
    REPLICATE
    ROUND_ROBIN
)
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 COLUMNSTORE INDEX
    REPLICATE
    ROUND_ROBIN
)
CREATE TABLE [dbo].[Country]
```

NEW QUESTION 121

- (Exam Topic 3)

You have an Azure Synapse Analytics dedicated SQL pool.

You need to monitor the database for long-running queries and identify which queries are waiting on resources Which dynamic management view should you use for each requirement? To answer, select the appropriate options in the answer area.

NOTE; Each correct answer is worth one point.

Answer Area

Monitor the database for long-running queries:

	▼
sys.dm_pdw_exec_requests sys.dm_pdw_sql_requests sys.dm_pdw_exec_sessions	

Identify which queries are waiting on resources:

	▼
sys.dm_pdw_waits sys.dm_pdw_lock_waits sys.resource_governor_workload_groups	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Answer Area

Monitor the database for long-running queries:

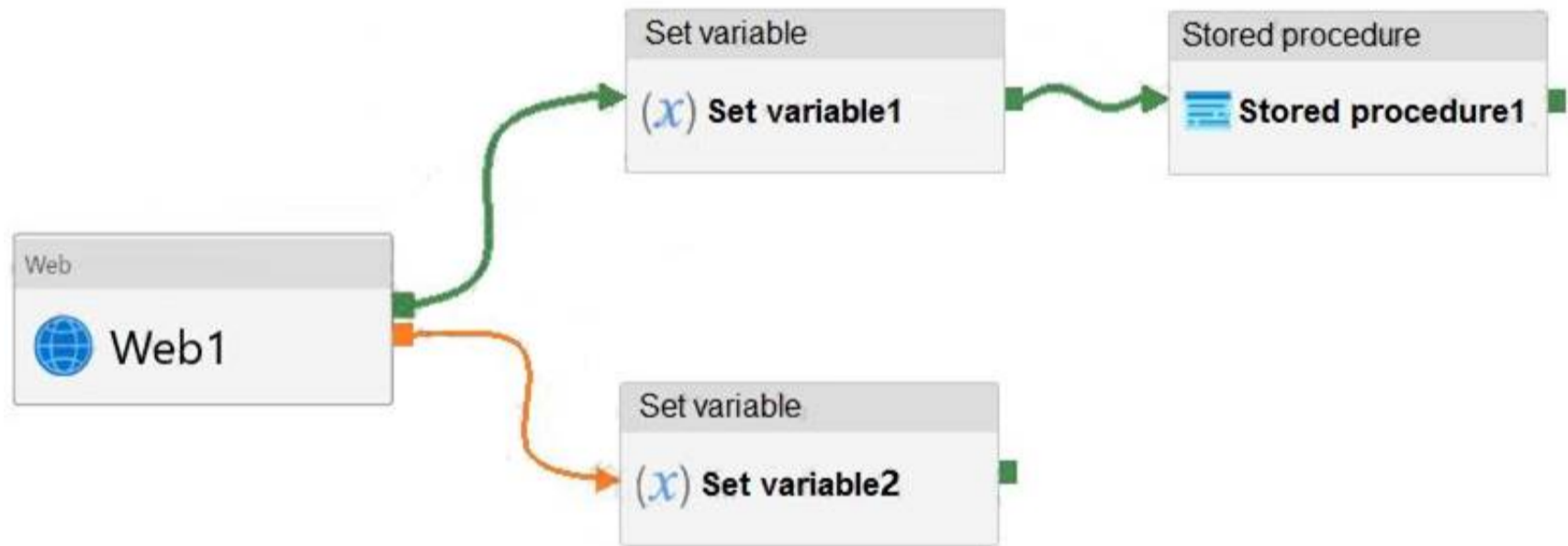
sys.dm_pdw_exec_requests
sys.dm_pdw_sql_requests
sys.dm_pdw_exec_sessions

Identify which queries are waiting on resources:

sys.dm_pdw_waits
sys.dm_pdw_lock_waits
sys.resource_governor_workload_groups

NEW QUESTION 124

- (Exam Topic 3)
You have an Azure Data Factory pipeline that has the activities shown in the following exhibit.



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.

Stored procedure1 will execute Web1 and Set variable1 [answer choice]

complete
fail
succeed

If Web1 fails and Set variable2 succeeds, the pipeline status will be [answer choice]

Canceled
Failed
Succeeded

- A. Mastered
- B. Not Mastered

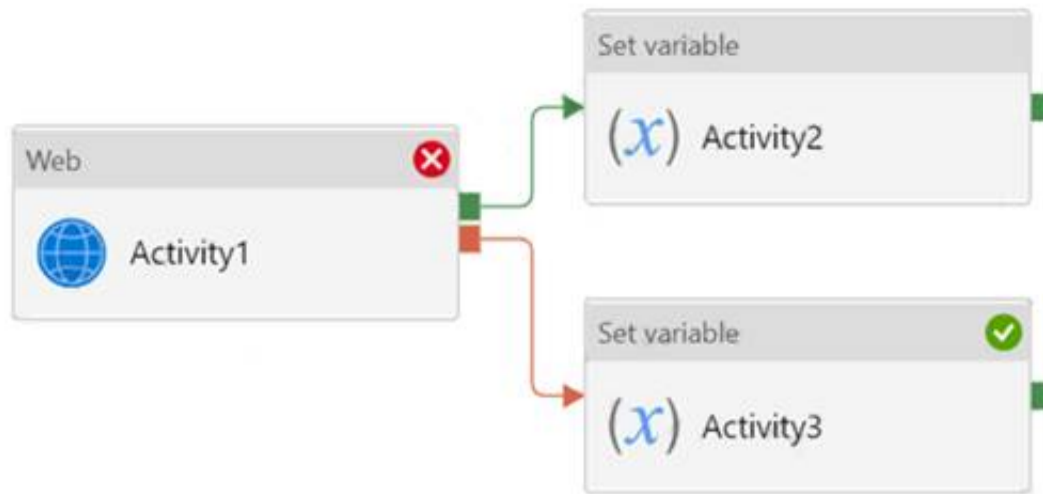
Answer: A

Explanation:

Box 1: succeed

Box 2: failed Example:

Now let's say we have a pipeline with 3 activities, where Activity1 has a success path to Activity2 and a failure path to Activity3. If Activity1 fails and Activity3 succeeds, the pipeline will fail. The presence of the success path alongside the failure path changes the outcome reported by the pipeline, even though the activity executions from the pipeline are the same as the previous scenario.



Activity1 fails, Activity2 is skipped, and Activity3 succeeds. The pipeline reports failure. Reference:
<https://datasavvy.me/2021/02/18/azure-data-factory-activity-failures-and-pipeline-outcomes/>

NEW QUESTION 127

- (Exam Topic 3)

You have an Azure Data Factory pipeline that is triggered hourly. The pipeline has had 100% success for the past seven days. The pipeline execution fails, and two retries that occur 15 minutes apart also fail. The third failure returns the following error.

```

ErrorCode=UserErrorFileNotFound,'Type=Microsoft.DataTransfer.Common.Shared.HybridDeliveryException,Message=ADLS Gen2 operation failed for:
Operation returned an invalid status code 'NotFound'. Account: 'contosoproduksouth'. FileSystem: wwi. Path:
'BIKES/CARBON/year=2021/month=01/day=10/hour=06'. ErrorCode: 'PathNotFound'. Message: 'The specified path does not exist.'. RequestId: '6d269b78-
901f-001b-4924-e7a7bc000000'. TimeStamp: 'Sun, 10 Jan 2021 07:45:05'
  
```

What is a possible cause of the error?

- A. The parameter used to generate year=2021/month=01/day=10/hour=06 was incorrect.
- B. From 06:00 to 07:00 on January 10, 2021, there was no data in wwi/BIKES/CARBON.
- C. From 06:00 to 07:00 on January 10, 2021, the file format of data in wwi/BIKES/CARBON was incorrect.
- D. The pipeline was triggered too early.

Answer: C

NEW QUESTION 130

- (Exam Topic 3)

You are designing an Azure Databricks table. The table will ingest an average of 20 million streaming events per day.

You need to persist the events in the table for use in incremental load pipeline jobs in Azure Databricks. The solution must minimize storage costs and incremental load times.

What should you include in the solution?

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

Answer: A

Explanation:

The Databricks ABS-AQS connector uses Azure Queue Storage (AQS) to provide an optimized file source that lets you find new files written to an Azure Blob storage (ABS) container without repeatedly listing all of the files.

This provides two major advantages:

- Lower costs: no more costly LIST API requests made to ABS.

Reference:

<https://docs.microsoft.com/en-us/azure/databricks/spark/latest/structured-streaming/aqs>

NEW QUESTION 135

- (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 140

- (Exam Topic 3)
You have an Azure data factory.
You execute a pipeline that contains an activity named Activity1. Activity1 produces the following output.

```
{
  ...
  "dataRead": 1208,
  "dataWritten": 1208,
  "filesRead": 1,
  "filesWritten": 1,
  "sourcePeakConnections": 3,
  "sinkPeakConnections": 2,
  "copyDuration": 13,
  "throughput": 0.147,
  "effectiveIntegrationRuntime": "AutoResolveIntegrationRuntime (West Central US)",
  "usedDataIntegrationUnits": 4,
  "reportLineageToPurview": {
    "status": "Succeeded",
    "durationInSeconds": "4"
  }
}
```

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

Answer Area

Statements	Yes	No
Activity1 is a Copy activity.	<input type="radio"/>	<input type="radio"/>
Activity1 is executed by using a self-hosted integration runtime.	<input type="radio"/>	<input type="radio"/>
The data factory that executed the pipeline is connected to Microsoft Purview.	<input type="radio"/>	<input type="radio"/>

- A. Mastered
- B. Not Mastered

Answer: A

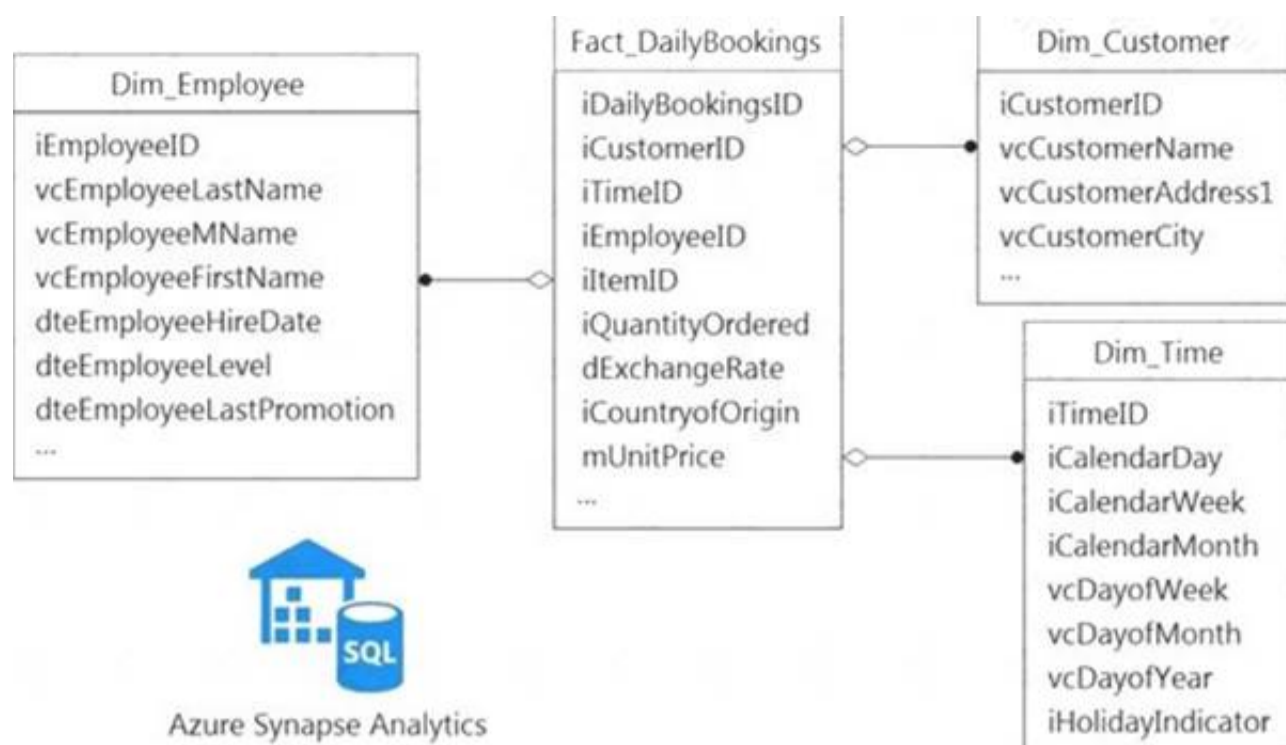
Explanation:

Answer Area

Statements	Yes	No
Activity1 is a Copy activity.	<input checked="" type="radio"/>	<input type="radio"/>
Activity1 is executed by using a self-hosted integration runtime.	<input checked="" type="radio"/>	<input type="radio"/>
The data factory that executed the pipeline is connected to Microsoft Purview.	<input type="radio"/>	<input checked="" type="radio"/>

NEW QUESTION 145

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



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

Answer Area

Dim_Customer:

Dim_Employee:

Dim_Time:

Fact_DailyBookings:

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Answer Area

Dim_Customer:	<div>▼</div> <div>Hash distributed</div> <div>Round-robin</div> <div>Replicated</div>
Dim_Employee:	<div>▼</div> <div>Hash distributed</div> <div>Round-robin</div> <div>Replicated</div>
Dim_Time:	<div>▼</div> <div>Hash distributed</div> <div>Round-robin</div> <div>Replicated</div>
Fact_DailyBookings:	<div>▼</div> <div>Hash distributed</div> <div>Round-robin</div> <div>Replicated</div>

NEW QUESTION 146

- (Exam Topic 3)

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

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

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

NOTE: Each correct selection is worth one point.

DimProduct is a **[answer choice]** slowly changing dimension (SCD).

▼

Type 0

Type 1

Type 2

The ProductKey column is **[answer choice]**.

▼

a surrogate key

a business key

an audit column

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Box 1: Type 2

A Type 2 SCD supports versioning of dimension members. Often the source system doesn't store versions, so the data warehouse load process detects and manages changes in a dimension table. In this case, the dimension table must use a surrogate key to provide a unique reference to a version of the dimension member. It also includes columns that define the date range validity of the version (for example, StartDate and EndDate) and possibly a flag column (for example, IsCurrent) to easily filter by current dimension members.

Reference:

<https://docs.microsoft.com/en-us/learn/modules/populate-slowly-changing-dimensions-azure-synapse-analytics>

NEW QUESTION 151

- (Exam Topic 3)

You have two fact tables named Flight and Weather. Queries targeting the tables will be based on the join between the following columns.

Table	Column
Flight	ArrivalAirportID
	ArrivalDateTime
Weather	AirportID
	ReportDateTime

You need to recommend a solution that maximizes query performance. What should you include in the recommendation?

- A. In the tables use a hash distribution of ArrivalDateTime and ReportDateTime.
- B. In the tables use a hash distribution of ArrivalAirportID and AirportID.
- C. In each table, create an identity column.
- D. In each table, create a column as a composite of the other two columns in the table.

Answer: B

Explanation:

Hash-distribution improves query performance on large fact tables.

NEW QUESTION 154

- (Exam Topic 3)

You have an Azure Synapse Analytics job that uses Scala. You need to view the status of the job. What should you do?

- A. From Azure Monitor, run a Kusto query against the AzureDiagnostics table.
- B. From Azure Monitor, run a Kusto query against the SparkLogging1 Event.CL table.
- C. From Synapse Studio, select the workspace
- D. From Monitor, select Apache Sparks applications.
- E. From Synapse Studio, select the workspace
- F. From Monitor, select SQL requests.

Answer: C

Explanation:

Use Synapse Studio to monitor your Apache Spark applications. To monitor running Apache Spark application Open Monitor, then select Apache Spark applications. To view the details about the Apache Spark applications that are running, select the submitting Apache Spark application and view the details. If the Apache Spark application is still running, you can monitor the progress.

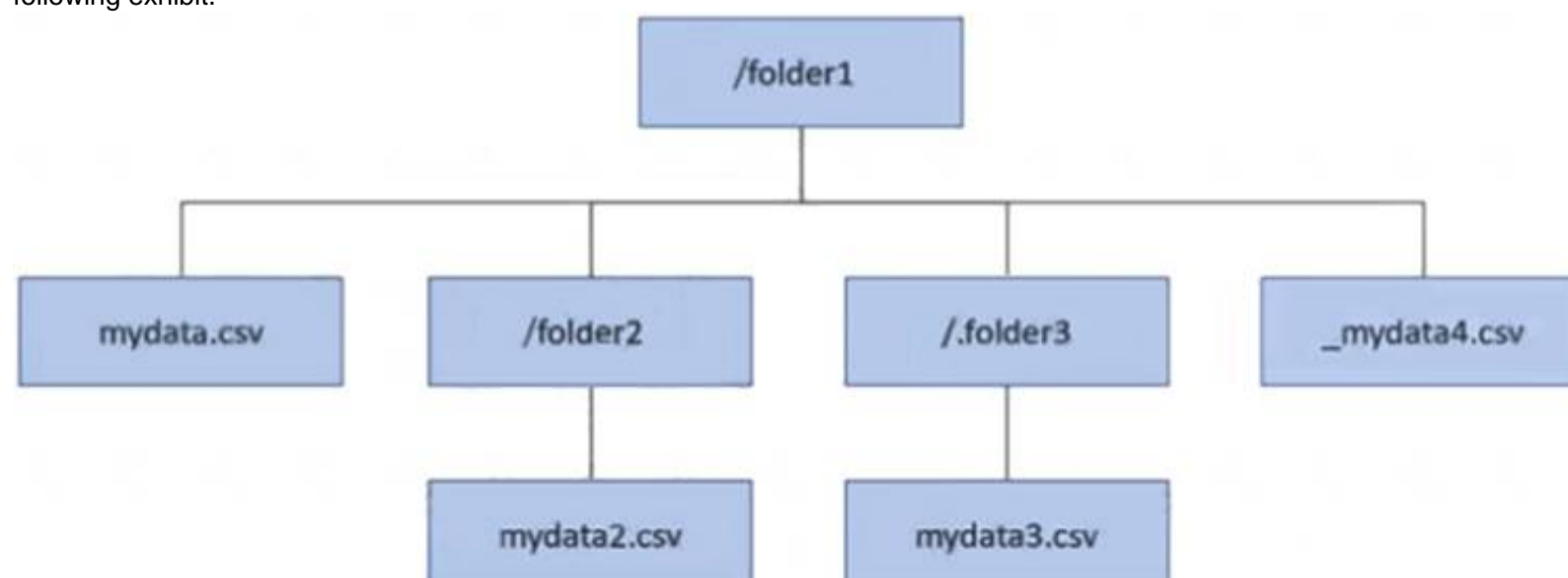
Reference:

<https://docs.microsoft.com/en-us/azure/synapse-analytics/monitoring/apache-spark-applications>

NEW QUESTION 159

- (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 160

- (Exam Topic 3)
You are building a data flow in Azure Data Factory that upserts data into a table in an Azure Synapse Analytics dedicated SQL pool.
You need to add a transformation to the data flow. The transformation must specify logic indicating when a row from the input data must be upserted into the sink.
Which type of transformation should you add to the data flow?

- A. join
- B. select
- C. surrogate key
- D. alter row

Answer: D

Explanation:

The alter row transformation allows you to specify insert, update, delete, and upsert policies on rows based on expressions. You can use the alter row transformation to perform upserts on a sink table by matching on a key column and setting the appropriate row policy

NEW QUESTION 164

- (Exam Topic 3)
You plan to develop a dataset named Purchases by using Azure databricks Purchases will contain the following columns:

- ProductID
- ItemPrice
- lineTotal
- Quantity
- StoreID
- Minute
- Month
- Hour
- Year
- Day

You need to store the data to support hourly incremental load pipelines that will vary for each StoreID. the solution must minimize storage costs. How should you complete the rode? To answer, select the appropriate options In the answer area.
NOTE: Each correct selection is worth one point.

df.write

.bucketBy

.partitionBy

.range

.sortBy

("")

("StoreID","Hour")

("StoreID","Year","Month","Day","Hour")

.mode("append")

.csv("/Purchases")

.json("/Purchases")

.parquet("/Purchases")

.saveAsTable("/Purchases")

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

Box 1: partitionBy

We should overwrite at the partition level. Example: df.write.partitionBy("y","m","d") mode(SaveMode.Append)

parquet("/data/hive/warehouse/db_name.db/" + tableName) Box 2: ("StoreID", "Year", "Month", "Day", "Hour", "StoreID") Box 3: parquet("/Purchases")

Reference:

<https://intellipaat.com/community/11744/how-to-partition-and-write-dataframe-in-spark-without-deleting-partiti>

NEW QUESTION 169

- (Exam Topic 3)

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

What should you do?

- A. On the master database, execute a query against the sys.dm_pdw_nodes_os_performance_counters dynamic management view.
B. From Azure Monitor in the Azure portal, execute a query against the logs of DW1.
C. On DW1, execute a query against the sys.database_files dynamic management view.
D. Execute a query against the logs of DW1 by using theGet-AzOperationalInsightSearchResult PowerShell cmdlet.

Answer: A

Explanation:

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

-- Transaction log size SELECT

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

FROM sys.dm_pdw_nodes_os_performance_counters WHERE

instance_name like 'Distribution_%'

AND counter_name = 'Log File(s) Used Size (KB)'

References:

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

NEW QUESTION 170

.....

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