

## DP-500 Dumps

# Designing and Implementing Enterprise-Scale Analytics Solutions Using Microsoft Azure and Microsoft Power BI

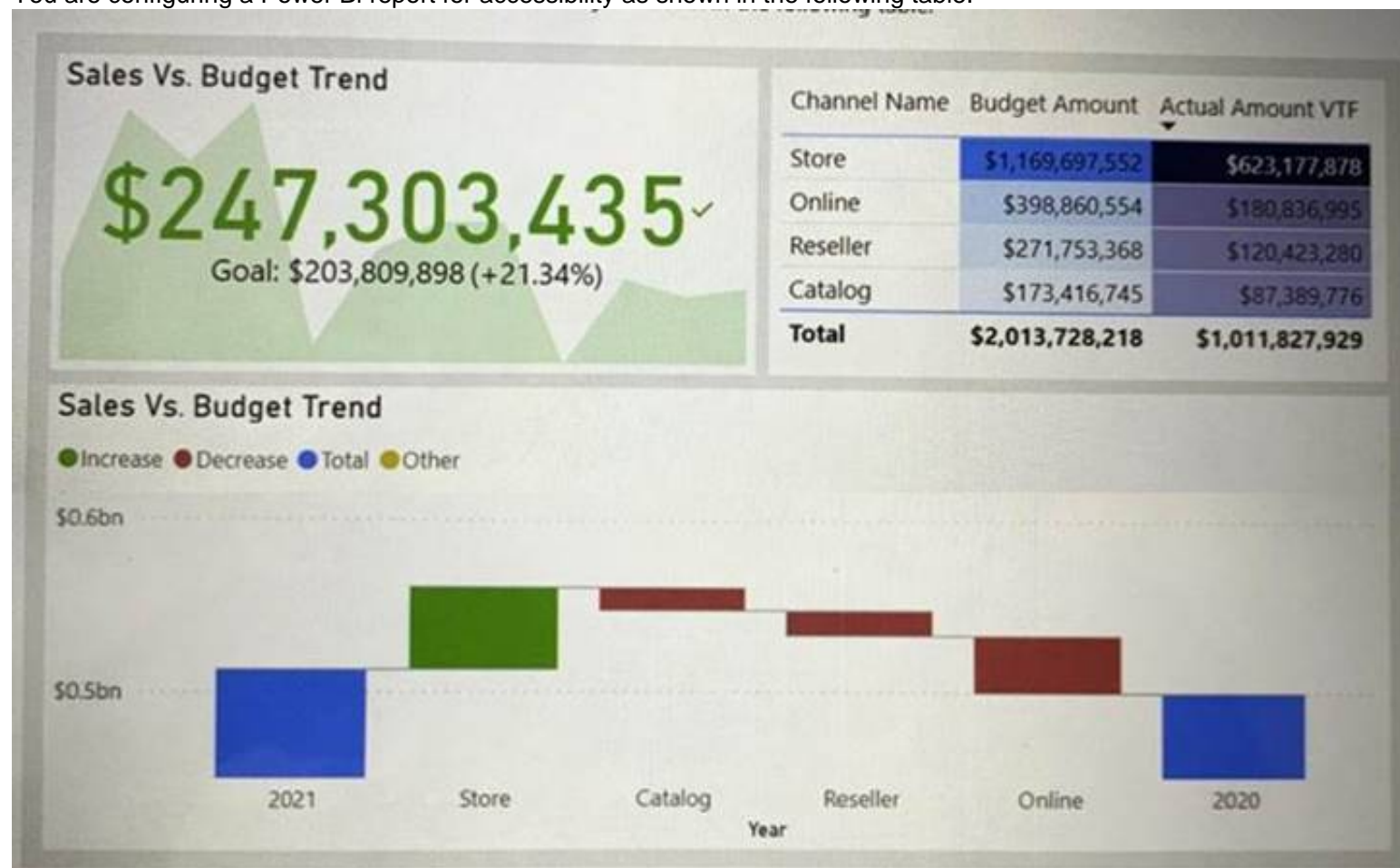
<https://www.certleader.com/DP-500-dumps.html>



### NEW QUESTION 1

- (Exam Topic 3)

You are configuring a Power BI report for accessibility as shown in the following table.



You need to change the default colors of all three visuals to make the report more accessible to users who have color vision deficiency. Which two settings should you configure in the Customize theme window? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Theme colors
- B. Sentiment colors
- C. Divergent colors
- D. First-level elements colors

**Answer:** AB

#### Explanation:

Reference: <https://docs.microsoft.com/en-us/power-bi/create-reports/desktop-report-themes>

### NEW QUESTION 2

- (Exam Topic 3)

You plan to generate a line chart to visualize and compare the last six months of sales data for two departments. You need to increase the accessibility of the visual. What should you do?

- A. Replace long text with abbreviations and acronyms.
- B. Configure a unique marker for each series.
- C. Configure a distinct color for each series.
- D. Move important information to a tooltip.

**Answer:** C

#### Explanation:

Themes, contrast and colorblind-friendly colors.

You should ensure that your reports have enough contrast between text and any background colors. Certain color combinations are particularly difficult for users with color vision deficiencies to distinguish.

These include the following combinations:

green and red green and brown blue and purple green and blue

light green and yellow blue and grey

green and grey green and black

Avoid using these colors together in a chart, or on the same report page.

Reference: <https://docs.microsoft.com/en-us/power-bi/create-reports/desktop-accessibility-creating-reports>

### NEW QUESTION 3

- (Exam Topic 3)

You have a Power Bi workspace named Workspacel in a Premium capacity. Workspacel contains a dataset. During a scheduled refresh, you receive the following error message: "Unable to save the changes since the new dataset size of 11,354 MB exceeds the limit of 10,240 MB."

You need to ensure that you can refresh the dataset. What should you do?

- A. Turn on Large dataset storage format.
- B. Connect Workspace1 to an Azure Data Lake Storage Gen2 account
- C. Change License mode to Premium per user.
- D. Change the location of the Premium capacity.

**Answer:** D

#### Explanation:

Assigning workspaces to capacities

Workspaces can be assigned to a Premium capacity in the Power BI Admin portal or, for a workspace, in the Workspace pane.

Note: Capacity limits

Workspace storage limits, whether for My Workspace or an app workspace, depend on whether the workspace is in shared or Premium capacity.

\* Shared capacity limits

For workspaces in shared capacity:

There is a per-workspace storage limit of 10 GB.

Premium Per User (PPU) tenants have a 100 TB storage limit.

When using a Pro license, the total usage can't exceed the tenant storage limit of 10 GB multiplied by the number of Pro licenses in the tenant.

\* Premium capacity limits

For workspaces in Premium capacity:

There is a limit of 100 TB per Premium capacity. There is no per-user storage limit.

Workspace storage usage is shown as 0 (as shown in this screenshot) if the workspace is assigned to a Premium capacity.

Incorrect:

Not C: If your organization is using the original version of Power BI Premium, you're required to migrate to the modern Premium Gen2 platform. Microsoft began migrating all Premium capacities to Gen2.

Reference: <https://docs.microsoft.com/en-us/power-bi/enterprise/service-premium-capacity-manage-gen2> <https://docs.microsoft.com/en-us/power-bi/admin/service-admin-manage-your-data-storage-in-power-bi>

#### NEW QUESTION 4

- (Exam Topic 3)

You use the Vertipaq Analyzer to analyze tables in a dataset as shown in the Tables exhibit. (Click the Tables tab.)

Vertipaq Analyzer Metrics

Tables	Columns	Relationships	Partitions	Summary		
Name	Cardinality	Table Size	Col Size	Data	Dictionary	Hier Size
Plan	627,876	22,823,464	21,147,552	6,697,272	10,293,184	4,157,096
Forecast Amount	101,606	22,823,464	7,400,920	1,475,640	5,112,384	812,896
Budget Amount	101,596	22,823,464	7,400,024	1,475,640	5,111,568	812,816
Row ID	627,876	22,823,464	4,185,992	1,674,344	120	2,511,528
ProductKey	628	22,823,464	842,296	818,016	19,208	5,072
Sales	858,789	20,968,092	18,674,660	12,182,384	2,587,004	3,905,272
Row ID	858,789	20,968,092	5,725,408	2,290,112	120	3,435,176
SalesAmount	36,554	20,968,092	2,960,560	1,245,904	1,422,176	292,480
TotalCost	9,711	20,968,092	1,924,272	1,238,488	608,056	77,728
Sales ID	2,000	20,968,092	1,431,192	1,374,064	41,080	16,048
Date	1,095	20,968,092	1,428,968	1,373,856	46,312	8,800

The table relationships for the dataset are shown in the Relationships exhibit. (Click the Relationships tab.)

Vertipaq Analyzer Metrics

Tables	Columns	Relationships	Partitions	Summary			
Table / Relationship			Size	Max From Cardinality	Max To Cardinality	1:M Ratio %	Missing Keys
Plan			1,675,912	627,876	858,789	136.78%	7
Plan[ProductKey] ↔ 1 Product[ProductKey]			848	628	629	0.10%	0
Plan[StoreKey] ↔ 1 Store[Store Key]			360	306	299	0.05%	7
Plan[GeographyKey] ↔ 1 Geography[GeographyKey]			312	263	263	0.04%	0
Plan[DateKey] ↔ 1 Month & Year Distinct[Date]			32	36	36	0.01%	0
Sales			2,293,432	858,789	1,095	0.13%	858,793
Sales[Date] ↔ 1 Calendar[Date]			1,760	1,095	1,095	0.13%	0
Sales[GeographyKey] ↔ 1 Geography[GeographyKey]			312	263	263	0.03%	0
Sales[PromotionKey] ↔ 1 Promotion[Promotion Key]			24	28	28	0.00%	0
Sales[channelKey] ↔ 1 Channel[ChannelKey]			8	4	4	0.00%	0
Sales[Row ID] ↔ 1 Plan Header Details[Row ID]			0	858,789	3	0.00%	858,786

You need to reduce the model size by eliminating invalid relationships. Which column should you remove?

- A. Sales[Sales Amount]
- B. Sales[RowID]
- C. Sales[Sales ID]
- D. Plan[RowID]

**Answer: B**

#### Explanation:

Sales[Row ID] has 858,786 missing keys and 858,789 Max From Cardinality.

Note: The Max From Cardinality column defines the cost of the relationship which is the amount of time DAX needs to transfer the filters from the dimensions table to the fact table.

Reference: <https://blog.enterprisedna.co/vertipaq-analyzer-tutorial-relationships-referential-integrity/>

#### NEW QUESTION 5

- (Exam Topic 3)

You are using a Python notebook in an Apache Spark pool in Azure Synapse Analytics. You need to present the data distribution statistics from a DataFrame in a tabular view. Which method should you invoke on the DataFrame?

- A. freqItems
- B. explain
- C. rollup
- D. describe

**Answer: D**



**Explanation:**

The aggregating statistic can be calculated for multiple columns at the same time with the describe function. Example:

titanic[["Age", "Fare"]].describe() Out[6]:

Age Fare

count 714.000000 891.000000

mean 29.699118 32.204208

std 14.526497 49.693429

min 0.420000 0.000000

25% 20.125000 7.910400

50% 28.000000 14.454200

75% 38.000000 31.000000

max 80.000000 512.329200

Reference: [https://pandas.pydata.org/docs/getting\\_started/intro\\_tutorials/06\\_calculate\\_statistics.html](https://pandas.pydata.org/docs/getting_started/intro_tutorials/06_calculate_statistics.html)

**NEW QUESTION 6**

- (Exam Topic 3)

You have a Power BI report that contains one visual.

You need to provide users with the ability to change the visual type without affecting the view for other users. What should you do?

- A. From Report setting, select Personalize visuals.
- B. From Tabular Editor, create a new perspective.
- C. From the Bookmarks pane, select Focus mode, and then select Add.
- D. From Visual options in Report settings, select Use the modern visual header with updated styling options.

**Answer:** A

**Explanation:**

Enable personalization in a report

You can enable the feature either in Power BI Desktop or the Power BI service. You can also enable it in embedded reports.

To enable the feature in Power BI Desktop, go to File > Options and settings > Options > Current file > Report settings. Make sure Personalize visuals is turned on.

**NEW QUESTION 7**

- (Exam Topic 3)

You have a file named File1.txt that has the following characteristics:

- A header row
- Tab delimited values
- UNIX-style line endings

You need to read File1.txt by using an Azure Synapse Analytics serverless SQL pool. Which query should you execute?

- A. 

```
SELECT*
FROM OPENROWSET (
    BULK 'file1.txt',
    DATA_SOURCE = 'Sql1',
    FORMAT = 'CSV', PARSER_VERSION = '2.0',
    FIELDTERMINATOR = '\t',
    ROWTERMINATOR = '0x0a',
    FIRSTROW= 2
)
```
- B. 

```
SELECT*
FROM OPENROWSET (
    BULK 'file1.txt',
    DATA_SOURCE = 'Sql1',
    FORMAT = 'CSV', PARSER_VERSION = '2.0',
    FIELDTERMINATOR = ',',
    ROWTERMINATOR = '\n',
    FIRSTROW= 2
)
```
- C. 

```
SELECT*
FROM OPENROWSET (
    BULK 'file1.txt',
    DATA_SOURCE = 'Sql1',
    FORMAT = 'CSV', PARSER_VERSION = '2.0',
    FIELDTERMINATOR = ',',
    ROWTERMINATOR = '0x0a',
    FIRSTROW= 2
)
```
- D. 

```
SELECT*
FROM OPENROWSET (
    BULK 'file1.txt',
    DATA_SOURCE = 'Sql1',
    FORMAT = 'CSV', PARSER_VERSION = '2.0',
    FIELDTERMINATOR = '\t',
    ROWTERMINATOR = '0x0a',
    FIRSTROW= 1
)
```

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

**Answer:** A

**Explanation:**

Use FIELDTERMINATOR ='t' for tab.

Use ROWTERMINATOR ='0x0A ' for UNIX-style line endings Use FIRSTROW= 2 for a header row

Note: Using Row Terminators

The row terminator can be the same character as the terminator for the last field. Generally, however, a distinct row terminator is useful. For example, to produce tabular output, terminate the last field in each row with the newline character (\n) and all other fields with the tab character (\t).

If you want to output a line feed character only (LF) as the row terminator - as is typical on Unix and Linux computers - use hexadecimal notation to specify the LF row terminator. For example:

bcp -r '0x0A' FIRSTROW

FIRSTROW =first\_row Specifies the number of the first row to load. The default is 1. This indicates the first row in the specified data file. The row numbers are determined by counting the row terminators. FIRSTROW

is 1-based.

Reference:

<https://docs.microsoft.com/en-us/sql/relational-databases/import-export/specify-field-and-row-terminators-sql-se>

<https://docs.microsoft.com/en-us/sql/t-sql/functions/openrowset-transact-sql>

**NEW QUESTION 8**

- (Exam Topic 3)

You discover a poorly performing measure in a Power BI data model.

You need to review the query plan to analyze the amount of time spent in the storage engine and the formula engine.

What should you use?

- A. Tabular Editor
- B. Performance analyzer in Power BI Desktop
- C. Vertipaq Analyzer
- D. DAX Studio

**Answer:** B

**Explanation:**

Monitor report performance in Power BI Desktop using the Performance Analyzer. Monitoring will help you learn where the bottlenecks are, and how you can improve report performance.

Monitoring performance is relevant in the following situations: Your Import data model refresh is slow.

Your DirectQuery or Live Connection reports are slow. Your model calculations are slow.

Slow queries or report visuals should be a focal point of continued optimization.

Reference: <https://docs.microsoft.com/en-us/power-bi/guidance/monitor-report-performance>

**NEW QUESTION 9**

- (Exam Topic 3)

You need to recommend an automated solution to monitor Power BI user activity. The solution must meet the following requirements:

- Security admins must identify when users export reports from Power BI within five days of a new sensitivity label being applied to the artifacts in Power BI.
- Power BI admins must identify updates or changes to the Power BI capacity.
- The principle of least privilege must be used.

Which log should you include in the recommendation for each group? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Answer Area**

Security admins:	<div><div></div><div>the Azure Activity log</div><div>the Power BI activity log</div><div>the unified audit log in Microsoft 365</div></div>
Power BI admins:	<div><div></div><div>the Azure Activity log</div><div>the Power BI activity log</div><div>the unified audit log in Microsoft 365</div></div>

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Box 1: the unified audit log in Microsoft 365

Security admins must identify when users export reports from Power BI within five days of a new sensitivity label being applied to the artifacts in Power BI.

Use the audit log

If your task is to track user activities across Power BI and Microsoft 365, you work with auditing in Microsoft 365 compliance or use PowerShell. Auditing relies on functionality in Exchange Online, which automatically supports Power BI.

You can filter the audit data by date range, user, dashboard, report, dataset, and activity type. You can also download the activities in a csv (comma-separated value) file to analyze offline.

Box 2: Power BI activity log

Power BI admins must identify updates or changes to the Power BI capacity. Use the activity log

Power BI administrators can analyze usage for all Power BI resources at the tenant level by using custom reports that are based on the Power BI activity log.

Reference: <https://docs.microsoft.com/en-us/power-bi/admin/service-admin-auditing>

**NEW QUESTION 10**

- (Exam Topic 3)

You have an Azure Synapse Analytics serverless SQL pool.

You need to catalog the serverless SQL pool by using Azure Purview.

Which three actions should you perform? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Create a managed identity in Azure Active Directory (Azure AD).
- B. Assign the Storage Blob Data Reader role to the Azure Purview managed service identity (MSI) for the storage account associated to the Synapse Analytics workspace.
- C. Assign the Owner role to the Azure Purview managed service identity (MSI) for the Azure Purview resource group.
- D. Register a data source.
- E. Assign the Reader role to the Azure Purview managed service identity (MSI) for the Synapse Analytics workspace.

**Answer:** ABE

**Explanation:**

Authentication for enumerating serverless SQL database resources

There are three places you'll need to set authentication to allow Microsoft Purview to enumerate your serverless SQL database resources:

The Azure Synapse workspace The associated storage

The Azure Synapse serverless databases

The steps below will set permissions for all three. Azure Synapse workspace

In the Azure portal, go to the Azure Synapse workspace resource. On the left pane, select Access Control (IAM).

Select the Add button.

Set the Reader role and enter your Microsoft Purview account name, which represents its managed service identity (MSI).

Select Save to finish assigning the role

Azure Synapse Analytics serverless SQL pool catalog Purview Azure Purview managed service identity Storage account

In the Azure portal, go to the Resource group or Subscription that the storage account associated with the Azure Synapse workspace is in.

On the left pane, select Access Control (IAM). Select the Add button.

Set the Storage blob data reader role and enter your Microsoft Purview account name (which represents its MSI) in the Select box.

Select Save to finish assigning the role. Azure Synapse serverless database

Go to your Azure Synapse workspace and open the Synapse Studio. Select the Data tab on the left menu.

Select the ellipsis (...) next to one of your databases, and then start a new SQL script.

Add the Microsoft Purview account MSI (represented by the account name) on the serverless SQL databases. You do so by running the following command in your SQL script:

SQL

```
CREATE LOGIN [PurviewAccountName] FROM EXTERNAL PROVIDER;
```

Apply permissions to scan the contents of the workspace

You can set up authentication for an Azure Synapse source in either of two ways. Select your scenario below for steps to apply permissions.

Use a managed identity Use a service principal

Reference: <https://docs.microsoft.com/en-us/azure/purview/register-scan-synapse-workspace?tabs=MI>

**NEW QUESTION 10**

- (Exam Topic 3)

You have two Power BI reports named Report1 and Report2.

Report1 connects to a shared dataset named Dataset1.

Report2 connects to a local dataset that has the same structure as Dataset1. Report2 contains several calculated tables and parameters.

You need to prepare Report2 to use Dataset1.

Which two actions should you perform? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Remove the data source permissions.
- B. Delete all the Power Query Editor objects.
- C. Modify the source of each query.
- D. Update all the parameter values.
- E. Delete all the calculated tables.

**Answer:** CD

**Explanation:**

C: Power BI Desktop also comes with Power Query Editor. Use Power Query Editor to connect to one or many data sources, shape and transform the data to meet your needs, then load that model into Power BI Desktop.

D: Common uses for parameters

Here are some of the most common ways to use parameters. Control paginated report data

\* Filter paginated report data at the data source by writing dataset queries that contain variables.

\* Etc.

Reference: <https://docs.microsoft.com/en-us/power-bi/transform-model/desktop-query-overview> <https://docs.microsoft.com/en-us/learn/modules/dax-power-bi-add-calculated-tables/1-introduction>

**NEW QUESTION 11**

- (Exam Topic 3)

You are creating an external table by using an Apache Spark pool in Azure Synapse Analytics. The table will contain more than 20 million rows partitioned by date.

The table will be shared with the SQL engines.

You need to minimize how long it takes for a serverless SQL pool to execute a query data against the table. In which file format should you recommend storing the table data?

- A. JSON
- B. Apache Parquet
- C. CSV
- D. Delta

**Answer:** B

**Explanation:**

Prepare files for querying

If possible, you can prepare files for better performance:

\* Convert large CSV and JSON files to Parquet. Parquet is a columnar format. Because it's compressed, its file sizes are smaller than CSV or JSON files that contain the same data. Serverless SQL pool skips the columns and rows that aren't needed in a query if you're reading Parquet files. Serverless SQL pool needs less time and fewer storage requests to read it.

Reference: <https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/best-practices-serverless-sql-pool> <https://stackoverflow.com/questions/65320949/parquet-vs-delta-format-in-azure-data-lake-gen-2-store>

**NEW QUESTION 12**

- (Exam Topic 3)

You need to save Power BI dataflows in an Azure Storage account.

Which two prerequisites are required to support the configuration? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. The storage account must be protected by using an Azure Firewall.
- B. The connection must be created by a user that is assigned the Storage Blob Data Owner role.
- C. The storage account must have hierarchical namespace enabled.
- D. Dataflows must exist already for any directly connected Power BI workspaces.
- E. The storage account must be created in a separate Azure region from the Power BI tenant and workspaces.

**Answer:** BC

**Explanation:**

Reference:

<https://docs.microsoft.com/en-us/power-bi/transform-model/dataflows/dataflows-azure-data-lake-storage-integra>

**NEW QUESTION 16**

- (Exam Topic 3)

You plan to modify a Power BI dataset.

You open the Impact analysis panel for the dataset and select Notify contacts. Which contacts will be notified when you use the Notify contacts feature?

- A. any users that accessed a report that uses the dataset within the last 30 days
- B. the workspace admins of any workspace that uses the dataset
- C. the Power BI admins
- D. all the workspace members of any workspace that uses the dataset

**Answer:** D

**Explanation:**

Notify contacts

If you've made a change to a dataset or are thinking about making a change, you might want to contact the relevant users to tell them about it. When you notify contacts, an email is sent to the contact lists of all the impacted workspaces. Your name appears on the email so the contacts can find you and reply back in a new email thread.

Reference: <https://docs.microsoft.com/en-us/power-bi/collaborate-share/service-dataset-impact-analysis>

**NEW QUESTION 18**

- (Exam Topic 3)

You have five Power BI reports that contain R script data sources and R visuals.

You need to publish the reports to the Power BI service and configure a daily refresh of datasets. What should you include in the solution?

- A. a Power BI Embedded capacity
- B. an on-premises data gateway (standard mode)
- C. a workspace that connects to an Azure Data Lake Storage Gen2 account
- D. an on-premises data gateway (personal mode)

**Answer:** D

**Explanation:**

To schedule refresh of your R visuals or dataset, enable scheduled refresh and install an on-premises data gateway (personal mode) on the computer containing the workbook and R.

Reference: <https://docs.microsoft.com/en-us/power-bi/connect-data/desktop-r-in-query-editor>

**NEW QUESTION 21**

- (Exam Topic 3)

You have an Azure Synapse Analytics serverless SQL pool and an Azure Data Lake Storage Gen2 account. You need to query all the files in the 'csv/taxi/' folder and all its subfolders. All the files are in CSV format and have a header row.

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 *
FROM OPENROWSET (
    (
        BULK 'csv/taxi',
        BULK 'csv/taxi/**',
        BULK 'csv/taxi/*.csv',
        BULK 'csv/taxi/'
    ),
    DATA_SOURCE = 'datalake',
    FORMAT = 'CSV', PARSER_VERSION = '2.0',
    (
        FIRSTROW = 0
        FIRSTROW = 1
        FIRSTROW = -1
        FIRSTROW = 2
    )
)
WITH (
    pickup_datetime DATETIME2,
    passenger_count INT,
    trip_distance FLOAT,
    total_amount FLOAT
) AS nyc;
```

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Box 1: BULK 'csv/taxi\*.CSV',

\*.CSV to get all the CSV files. Box 2: FIRSTROW=2

As there is a header we should read from the second line. Note: FIRSTROW = 'first\_row'

Specifies the number of the first row to load. The default is 1 and indicates the first row in the specified data file. The row numbers are determined by counting the row terminators. FIRSTROW is 1-based.

Incorrect:

Not FIRSTROW=1. FIRSTROW=1 is used when there is no header.

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

**NEW QUESTION 26**

- (Exam Topic 3)

You have a Power BI tenant that contains 10 workspaces.

You need to create dataflows in three of the workspaces. The solution must ensure that data engineers can access the resulting data by using Azure Data Factory.

Which two actions should you perform? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point

- A. Associate the Power BI tenant to an Azure Data Lake Storage account.
- B. Add the managed identity for Data Factory as a member of the workspaces.
- C. Create and save the dataflows to an Azure Data Lake Storage account.
- D. Create and save the dataflows to the internal storage of Power BI

**Answer:** AC

**Explanation:**

Data used with Power BI is stored in internal storage provided by Power BI by default. With the integration of dataflows and Azure Data Lake Storage Gen 2 (ADLS Gen2), you can store your dataflows in your organization's Azure Data Lake Storage Gen2 account. This essentially allows you to "bring your own storage" to Power BI dataflows, and establish a connection at the tenant or workspace level.

Reference:

<https://docs.microsoft.com/en-us/power-bi/transform-model/dataflows/dataflows-azure-data-lake-storage-integra>

**NEW QUESTION 28**

- (Exam Topic 3)

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 using an Azure Synapse Analytics serverless SQL pool to query a collection of Apache Parquet files by using automatic schema inference. The files contain more than 40 million rows of UTF-8-encoded business names, survey names, and participant counts. The database is configured to use the default collation.

The queries use open row set and infer the schema shown in the following table.

name	system_type_name	max_length
businessName	varchar(8000)	8000
surveyName	varchar(8000)	8000
participants	int	4

You need to recommend changes to the queries to reduce I/O reads and tempdb usage.

Solution: You recommend defining a data source and view for the Parquet files. You recommend updating the query to use the view.

Does this meet the goal?



- A. Yes
- B. No

**Answer:** B

**Explanation:**

Solution: You recommend using OPENROWSET WITH to explicitly specify the maximum length for businessName and surveyName.

The size of the varchar(8000) columns are too big. Better reduce their size.

A SELECT...FROM OPENROWSET(BULK...) statement queries the data in a file directly, without importing the data into a table. SELECT...FROM OPENROWSET(BULK...) statements can also list bulk-column aliases by using a format file to specify column names, and also data types.

Reference: <https://docs.microsoft.com/en-us/sql/t-sql/functions/openrowset-transact-sql>

**NEW QUESTION 29**

- (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 a Power BI dataset named Dataset1.

In Dataset1, you currently have 50 measures that use the same time intelligence logic. You need to reduce the number of measures, while maintaining the current functionality. Solution: From Tabular Editor, you create a calculation group.

Does this meet the goal?

- A. Yes
- B. No

**Answer:** B

**Explanation:**

Solution: From DAX Studio, you write a query that uses grouping sets.

A grouping is a set of discrete values that are used to group measure fields. Reference: <https://docs.microsoft.com/en-us/power-bi/developer/visuals/capabilities>

**NEW QUESTION 31**

- (Exam Topic 3)

You are using GitHub as a source control solution for an Azure Synapse Studio workspace. You need to modify the source control solution to use an Azure DevOps Git repository. What should you do first?

- A. Disconnect from the GitHub repository.
- B. Create a new pull request.
- C. Change the workspace to live mode.
- D. Change the active branch.

**Answer:** A

**Explanation:**

By default, Synapse Studio authors directly against the Synapse service. If you have a need for collaboration using Git for source control, Synapse Studio allows you to associate your workspace with a Git repository, Azure DevOps, or GitHub.

Prerequisites

Users must have the Azure Contributor (Azure RBAC) or higher role on the Synapse workspace to configure, edit settings and disconnect a Git repository with Synapse.

Reference: <https://docs.microsoft.com/en-us/azure/synapse-analytics/cicd/source-control>

**NEW QUESTION 36**

- (Exam Topic 3)

You have an Azure Synapse Analytics serverless SQL pool.

You need to return a list of files and the number of rows in each file.

How should you complete the Transact-SQL statement? To answer, drag the appropriate values to the 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**

**Answer Area**

APPROX_COUNT_DISTINCT	SELECT
COUNT_BIG	asa.filename() AS [filename]
OPENDATASOURCE	, [ ] (*) AS [rows]
OPENJSON	FROM
OPENQUERY	[ ]
OPENROWSET	BULK 'parquet/production/year=2017/month=9/*.parquet',
	DATA_SOURCE = 'DataLake1',
	FORMAT= 'PARQUET'
	) asa
	GROUP BY [filename]

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

Box 1: APPROX\_COUNT\_DISTINCT

The APPROX\_COUNT\_DISTINCT function returns the approximate number of unique non-null values in a group.

Box 2: OPENROWSET

OPENROWSET function in Synapse SQL reads the content of the file(s) from a data source. The data source is an Azure storage account and it can be explicitly referenced in the OPENROWSET function or can be dynamically inferred from URL of the files that you want to read. The OPENROWSET function can optionally contain a DATA\_SOURCE parameter to specify the data source that contains files.

The OPENROWSET function can be referenced in the FROM clause of a query as if it were a table name OPENROWSET. It supports bulk operations through a built-in BULK provider that enables data from a file to be read and returned as a rowset.

Reference: <https://docs.microsoft.com/en-us/sql/t-sql/functions/approx-count-distinct-transact-sql> <https://docs.microsoft.com/en-us/azure/synapse-analytics/sql/develop-openrowset>

**NEW QUESTION 41**

- (Exam Topic 3)

You have a Power BI dataset that has only the necessary fields visible for report development.

You need to ensure that end users see only 25 specific fields that they can use to personalize visuals. What should you do?

- A. From Tabular Editor, create a new role.  
B. Hide all the fields in the dataset.  
C. Configure object-level security (OLS).  
D. From Tabular Editor, create a new perspective.

**Answer:** B

**NEW QUESTION 45**

- (Exam Topic 3)

You have a group of data scientists who must create machine learning models and run periodic experiments on a large dataset.

You need to recommend an Azure Synapse Analytics pool for the data scientists. The solution must minimize costs.

Which type of pool should you recommend?

- A. a Data Explorer pool  
B. an Apache Spark pool  
C. a dedicated SQL pool  
D. a serverless SQL pool

**Answer:** B

**Explanation:**

In Azure Synapse, training machine learning models can be performed on the Apache Spark Pools with tools like PySpark/Python, Scala, or .NET.

Reference:

<https://docs.microsoft.com/en-us/azure/synapse-analytics/machine-learning/what-is-machine-learning>

**NEW QUESTION 47**

- (Exam Topic 3)

You need to provide users with a reproducible method to connect to a data source and transform the data by using an AI function. The solution must meet the following requirement

- Minimize development effort.
- Avoid including data in the file. Which type of file should you create?

- A. PBIDS  
B. PBIX  
C. PBIT

**Answer:** C

**Explanation:**

A PBIT file is a template created by Power BI Desktop, a Microsoft application used to create reports and visualizations. It contains queries, visualization settings, data models, reports, and other data added by the user.

A PBIT file acts as a Power BI template. It doesn't include any data from your source systems. Reference: <https://docs.microsoft.com/en-us/power-bi/connect-data/desktop-data-sources>

**NEW QUESTION 52**

- (Exam Topic 3)

You are optimizing a dataflow in a Power BI Premium capacity. The dataflow performs multiple joins. You need to reduce the load time of the dataflow.

Which two actions should you perform? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Reduce the memory assigned to the dataflows.  
B. Execute non-foldable operations before foldable operations.  
C. Execute foldable operations before non-foldable operations.  
D. Place the ingestion operations and transformation operations in a single dataflow.  
E. Place the ingestion operations and transformation operations in separate dataflows.

**Answer:** CE

**Explanation:**

Using the compute engine to improve performance

Take the following steps to enable workloads trigger the compute engine, and always improve performance: For computed and linked entities in the same workspace:

Ensure you perform the operations that fold, such as merges, joins, conversion, and others.

For ingestion focus on getting the data into the storage as fast as possible, using filters only if they reduce the overall dataset size. It's best practice to keep your transformation logic separate from this step, and allow the engine to focus on the initial gathering of ingredients. Next, separate your transformation and business logic into a separate dataflow in the same workspace, using linked or computed entities; doing so allows for the engine to activate and accelerate your computations. In our analogy, it's like food preparation in the kitchen: food preparation is typically a separate and distinct step from gathering your raw ingredients, and a pre-requisite for putting the food in the oven. Similarly, your logic needs to be prepared separately before it can take advantage of the compute engine.

Reference:

<https://docs.microsoft.com/en-us/power-bi/transform-model/dataflows/dataflows-premium-workload-configurati>

**NEW QUESTION 54**

- (Exam Topic 3)

You have a sales report as shown in the following exhibit.



The sales report has the following characteristics: The measures are optimized.

The dataset uses import storage mode.

Data points, hierarchies, and fields cannot be removed or filtered from the report page. From powerbi.com, users experience slow load times when viewing the report.

You need to reduce how long it takes for the report to load without affecting the data displayed in the report. Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Change the report theme to monochromatic.
- B. Replace the single-value cards with a multi-row card.
- C. Replace the product category charts with a bar chart for sales and a hierarchy of Category and Sub Category on the axis.
- D. Replace all the filters on the Filters pane with visual slicers on the report page.

**Answer:** BC

**NEW QUESTION 57**

- (Exam Topic 3)

You have a shared dataset in Power BI named Dataset1.

You have an on-premises Microsoft SQL Server database named DB1. You need to ensure that Dataset1 refreshes data from DB1.

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.

**Actions**

- From powerbi.com, configure Dataset1 to use a data gateway.
- From powerbi.com, add a data source to the gateway clusters.
- Create a virtual network data gateway.
- Install the on-premises data gateway (standard mode).
- Configure a private endpoint.
- Install the on-premises data gateway (personal mode).

➤

➤

**Answer Area**

- A. Mastered  
B. Not Mastered

**Answer:** A

**Explanation:**

Step 1: Install the on-premises data gateway (standard mode)

The personal mode is only for a single user, not to be used for a shared dataset. Step 2: From powerbi.com, add a data source to the gateway clusters

After you install the on-premises data gateway, you can add data sources that can be used with the gateway. Add a data source

Under Data Source Type, select SQL Server.

×

New data source

Gateway cluster name \*

GatewayApril

Data source name \*

New data source

Data source type \*

SQL Server

After you fill in everything, select Create. You can now use this data source for scheduled refresh or DirectQuery against a SQL Server that's on-premises. You see Created New data source if it succeeded.

Step 3: From powerbi.com, configure Dataset1 to use a data gateway. Connect a dataset to a SQL Server database

In Power BI Desktop, you connected directly to your on-premises SQL Server database, but the Power BI service requires a data gateway to act as a bridge between the cloud and your on-premises network. Follow these steps to add your on-premises SQL Server database as a data source to a gateway and then connect your dataset to this data source.

- Sign in to Power BI. In the upper-right corner, select the settings gear icon and then select Settings.
- On the Datasets tab, select the dataset AdventureWorksProducts, so you can connect to your on-premises SQL Server database through a data gateway.
- Expand Gateway connection and verify that at least one gateway is listed.
- Under Actions, expand the toggle button to view the data sources and select the Add to gateway link.
- On the Gateways management page, on the Data Source Settings tab, enter and verify the following information, and select Add.
- On the Datasets tab, expand the Gateway connection section again. Select the data gateway you configured, which shows a Status of running on the machine where you installed it, and select Apply.

Reference: <https://docs.microsoft.com/en-us/power-bi/connect-data/service-gateway-personal-mode> <https://docs.microsoft.com/en-us/power-bi/connect-data/service-gateway-sql-tutorial> <https://docs.microsoft.com/en-us/power-bi/connect-data/service-gateway-enterprise-manage-sql>

**NEW QUESTION 61**

- (Exam Topic 3)

You have new security and governance protocols for Power BI reports and datasets. The new protocols must meet the following requirements.

- New reports can be embedded only in locations that require authentication.
- Live connections are permitted only for workspaces that use Premium capacity datasets.

Which three actions should you recommend performing in the Power BI Admin portal? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. From Tenant settings, disable Allow XMLA endpoints and Analyze in Excel with on-premises datasets.  
B. From the Premium per user settings, set XMLA Endpoint to Off.  
C. From Embed Codes, delete all the codes.  
D. From Capacity settings, set XMLA Endpoint to Read Write.  
E. From Tenant settings, set Publish to web to Disable.

**Answer:** ADE

**Explanation:**

Reference: <https://docs.microsoft.com/en-us/power-bi/enterprise/service-premium-connect-tools> <https://powerbi.microsoft.com/en-us/blog/power-bi-february-service-update>

**NEW QUESTION 62**

- (Exam Topic 3)

You are planning a Power BI solution for a customer.

The customer will have 200 Power BI users. The customer identifies the following requirements:

- Ensure that all the users can create paginated reports.
- Ensure that the users can create reports containing AI visuals.
- Provide autoscaling of the CPU resources during heavy usage spikes.

You need to recommend a Power BI solution for the customer. The solution must minimize costs. What should you recommend?



- A. Power BI Premium per user
- B. a Power BI Premium per capacity
- C. Power BI Pro per user
- D. Power BI Report Server

**Answer:** A

**Explanation:**

Announcing Power BI Premium Per User general availability and autoscale preview for Gen2. Power BI Premium per user features and capabilities

\* Pixel perfect paginated reports are available for operational reporting capabilities based on SSRS technology. Users can create highly formatted reports in various formats such as PDF and PPT, which are embeddable in applications and are designed to be printed or shared.

\* Automated machine learning (AutoML) in Power BI enables business users to build ML models to predict outcomes without having to write any code.

\* Etc. Note:

Power BI empowers every business user and business analyst to get amazing insights with AI infused experiences. With Power BI Premium, we enable business analysts to not only analyze and visualize their data, but to also build an end-to-end data platform through drag and drop experiences. Everything from ingesting and transforming data at scale, to building automated machine learning models, and analyzing massive volumes of data is now possible for our millions of business analysts.

Reference:

<https://powerbi.microsoft.com/nl-be/blog/announcing-power-bi-premium-per-user-general-availability-and-auto>

**NEW QUESTION 64**

- (Exam Topic 3)

You have the following code in an Azure Synapse notebook.

```
import matplotlib.pyplot as plt
x1 = [2, 3, 4]
y1 = [5, 5, 5]
x2 = [1, 2, 3, 4, 5]
y2 = [2, 3, 2, 3, 4]
y3 = [6, 8, 7, 8, 7]
plt.scatter(x1, y1)
plt.scatter(x2, y2, marker='v', color='r')
plt.scatter(x2, y3, marker='^', color='m')
plt.title('Scatter Plot')
plt.show()
```

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

NOTE: Each correct selection is worth one point.

Answer Area	
There will be [answer choice] rendered as the output of the code.	<div>one scatterplot</div> <div>two scatterplots</div> <div>three scatterplots</div>
There will be [answer choice] used in the output.	<div>one marker symbol</div> <div>two marker symbols</div> <div>three marker symbols</div>

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Box 1: three scatterplots Compare Plots

Example, Draw two plots on the same figure: import matplotlib.pyplot as plt

import numpy as np

#day one, the age and speed of 13 cars:

x = np.array([5,7,8,7,2,17,2,9,4,11,12,9,6])

y = np.array([99,86,87,88,111,86,103,87,94,78,77,85,86])

plt.scatter(x, y)

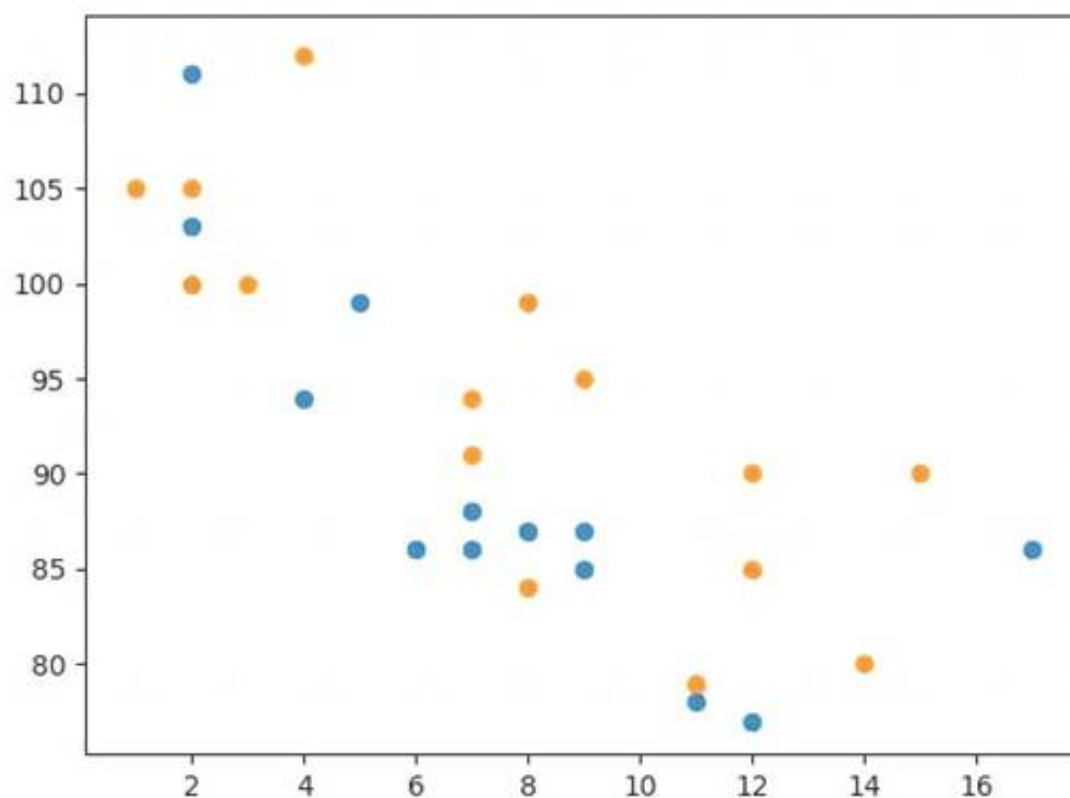
#day two, the age and speed of 15 cars:

x = np.array([2,2,8,1,15,8,12,9,7,3,11,4,7,14,12])

y = np.array([100,105,84,105,90,99,90,95,94,100,79,112,91,80,85])

plt.scatter(x, y) plt.show() Result:

Chart, scatter chart Description automatically generated



Box 2: three marker symbols

One for each scatterplot. One default, and two defined.

Default is point.

v is triangle down.

^ is triangle up.

Reference: [https://www.w3schools.com/python/matplotlib\\_scatter.asp](https://www.w3schools.com/python/matplotlib_scatter.asp) [https://matplotlib.org/stable/api/markers\\_api.html](https://matplotlib.org/stable/api/markers_api.html)

#### NEW QUESTION 69

- (Exam Topic 3)

You are creating a Python visual in Power BI Desktop.

You need to retrieve the value of a column named Unit Price from a DataFrame. How should you reference the Unit Price column in the Python code?

- A. `pandas.DataFrame('Unit Price')`
- B. `dataset['Unit Price']`
- C. `data = [Unit Price]`
- D. `('Unit Price')`

**Answer: A**

#### Explanation:

You can retrieve a column in a pandas DataFrame object by using the DataFrame object name, followed by the label of the column name in brackets.

So if the DataFrame object name is `dataframe1` and the column we are trying to retrieve the 'X' column, then we retrieve the column using the statement, `dataframe1['X']`.

Here's a simple Python script that imports pandas and uses a data frame: `import pandas as pd`

`data = [['Alex',10],['Bob',12],['Clarke',13]]`

`df = pd.DataFrame(data,columns=['Name','Age'],dtype=float) print (df)`

When run, this script returns:

0 Alex 10.0

1 Bob 12.0

2 Clarke 13.0

Reference:  
<http://www.learningaboutelectronics.com/Articles/How-to-retrieve-a-column-from-a-pandas-dataframe-object-i>

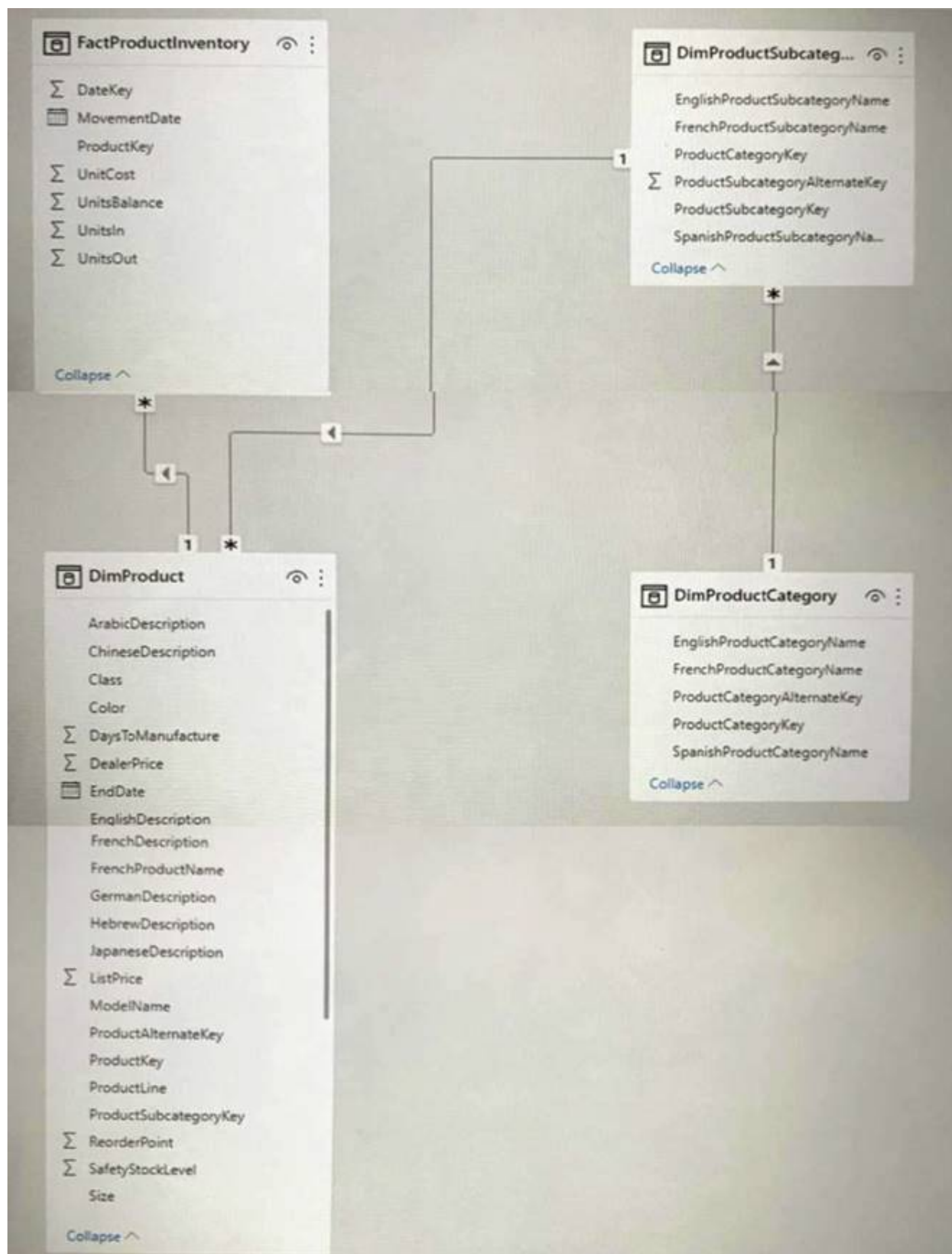
#### NEW QUESTION 72

- (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 the Power BI data model shown in the exhibit. (Click the Exhibit tab.)



Users indicate that when they build reports from the data model, the reports take a long time to load. You need to recommend a solution to reduce the load times of the reports.

Solution: You recommend creating a perspective that contains the commonly used fields. Does this meet the goal?

- A. Yes
- B. No

**Answer: B**

**Explanation:**

Instead denormalize For Performance.

Even though it might mean storing a bit of redundant data, schema denormalization can sometimes provide better query performance. The only question then becomes is the extra space used worth the performance benefit.

Reference: <https://www.mssqltips.com/sqlservertutorial/3211/denormalize-for-performance/>

**NEW QUESTION 76**

- (Exam Topic 3)

You have a dataset that contains a table named UserPermissions. UserPermissions contains the following data.

User	Region
CONTOSO\User1	1
CONTOSO\User2	2
CONTOSO\User3	1
CONTOSO\User4	3
CONTOSO\User4	5

You plan to create a security role named User Security for the dataset. You need to filter the dataset based on the current users. What should you include in the DAX expression?

- A. [UserPermissions] - USERNAME()
- B. [UserPermissions] - USERPRINCIPALNAME()
- C. [User] = USERPRINCIPALNAME()
- D. [User] = USERNAME()
- E. [User] = USEROBJECTID()

**Answer:** D

**Explanation:**

USERNAME() returns the domain name and username from the credentials given to the system at connection time.

It should be compared to column name of User, which in DAX is expressed through [User]. Reference: <https://docs.microsoft.com/en-us/dax/username-function-dax>

**NEW QUESTION 77**

- (Exam Topic 2)

You need to recommend a solution for the customer workspaces to support the planned changes.

Which two configurations should you include in the recommendation? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Set Use datasets across workspaces to Enabled
- B. Publish the financial data to the web.
- C. Grant the Build permission for the financial data to each customer.
- D. Configure the FinData workspace to use a Power BI Premium capacity.

**Answer:** AD

**Explanation:**

Build a new dataset in the FinData workspace by using data from the Synapse Analytics dedicated SQL pool. Provide all the customers with their own Power BI workspace to create their own reports. Each workspace will use the new dataset in the FinData workspace

Reference: <https://docs.microsoft.com/en-us/power-bi/connect-data/service-datasets-admin-across-workspaces>

**NEW QUESTION 80**

- (Exam Topic 2)

You need to recommend a solution to add new fields to the financial data Power BI dataset with data from the Microsoft SQL Server data warehouse.

What should you include in the recommendation?

- A. Azure Purview
- B. Site-to-Site VPN
- C. an XMLA endpoint
- D. the on-premises data gateway

**Answer:** D

**Explanation:**

Refresh data from an on-premises SQL Server database

The SQL Server database must be accessed by Power BI through an on-premises data gateway.

You can install an on-premises data gateway on the same local computer as SQL Server (in production, it would typically be a different computer).

Reference: <https://docs.microsoft.com/en-us/power-bi/connect-data/service-gateway-sql-tutorial>

**NEW QUESTION 84**

- (Exam Topic 1)

How should you configure the Power BI dataset refresh for the dbo.SalesTransactions table?

- A. an incremental refresh of Product where the ModifiedDate value is during the last three days.
- B. an incremental refresh of dbo.SalesTransactions where the SalesDate value is during the last three days.
- C. a full refresh of all the tables
- D. an incremental refresh of dbo.SalesTransactions where the SalesDate value is during the last hour.

**Answer:** B

**Explanation:**

The sales data in SQLDW is updated every 30 minutes. Records in dbo.SalesTransactions are updated in SQLDW up to three days after being created. The



records do NOT change after three days.

### NEW QUESTION 86

- (Exam Topic 1)

You need to implement object-level security (OLS) in the Power BI dataset for the sales associates.

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.

**Actions**

- From Power BI Desktop, add a table filter to the role.
- From Power BI Desktop, create a role for the sales associates.
- From Tabular Editor, set Object Level Security to **None** for the Customer[Email] column and save the changes.
- From Power BI Desktop, publish the dataset to the Sales Analytics workspace.
- From Tabular Editor, set Object Level Security to **None** for the Customer table and save the changes.

**Answer Area**

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

**Actions**

- From Power BI Desktop, add a table filter to the role.
- From Power BI Desktop, create a role for the sales associates.
- From Tabular Editor, set Object Level Security to **None** for the Customer[Email] column and save the changes.
- From Power BI Desktop, publish the dataset to the Sales Analytics workspace.
- From Tabular Editor, set Object Level Security to **None** for the Customer table and save the changes.

**Answer Area**

- From Power BI Desktop, create a role for the sales associates.
- From Tabular Editor, set Object Level Security to **None** for the Customer[Email] column and save the changes.
- From Power BI Desktop, publish the dataset to the Sales Analytics workspace.

### NEW QUESTION 91

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