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**Vendor:** Microsoft

**Exam Code:** 70-467

**Exam Name:** Designing Business Intelligence Solutions with Microsoft SQL Server 2012 Exam



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## Exam A

### QUESTION 1

#### DRAG DROP

You are designing a SQL Server Reporting Services (SSRS) solution. A report project must access multiple SQL Azure databases. Each database is on a different host. The databases have identical schema and security configurations.

You have the following requirements:

- The report must support subscriptions.
- Users must be able to select the host when running the report.

What should you do?

To answer, drag the appropriate phrase or phrases from the list to the correct location or locations in the answer area. (Answer choices may be used once, more than once, or not all.)

SQL Azure data.

SQL Azure hosts.

a shared dataset.

stored credentials.

integrated security.

data source in the report.

an expression-based connection string.

shared data source in the report

Create a

Create a report parameter that displays available values of

Create

Configure the data source to use

A.

SQL Azure data.

a shared dataset.

integrated security.

shared data source in the report

Create a data source in the report.

Create a report parameter that displays available values of SQL Azure hosts.

Create an expression-based connection string.

Configure the data source to use stored credentials.

**Correct Answer: A**

**Section: (none)**

**Explanation**

#### Explanation/Reference:

Explanation:

Note:

\* To include data in a report, you must first create data connections, also known as data sources, and then create datasets.

\* A data connection includes the data source type, connection information, and the type of credentials to use. There are two types of data sources: embedded and shared. An embedded data source is defined in the report and used only by that report (fits this scenario). A shared data source is defined independently from a report

and can be used by multiple reports.

\* Built-in data extensions include the following data connection types:

?Microsoft SQL Server

?Microsoft SQL Server Analysis Services

?Microsoft SharePoint List

?Windows Azure SQL Database

Etc.

\* Expression-based connection strings are evaluated at run time. For example, you can specify the data source as a parameter, include the parameter reference in the connection string, and allow the user to choose a data source for the report.

\* Credentials You provide the credentials that are needed to access the data. The data source owner must have granted you the appropriate permissions to access both the data source and the specific data on the data source.

Reference: Data Connections, Data Sources, and Connection Strings (SSRS)

## QUESTION 2

### DRAG DROP

You are designing a SQL Server Reporting Services (SSRS) solution. An existing report aggregates data from a SQL Server database in a chart. You need to use the chart in a new report and ensure that other users can use the chart in their reports. 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.)

In Power View, open the report that contains the chart.

In Report Designer, insert the report part into a new report.

In Report Designer, open the report that contains the chart.

In Report Builder, insert the report part into a new report.

In Power View, insert the report part into a new report.

Select the chart for publication as a report part and publish the report.

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A.

In Power View, open the report that contains the chart.

In Report Designer, insert the report part into a new report.

In Power View, insert the report part into a new report.

Select the chart for publication as a report part and publish the report.

In Report Builder, insert the report part into a new report.

In Report Designer, open the report that contains the chart.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

\* In Report Designer, after you create tables, charts, and other report items in a project, you can publish them as report parts to a report server or SharePoint site integrated with a report server so that you and others can reuse them in other reports.

\* . By using Report Builder, you can customize and update reports that were created in SQL Server Data Tools (SSDT) Report Designer.

\* In Report Builder, IT pros and power users can create powerful operational reports, and reusable report parts and shared datasets.

Incorrect:

\* (incorrect) Power View, a feature of SQL Server 2012 Reporting Services Add-in for Microsoft SharePoint Server 2010 Enterprise Edition, is an interactive data exploration, visualization, and presentation experience. It provides intuitive ad-hoc reporting for business users such as data analysts, business decision makers, and information workers. They can easily create and interact with views of data from data models based on PowerPivot workbooks published in a PowerPivot Gallery, or tabular models deployed to SQL Server 2012 Analysis Services (SSAS) instances. Power View is a browser-based Silverlight application launched from SharePoint Server 2010 that enables users to present and share insights with others in their organization through interactive presentations.

Reference: Getting Started with Report Builder

Reference: Report Parts in Report Designer (SSRS)

### QUESTION 3

You are designing a subscription strategy for a SQL Server Reporting Services (SSRS) report. You have an application that populates a table with user-specific subscription schedules and report formats. You need to ensure that users can receive reports by email according to their preferences. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Create a standard subscription for each record in the table.
- B. Create a data-driven subscription for each record in the schedule table.
- C. Create one data-driven subscription. Schedule the subscription to frequently retrieve user preferences.
- D. Create a standard subscription for each subscription schedule.

**Correct Answer: C**

**Section: (none)**

**Explanation**

### QUESTION 4

You are modifying a SQL Server Reporting Services (SSRS) report for a SQL Server Analysis Services (SSAS) cube. The report defines a report parameter of data type Date/Time with which users can filter the report by a single date. The parameter value cannot be directly used to filter the Multidimensional Expressions (MDX) query for the dataset. You need to ensure that the report displays data filtered by the user-entered value. You must achieve this goal by using the least amount of development effort. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Edit the dataset query parameter. Change the Value property of the report parameter to an expression that uses the same format as the date dimension member key value.
- B. Edit the dataset query parameter. Change the Name property of the dataset query parameter so that it points to a name value for each date dimension member.
- C. Edit the dataset query parameter. Create a subcube subquery that uses the StrToSet MDX function and accepts the report parameter value.
- D. Change the dataset query to Transact-SQL (T-SQL). Use the OPENROWSET function to query the cube. Output the cube results to the T-SQL query and use a Convert function to change the report parameter

value into the same format as the date dimension member.

**Correct Answer:** A

**Section:** (none)

**Explanation**

#### **QUESTION 5**

You administer a SQL Server Reporting Services (SSRS) instance in native mode. You need to assign a predefined role that meets the following requirements:

?Members of the role must be able to update shared data sources. ?Members of the role must not be able to consume reports or manage subscriptions. ?The role must provide only the minimum permissions required.

Which role should you assign? (More than one answer choice may achieve the goal. Select the BEST answer.)

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A the Content Manager role

A. the Read and Process role

B. the Publisher role

C. the Browser role

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 6**

You are designing a strategy for an enterprise reporting solution that uses SQL Server Reporting Services (SSRS). Many of the SSRS reports will use common utilities and functions, including the following:

?Report utility functions and business logic in code ?Standardized report formatting properties such as fonts

and colors for report branding Formatting may change and new functions may be added as the reporting solution evolves. You need to create a strategy for deploying the formatting and code across the entire

enterprise reporting solution. You must also ensure that reports can be easily updated to reflect formatting and function changes. What should you do? (More than one answer choice may achieve the goal. Select the BEST

answer.)

A. Create a report as a template. Apply standardized formatting to the template. Store code in the Code section of the template.

B. Build a web service that retrieves formatting properties and runs code. Call the web service through a report dataset.

C. Store the formatting properties and code in database objects. Use stored procedures to populate a default value for report parameters and map each parameter to a corresponding formatting property.

D. Create an assembly that contains formatting properties and code. Deploy the assembly on the Reporting Server and reference the assembly from each report.

**Correct Answer:** D

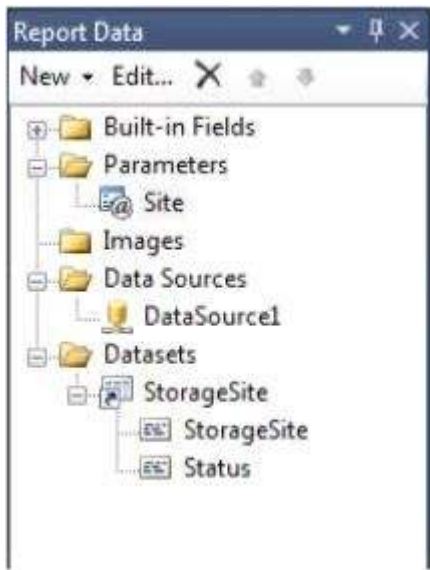
**Section:** (none)

**Explanation**

#### **QUESTION 7**

**DRAG DROP**

You are designing a dataset for a SQL Server Reporting Services (SSRS) report. The report includes the report items displayed in the following graphic.



The dataset is sourced from a commonly used stored procedure in an inventory data mart hosted in a SQL Azure database. It returns the status for all products across all storage sites. The report must display data for the storage site that is selected by the Site report parameter. You cannot change the stored procedure code. You need to filter the dataset to use only data specific to the selected site.

How should you configure the filter?

To answer, drag the appropriate expression or expressions to the correct location or locations in the answer area. (Answer choices may be used once, more than once, or not all.)

- =DataSet!StorageSite.Value
- =Fields!StorageSite.Value
- =Parameters!Site.Value
- = "Site1"
- =SiteParameters.Value
- =StoredProc!StorageSite.Value

Change filters.

Include rows where the following conditions are true.

Add Delete Up Down

Expression	<input type="text"/>	Text
Operator	=	
Value	<input type="text"/>	



A.



**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

To set a filter on the dataset

?Open a report in Design view.

?Right-click a dataset in the Report Data pane and then click Dataset Properties. The Dataset Properties dialog box opens.

?Click Filters. This displays the current list of filter equations. By default, the list is empty.

?Click Add. A new blank filter equation appears.

?In Expression, type or select the expression for the field to filter. To edit the expression, click the expression (fx) button.

Box 1: Here we use the Fields expression.

?From the drop-down box, select the data type that matches the type of data in the expression you created in step 5.

?In the Operator box, select the operator that you want the filter to use to compare the values in the Expression box and the Value box. The operator you choose determines the number of values that are used from the next step.

Box 2: we test for equality.

?In the Value box, type the expression or value against which you want the filter to evaluate the value in Expression.

Box 3: we compare to the value of the Parameter named Site.

?Click OK.

Reference: How to: Add a Filter (Reporting Services)

**QUESTION 8**

**HOTSPOT**

You are designing a SQL Server Integration Services (SSIS) package configuration strategy. The package configuration must meet the following requirements:

?Include multiple properties in a configuration.

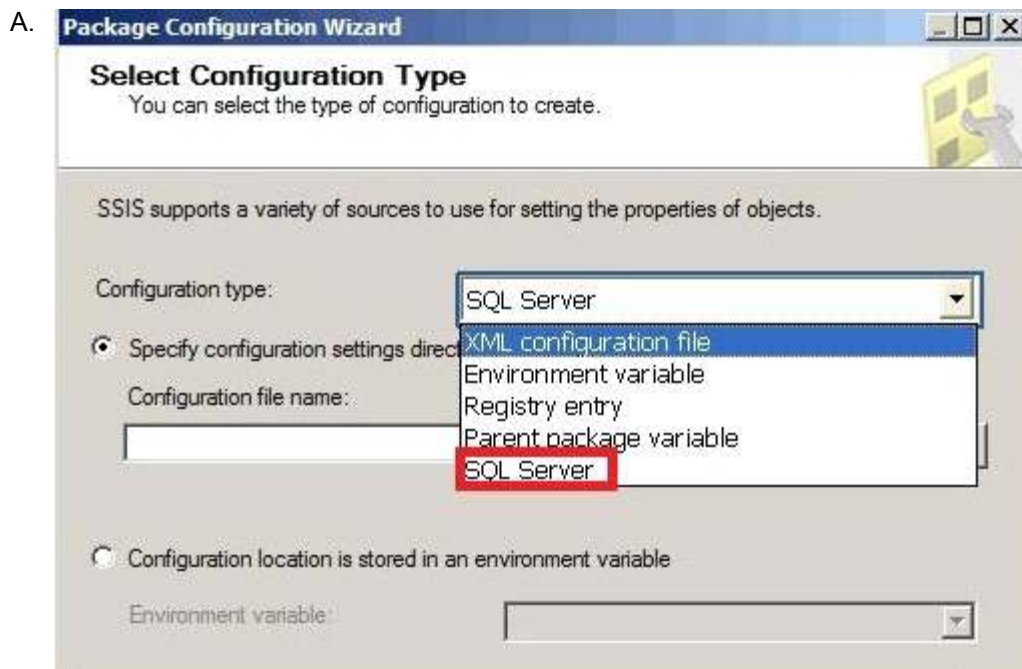
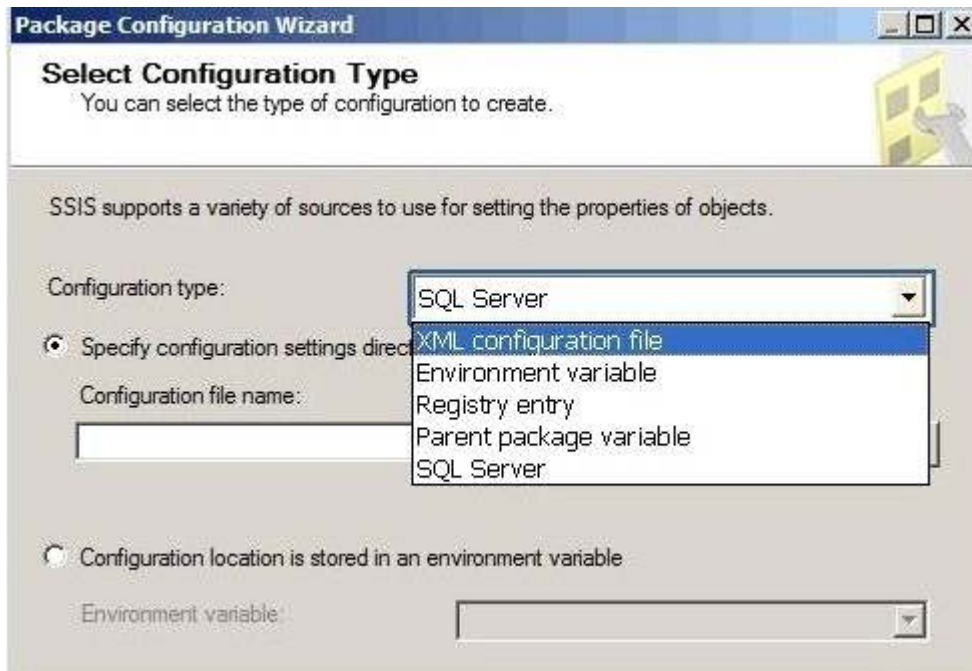
?Support several packages with different configuration settings.

You need to select the appropriate configuration.

Which configuration type should you use?

To answer, select the appropriate option from the drop-down list in the dialog box.





**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

Package Configuration Types

The following table describes the package configuration types.

\* SQL Server table

A table in a SQL Server database contains the configuration. The table can include multiple configurations.

\* XML configuration file

An XML file contains the configurations. The XML file can include multiple configurations.

\* Environment variable

An environment variable contains the configuration.

\* Registry entry

A Registry entry contains the configuration.

\* Parent package variable

A variable in the package contains the configuration. This configuration type is typically used to update properties in child packages.

Reference: Package Configurations

### QUESTION 9

You are designing a SQL Server Integration Services (SSIS) solution. The solution will contain an SSIS project that includes several SSIS packages. Each SSIS package will define the same connection managers and variables. You have the following requirements:

?Ensure that the deployment model supports changing the content of connection strings by using parameters at execution time.

?Ensure that the deployment model automatically starts from calls to the catalog.start\_execution stored procedure in the SSISDB database.

?Maximize performance at execution time.

?Minimize development effort.

You need to design a solution that meets the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Use a project deployment model. Modify connection manager properties to use project parameters. Ensure that the SSISDB database is created.
- B. Use a project deployment model. Configure connections in an XML configuration file referenced by an environment variable that corresponds to the SQL Server environment of each SSIS package.
- C. Use a package deployment model. Use a SQL Server package configuration with a common filter. Change the contents of the SSIS Configurations table at runtime.
- D. Use a package deployment model. Save each SSIS package to a file share that can be accessed from all environments.

**Correct Answer: A**

**Section: (none)**

**Explanation**

### QUESTION 10

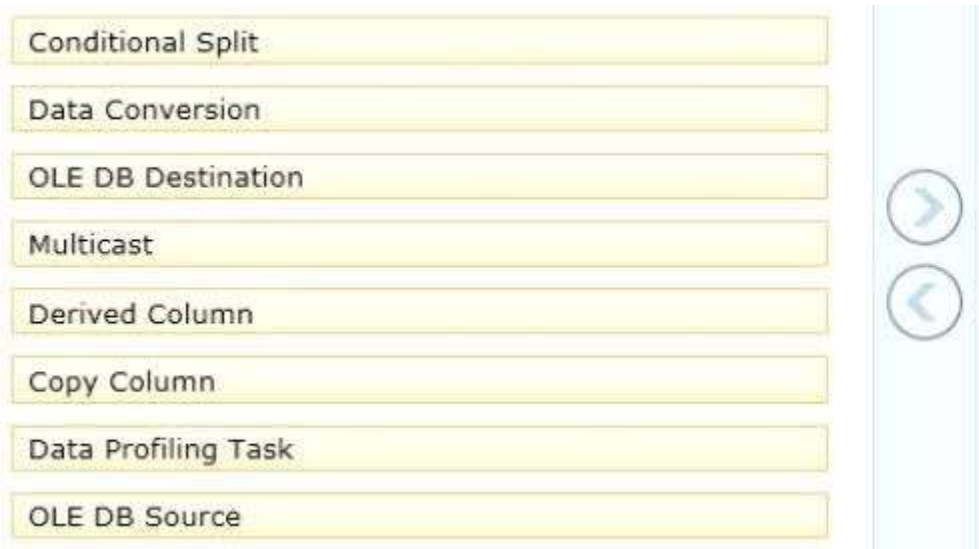
DRAG DROP

You are creating a SQL Server Integration Services (SSIS) package to populate a fact table from a source table. The fact table and source table are located in a SQL Azure database. The source table has a price field and a tax field. The OLE DB source uses the data access mode of Table. You have the following requirements:

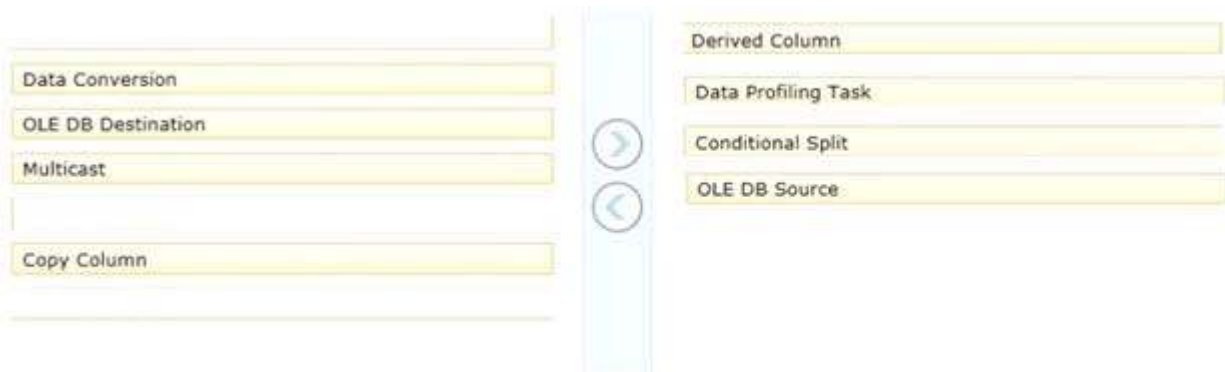
?The fact table must populate a column named TotalCost that computes the sum of the price and tax columns.

?Before the sum is calculated, any records that have a price of zero must be discarded. You need to create the SSIS package in SQL Server Data Tools. In what sequence should you order four of the listed components for the data flow task? (To answer, move the appropriate components from the list of components to the answer area and arrange them in the correct order.)

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A.



**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

\* You configure a Data Flow task by adding components to the Data Flow tab. SSIS supports three types of data flow components:

Sources: Where the data comes from

Transformations: How you can modify the data

Destinations: Where you want to put the data

\* Creating a data flow includes the following steps:

/ Adding one or more sources to extract data from files and databases, and add connection managers to connect to the sources.

/ Adding the transformations that meet the business requirements of the package. A data flow is not required to include transformations.

Some transformations require a connection manager. For example, the Lookup transformation uses a connection manager to connect to the database that contains the lookup data. / Connecting data flow components by connecting the output of sources and transformations to the input of transformations and destinations.

/ Adding one or more destinations to load data into data stores such as files and databases, and adding connection managers to connect to the data sources. / Configuring error outputs on components to handle problems. At run time, row-level errors may occur when data flow components convert data, perform a lookup, or evaluate expressions. For example, a data column with a string value cannot be converted to an integer, or an expression tries to divide by zero. Both operations cause errors, and the rows that contain the errors can be

processed separately using an error flow. / Include annotations to make the data flow self-documenting.

\* The capabilities of transformations vary broadly. Transformations can perform tasks such as updating, summarizing, cleaning, merging, and distributing data. You can modify values in columns, look up values in tables, clean data, and aggregate column values.

\* The Data Flow task encapsulates the data flow engine that moves data between sources and destinations, and lets the user transform, clean, and modify data as it is moved. Addition of a Data Flow task to a package control flow makes it possible for the package to extract, transform, and load data.

A data flow consists of at least one data flow component, but it is typically a set of connected data flow components: sources that extract data; transformations that modify, route, or summarize data; and destinations that load data.

### QUESTION 11

#### DRAG DROP

You are designing a SQL Server Integration Services (SSIS) package to execute 12 Transact-SQL (T-SQL) statements on a SQL Azure database. The T-SQL statements may be executed in any order. The T-SQL statements have unpredictable execution times. You have the following requirements:

?The package must maximize parallel processing of the T-SQL statements. ?After all the T-SQL statements have completed, a Send Mail task must notify administrators.

You need to design the SSIS package.<http://www.lead2pass.com/70-467.html>

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.)

Add a Send Mail task to the control flow. Add a precedence constraint for Completion to the final Execute SQL task and link it to the Send Mail task.

Add a Sequence container to the control flow.

Add a Send Mail task to the control flow. Add a precedence constraint for Completion to the Sequence container and link it to the Send Mail task.

Create precedence constraints for Completion between all the Execute SQL tasks.

Add 12 Execute SQL tasks to the control flow and configure the tasks.

Add 12 Execute SQL tasks to the Sequence container and configure the tasks.

A.

Add a Sequence container to the control flow.

Create precedence constraints for Completion between all the Execute SQL tasks.

Add 12 Execute SQL tasks to the control flow and configure the tasks.

Add a Send Mail task to the control flow. Add a precedence constraint for Completion to the Sequence container and link it to the Send Mail task.

Add 12 Execute SQL tasks to the Sequence container and configure the tasks.

Add a Send Mail task to the control flow. Add a precedence constraint for Completion to the final Execute SQL task and link it to the Send Mail task.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Add a Sequence container to the control flow. Box 2: Add 12 Execute SQL tasks to the Sequence container and configure the tasks. Box 3: Add a Send mail task to the control flow. Add a precedence constraint for Completion to the to the Sequence container and link it to the Send Mail task.

Note:

The Sequence container defines a control flow that is a subset of the package control flow. Sequence containers group the package into multiple separate control flows, each containing one or more tasks and containers that run within the overall package control flow.

Reference: Sequence Container

**QUESTION 12**

HOTSPOT

You are configuring the partition storage settings for a SQL Server Analysis Services (SSAS) cube. The partition storage must meet the following requirements:

?Optimize the storage of source data and aggregations in the cube.

?Use proactive caching.

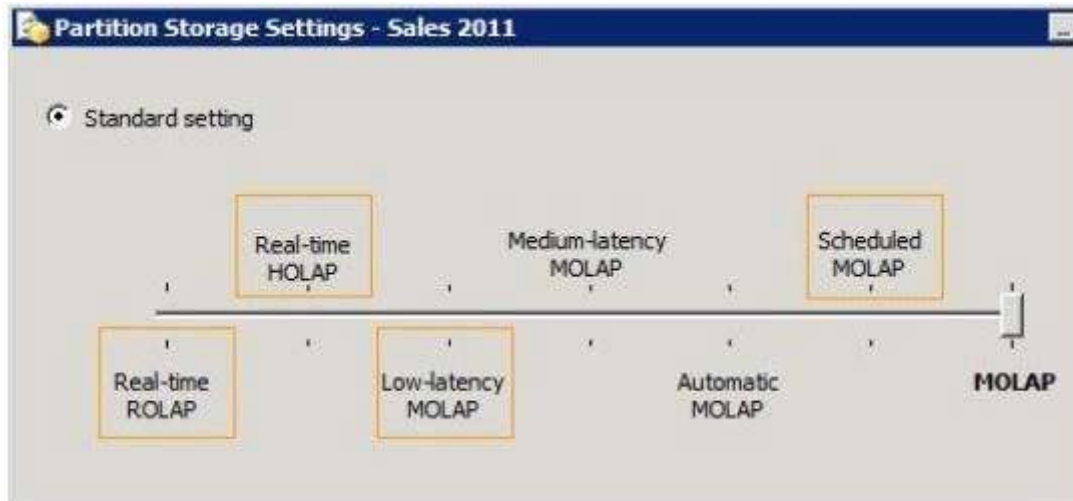
?Drop cached data that is more than 30 minutes old. ?Update the cache when data changes, with a silence interval of 10 seconds.

You need to select the partition storage setting.

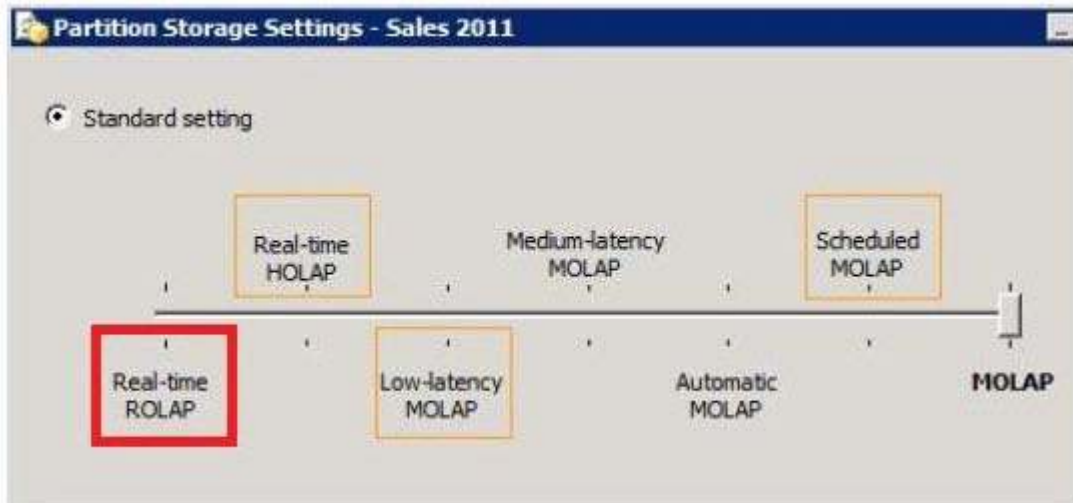
Which setting should you select?

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

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A.



**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

\* Real Time ROLAP

OLAP is in real time. Detail data and aggregations are stored in relational format. The server listens for notifications when data changes and all queries reflect the current state of the data (zero latency). This setting would typically be used for a data source with very frequent and continuous updates when the very latest data is always required by users. Depending on the types of queries generated by client applications, this method is liable to give the slowest response times.

Reference: Choosing a Standard Storage Setting

### QUESTION 13

#### HOTSPOT

A SQL Server Analysis Services (SSAS) cube contains billions of rows of data and is rapidly increasing in size. The cube consists of a single measure group and a single partition. The cube is currently processed by using the Process Full process option. You have the following requirements to reduce the cube processing time:

?Partition the measure group by month.

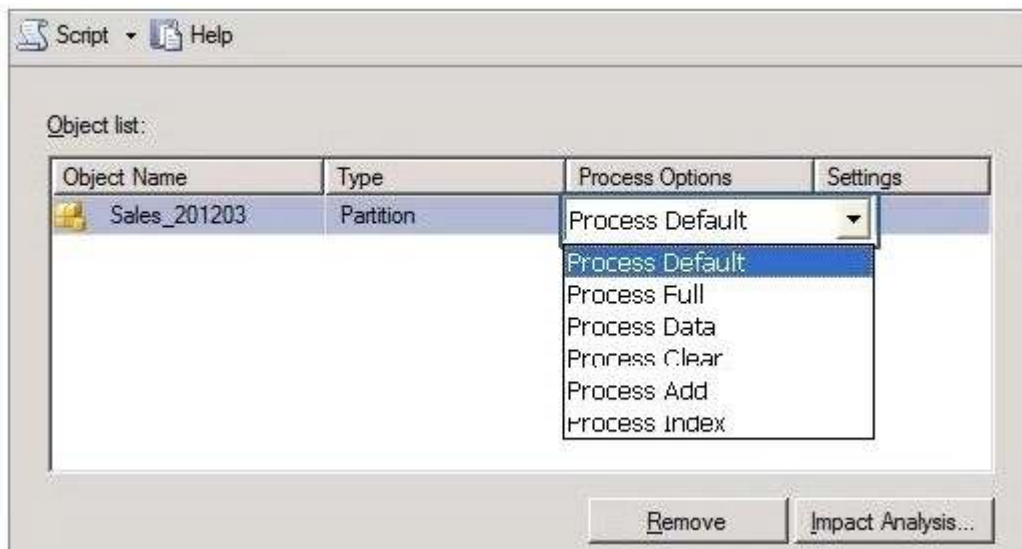
?Create a staging table that contains only data which is more recent than the last time the cube was processed.

?Do not include data updates or deletions in the staging table. ?Insert records from the staging table into the appropriate partition. You need to change the process option to meet the requirements.

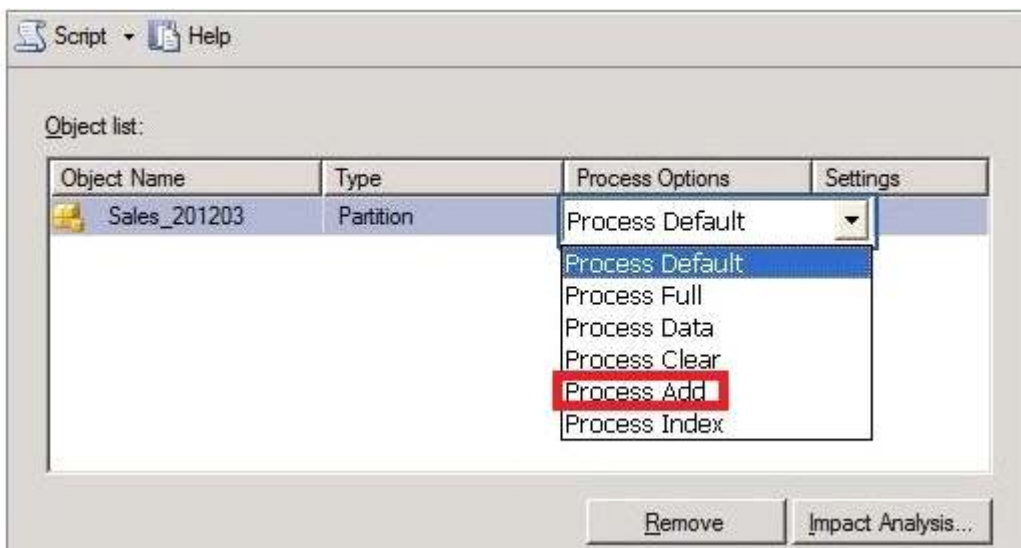
Which process option should you choose?

To answer, select the appropriate option from the drop-down list in the dialog box.





A.



**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

ProcessAdd

ProcessAdd applies only to dimensions and partitions. ProcessAdd is a new processing option for dimensions that did not exist in Analysis Services 2000. It essentially optimizes ProcessUpdate for the scenario where only new members are added. ProcessAdd never deletes or updates existing members. It only adds new members. The user can restrict the dimension table so that ProcessAdd reads only the new rows. ProcessAdd for partitions is the equivalent of incremental partition processing in Analysis Services 2000. The user typically specifies an alternate fact table or a filter condition pointing to the new rows. ProcessAdd internally creates a temporary partition, processes it with the specified fact data, and merges it into the target partition.

Reference: Analysis Services 2005 Processing Architecture

#### QUESTION 14

DRAG DROP

You administer a SQL Server Analysis Services (SSAS) instance. You need to capture a continuous log of



detailed event and subevent durations and custom trace events from queries executed in the SSAS instance. 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.)  
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Write a Multidimensional Expressions (MDX) script to query the DISCOVER\_TRACES dynamic management view (DMV).

Write an XMLA script to log the extended events of the trace.

Launch SQL Server Profiler and connect to the instance.

Execute the script.

Launch SQL Server Management Studio and connect to the instance.

Configure the trace to save to a SQL Server database table.

Navigation arrows: right arrow (top), left arrow (bottom)

A.

Write an XMLA script to log the extended events of the trace.

Launch SQL Server Profiler and connect to the instance.

Configure the trace to save to a SQL Server database table.

Launch SQL Server Management Studio and connect to the instance.

Write a Multidimensional Expressions (MDX) script to query the DISCOVER\_TRACES dynamic management view (DMV).

Execute the script.

Navigation arrows: right arrow (top), left arrow (bottom)

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

mdx script "discover\_traces"

Box 1: Launch SQL Server Profiler and connect to the instance. Box 2: Write an XMLA script to log the extended events of the trace.

Box 3: Execute the script.

Note:

\* Auditing an instance of SQL Server or a SQL Server database involves tracking and logging events that occur on the system. The SQL Server Audit object collects a single instance of server- or database-level actions and groups of actions to monitor. The audit is at the SQL Server instance level. You can have multiple audits per SQL Server instance. The Server Audit Specification object belongs to an audit. You can create one server audit specification per audit, because both are created at the SQL Server instance scope.

\* Trace events can be started and captured using SQL Server Profiler, , or can be started from an XMLA command as SQL Server Extended Events and later analyzed.

\* Extended Event tracing is enabled using a similar XMLA create object script.

### QUESTION 15

#### DRAG DROP

You plan to deploy a SQL Server Integration Services (SSIS) project by using the project deployment model. You need to monitor control flow tasks to determine whether any of them are running longer than usual. 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.)

Write a query against the **catalog.operation\_messages** view. Add a calculation to the query to compare durations to the **catalog.executables** view.

Execute the query.

Write a query against the **catalog.execution\_component\_phases** view. Add a calculation to the query to compare durations to the **catalog.executables** view.

Connect to the **SSISDB** database.

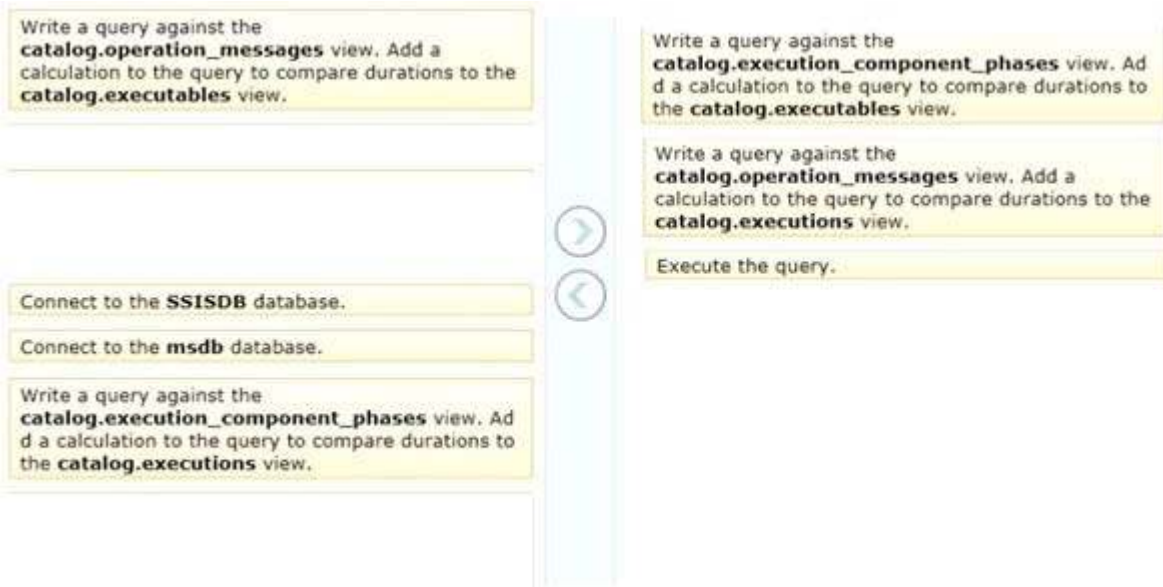
Connect to the **msdb** database.

Write a query against the **catalog.execution\_component\_phases** view. Add a calculation to the query to compare durations to the **catalog.executions** view.

Write a query against the **catalog.operation\_messages** view. Add a calculation to the query to compare durations to the **catalog.executions** view.



A.



**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

\* execution\_component\_phases

Displays the time spent by a data flow component in each execution phase.

\* The following example uses the catalog.execution\_component\_phases view to find the total amount of time that a specific package has spent executing in all phases (active\_time), and the total elapsed time for the package (total\_time).

use SSISDB

```
select package_name, task_name, subcomponent_name, execution_path, SUM(DATEDIFF
(ms,start_time,end_time)) as active_time, DATEDIFF(ms,min(start_time), max(end_time)) as total_time from
catalog.execution_component_phases
where execution_id = 1841
```

```
group by package_name, task_name, subcomponent_name, execution_path order by package_name,
task_name, subcomponent_name, execution_path
```

\* catalog.executables

This view displays a row for each executable in the specified execution. An executable is a task or container that you add to the control flow of a package.

\*(incorrect) catalog.executions (SSISDB Database)

Displays the instances of package execution in the Integration Services catalog. Packages that are executed with the Execute Package task run in the same instance of execution as the parent package.

This view displays a row for each instance of execution in the catalog.

\*(incorrect) catalog.operation\_messages

Displays messages that are logged during operations in the Integration Services catalog. This view displays a row for each message that is logged during an operation in the catalog. The message can be generated by the server, by the package execution process, or by the execution engine.

Reference: catalog.execution\_component\_phases

Reference: catalog.executables

## QUESTION 16

You are designing a partitioning strategy for a large fact table in a data warehouse. Tens of millions of new records are loaded into the data warehouse weekly, outside of business hours. Most queries are generated by reports and by cube processing. Data is frequently queried at the day level and occasionally at the month level. You need to partition the table to maximize the performance of queries. What should you do? (More than one

answer choice may achieve the goal. Select the BEST answer.)

- A. Partition the fact table by month, and compress each partition.
- B. Partition the fact table by week.
- C. Partition the fact table by year.
- D. Partition the fact table by day, and compress each partition.

**Correct Answer:** D

**Section:** (none)

**Explanation**

#### QUESTION 17

You are designing an extract, transform, load (ETL) process for loading data from a SQL Server database into a large fact table in a data warehouse each day with the prior day's sales data. The ETL process for the fact table must meet the following requirements:

?Load new data in the shortest possible time.

?Remove data that is more than 36 months old.

?Ensure that data loads correctly.

?Minimize record locking.

?Minimize impact on the transaction log.

You need to design an ETL process that meets the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Partition the destination fact table by date. Insert new data directly into the fact table and delete old data directly from the fact table.
- B. Partition the destination fact table by date. Use partition switching and staging tables both to remove old data and to load new data.
- C. Partition the destination fact table by customer. Use partition switching both to remove old data and to load new data into each partition.
- D. Partition the destination fact table by date. Use partition switching and a staging table to remove old data. Insert new data directly into the fact table.

**Correct Answer:** B

**Section:** (none)

**Explanation**

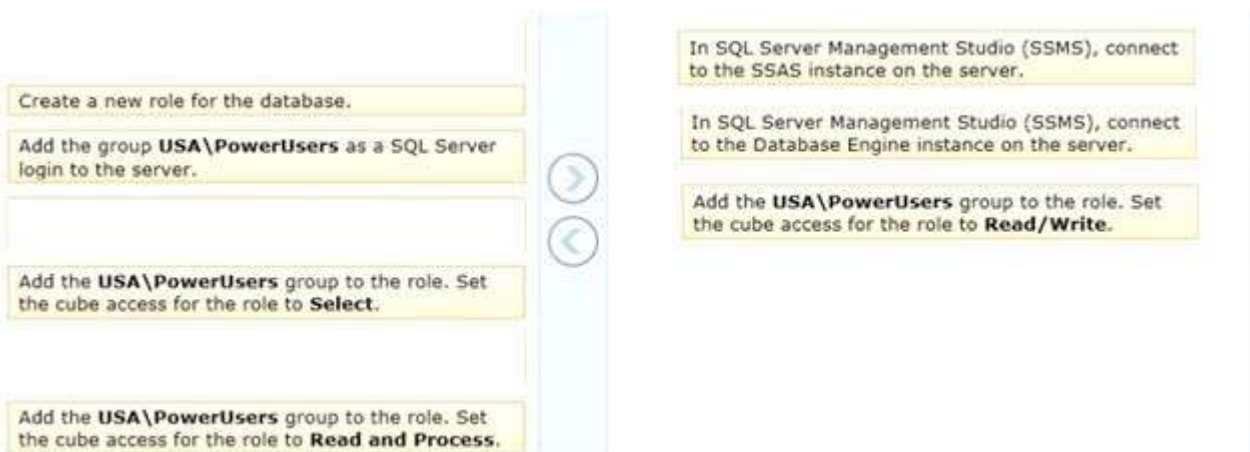
#### QUESTION 18

##### DRAG DROP

You are administering a SQL Server Analysis Services (SSAS) database on a server. The database hosts a financial cube based on a SQL Azure database. You need to grant write access to the financial cube for all users in the group USA\PowerUsers. 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.)



A.



**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: In the SQL Management Studio (SSMS), connect to the SSAS instance on the server.

Box 2: Create a new role for the database.

Box 3: Add the USA\PowerUsers group to the role. Set the cube access for the role to Read and Process.

Note:

\* A member of the server role for Microsoft SQL Server Analysis Services, or a member of a database role that has Full Control (Administrator) permissions in a particular database, can create a database role that only has permission to process specified objects within the database. Giving a database role permission to process a database object lets an administrator delegate the task of processing certain objects, without also granting extraneous permissions to the user who is performing the processing.

\* To give a database role permission to process a cube In SQL Server Management Studio, connect to the instance of Analysis Services, expand Roles for the appropriate database in Object Explorer, and then double-click a database role (or right-click Roles and select New Role to create a new database role). If this is a new role, make sure that you enter a name for the role in the Role namebox.

Click Cubes in the Select a Page pane, locate the cube in the Cube list, and then select the Process check box



for the cube.

Click the OK button.

\* There is no write permissions on a cube.

Reference: Grant Process Permissions on an Analysis Services Multidimensional Database

### QUESTION 19

#### DRAG DROP

You are validating whether a SQL Server Integration Services (SSIS) package named Master.dtsx in the SSIS catalog is executing correctly. You need to display the number of rows in each buffer passed between each data flow component of the package. 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.)

Execute a SQL statement with a package name of Master.dtsx against the **catalog.executions** view and return its execution ID.

Run the Master.dtsx package with the logging level set to **Performance**.

Execute a SQL statement with the execution ID equal to the previously retrieved execution ID against the **catalog.execution\_data\_statistics** view and return the **rows\_sent** column values for all the rows.

Run the Master.dtsx package with the logging level set to **Verbose**.

Execute a SQL statement with a package name of Master.dtsx against the **msdb..sysssislog** table and return its execution ID.

A.

Execute a SQL statement with a package name of Master.dtsx against the **catalog.executions** view and return its execution ID.

Execute a SQL statement with the execution ID equal to the previously retrieved execution ID against the **catalog.execution\_data\_statistics** view and return the **rows\_sent** column values for all the rows.

Run the Master.dtsx package with the logging level set to **Verbose**.

Execute a SQL statement with a package name of Master.dtsx against the **msdb..sysssislog** table and return its execution ID.

Run the Master.dtsx package with the logging level set to **Performance**.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

\* You are going to become very very familiar indeed with [catalog].[executions]. It is a view that provides a record of all package executions on the server and, most importantly, it contains [execution\_id] ?the identifier for each execution and the field to which all other objects herein will be related.

#### QUESTION 20

You are creating a Multidimensional Expressions (MDX) calculation for Projected Revenue in a cube. For Customer A, Projected Revenue is defined as 150 percent of the Total Sales for the customer. For all other customers, Projected Revenue is defined as 110 percent of the Total Sales for the customer. You need to calculate the Projected Revenue as efficiently as possible. Which calculation should you use? (More than one answer choice may achieve the goal. Select the BEST answer.)

- ☐ A. `CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]  
AS [Measures].[Total Sales];  
SCOPE ([Customer].[Customer Name].MEMBERS, [Measures].[Projected Revenue]);  
[Measures].[Total Sales] * 1.1;  
IF [Customer].[Customer Name].CurrentMember.Name = "Customer A"  
THEN [Measures].[Total Sales] * 1.5  
END IF;  
END SCOPE;`
- ☐ B. `CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]  
AS CASE WHEN [Customer].[Customer Name].CurrentMember.Name = "Customer A"  
THEN [Measures].[Total Sales] * 1.5  
ELSE [Measures].[Total Sales] * 1.1 END`
- ☐ C. `CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]  
AS [Measures].[Total Sales] * 1.1;  
SCOPE ([Customer].[Customer Name].&[Customer A], [Measures].[Projected Revenue]);  
THIS = [Measures].[Total Sales] * 1.5;  
END SCOPE;`
- ☐ D. `CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]  
AS [Measures].[Total Sales] * 1.1;  
SCOPE ([Customer].[Customer Name].MEMBERS, [Measures].[Projected Revenue]);  
[Customer].[Customer Name].&[Customer A] = [Measures].[Total Sales] * 1.5;  
END SCOPE;`

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

**Correct Answer:** C

**Section:** (none)

**Explanation**

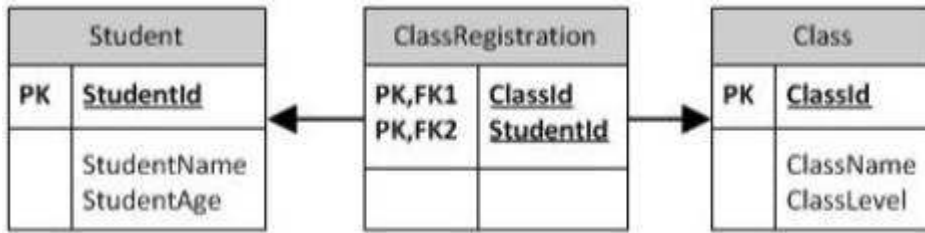
**Explanation/Reference:**

#### QUESTION 21

You are developing the database schema for a SQL Server Analysis Services (SSAS) BI Semantic Model



(BISM). The BISM will be based on the schema displayed in the following graphic.



You have the following requirements:

?Ensure that queries of the data model correctly display average student age by class and average class level by student.

?Minimize development effort.

You need to design the data model.

What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Create a multidimensional project and define measures and a reference relationship.
- B. Create a tabular project and define calculated columns.
- C. Create a multidimensional project and define measures and a many-to-many dimensional relationship.
- D. Create a tabular project and define measures.

**Correct Answer: C**

**Section: (none)**

**Explanation**

## QUESTION 22

DRAG DROP

You are designing a self-service business intelligence and reporting environment. Business analysts will create and publish PowerPivot for Microsoft Excel workbooks and create reports by using SQL Server Reporting Services (SSRS) and Power View. When the data models become more complex and the data volume increases, the data models will be replaced by IT-hosted server-based models. You have the following requirements:

?Maintain the self-service nature of the reporting environment.

?Reuse existing reports.

?Add calculated columns to the data models.

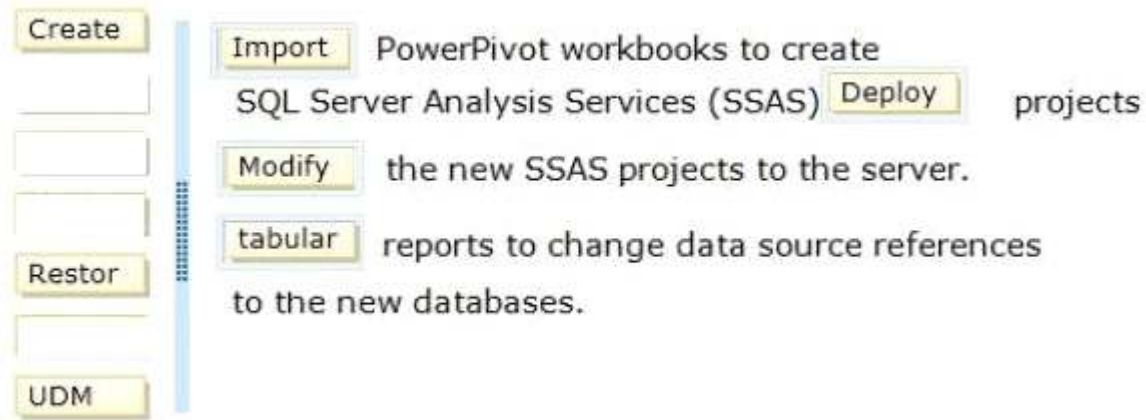
You need to create a strategy for implementing this process.

What should you do?

To answer, drag the appropriate term or terms to the correct location or locations in the answer area. (Answer choices may be used once, more than once, or not all.)

Create		PowerPivot workbooks to create
Deploy		SQL Server Analysis Services (SSAS) projects
Import		the new SSAS projects to the server.
Modify		reports to change data source references
Restor		to the new databases.
tabular		
UDM		

A.



**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: Import

Box 2: UDM

Box 3: Deploy

Box 4: Modify

### QUESTION 23

You are modifying a star schema data mart that feeds order data from a SQL Azure database into a SQL Server Analysis Services (SSAS) cube. The data mart contains two large tables that include flags and indicators for some orders. There are 100 different flag columns, each with 10 different indicator values. Some flags reuse indicators. The tables both have a granularity that matches the fact table.

You have the following requirements:

?Allow users to slice data by all flags and indicators. ?Modify the date dimension table to include a surrogate key of a numeric data type and add the surrogate key to the fact table.

?Use the most efficient design strategy for cube processing and queries.

You need to modify the schema.

What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Define the surrogate key as an INT data type. Combine the distinct flag/indicator combinations into a single dimension.
- B. Define the surrogate key as an INT data type. Create a single fact dimension in each table for its flags and indicators.
- C. Define the surrogate key as a BIGINT data type. Combine the distinct flag/indicator combinations into a single dimension.
- D. Define the surrogate key as a BIGINT data type. Create a single fact dimension in each table for its flags and indicators.

**Correct Answer:** A

**Section:** (none)

**Explanation**

### QUESTION 24

You are defining a named set by using Multidimensional Expressions (MDX) in a sales cube. The cube includes a Product dimension that contains a Category hierarchy and a Color attribute hierarchy. You need to return only the blue products in the Category hierarchy. Which set should you use? (More than one answer choice may achieve the goal. Select the BEST answer.)

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

**Correct Answer:** C

**Section:** (none)

**Explanation**

#### **QUESTION 25**

An existing cube dimension that has 30 attribute hierarchies is performing very poorly. You have the following requirements:

?Implement drill-down browsing.

?Reduce the number of attribute hierarchies but ensure that the information contained within them is available to users on demand.

?Optimize performance.

You need to redesign the cube dimension to meet the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. set the AggregateFunction property to Sum on all measures. Use the SCOPE statement in a Multidimensional Expressions (MDX) calculation to tune the aggregation types.
- B. Set the AttributeHierarchyOptimizedState property to FullyOptimized on the attribute hierarchies.
- C. Create user-defined hierarchies. For the attributes sourced by the levels of the user-defined hierarchies, set the RelationshipType property to Rigid. Run incremental processing.
- D. Remove as many attribute hierarchies as possible from the dimension. Reintroduce the information in the attribute hierarchies as properties. Implement natural hierarchies and set the AttributeHierarchyVisible property to False for attributes used as levels in the natural hierarchies.

**Correct Answer:** D

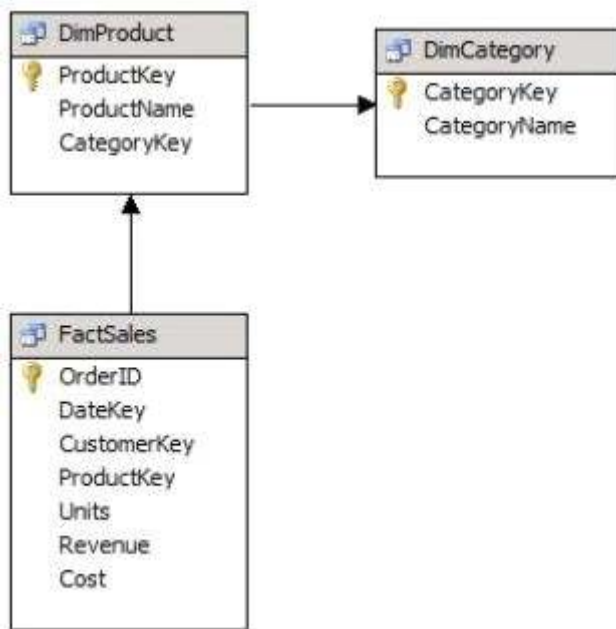
**Section:** (none)

**Explanation**

#### **QUESTION 26**

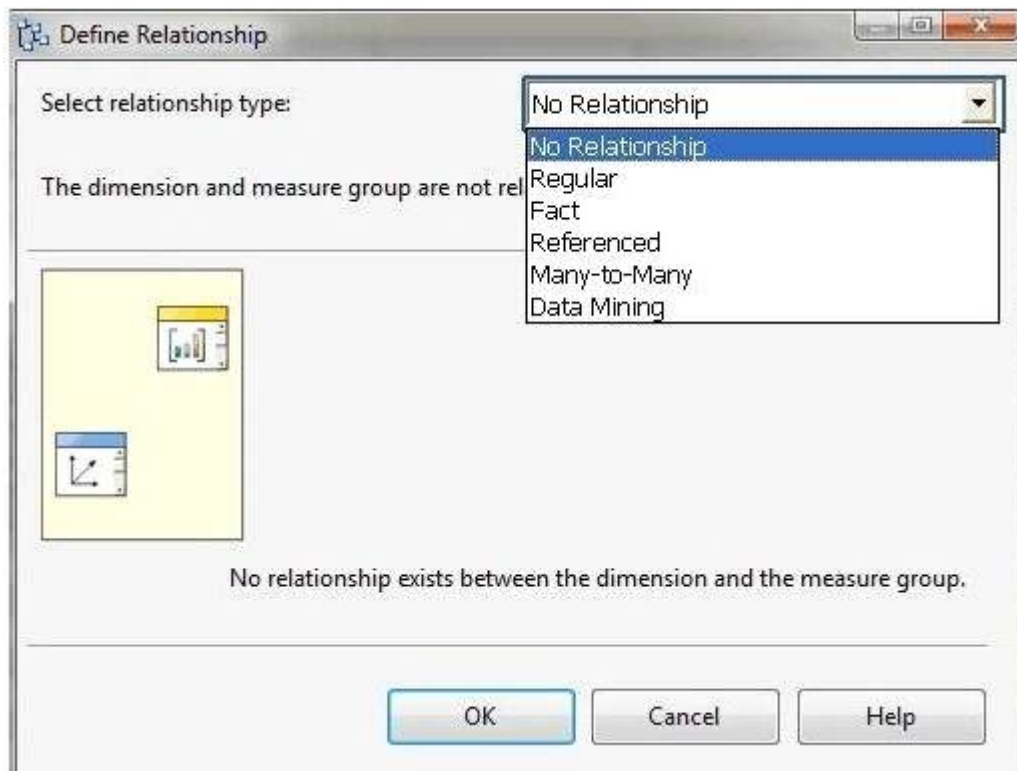
**HOTSPOT**

You are developing a SQL Server Analysis Services (SSAS) cube. A dimension named Category is based on the DimCategory table. A subset of the data source view is shown in the following graphic.

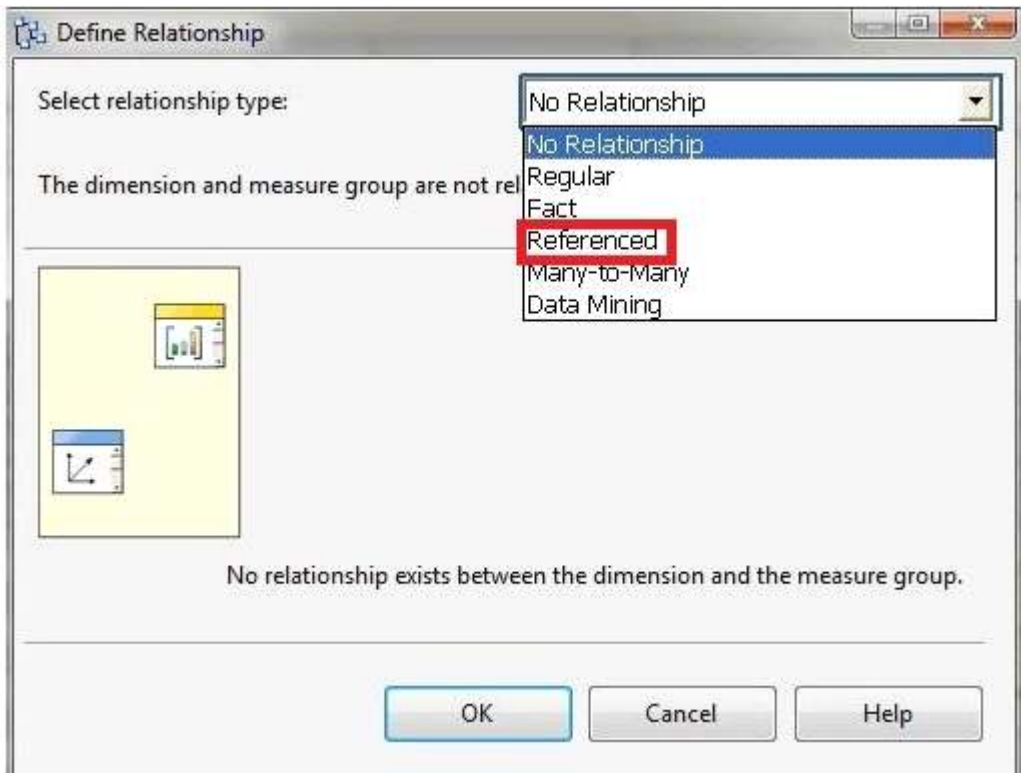


You need to relate the Category dimension to the Sales measure group. Which relationship type should you choose?

To answer, select the appropriate option from the drop-down list in the dialog box.



A.



**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

Referenced Relationship

Link a dimension to a fact table indirectly through a dimension that is linked directly through a primary key foreign key relationship.

#### QUESTION 27

You are designing a partitioning strategy for a large fact table in a Manufacturing data warehouse. Tens of millions of new inventory fact records are loaded into the data warehouse weekly, outside of business hours. Most queries against the database are generated by reports and by cube processing. Data is frequently queried at the day level and occasionally at the month level.

- A. Partition the inventory fact table by month, and compress each partition.
- B. Partition the inventory fact table by day, and compress each partition.
- C. Partition the inventory fact table by year.
- D. Partition the inventory fact table by week.

**Correct Answer:** B

**Section:** (none)

**Explanation**

#### QUESTION 28

DRAG DROP

You are administering a SQL Server Analysis Services (SSAS) database on a server. The database hosts a financial cube based on a SQL Azure database. You need to grant read access to the financial cube for all

users in the group USA\PowerUsers. 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.)

Add the **USA\PowerUsers** group to the role. Set the cube access for the role to **Read**.

Add the **USA\PowerUsers** group to the role. Set the cube access for the role to **Select**.

Add the group **USA\PowerUsers** as a SQL Server login to the server.

In SQL Server Management Studio (SSMS), connect to the Database Engine instance on the server.

Add the **USA\PowerUsers** group to the role. Set the cube access for the role to **Read and Process**.

Create a new role for the database.

In SQL Server Management Studio (SSMS), connect to the SSAS instance on the server.

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

**Correct Answer:**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Box 1: In the SQL Management Studio (SSMS), connect to the SSAS instance on the server.

Box 2: Create a new role for the database.

Box 3: Add the USA\PowerUsers group to the role. Set the cube access for the role to Read and Process.

Note:

\* A member of the server role for Microsoft SQL Server Analysis Services, or a member of a database role that has Full Control (Administrator) permissions in a particular database, can create a database role that only has permission to process specified objects within the database. Giving a database role permission to process a database object lets an administrator delegate the task of processing certain objects, without also granting extraneous permissions to the user who is performing the processing.

\* To give a database role permission to process a cube In SQL Server Management Studio, connect to the instance of Analysis Services, expand Roles for the appropriate database in Object Explorer, and then double-click a database role (or right-click Roles and select New Role to create a new database role). If this is a new role, make sure that you enter a name for the role in the Role namebox.

Click Cubes in the Select a Page pane, locate the cube in the Cube list, and then select the Process check box for the cube.

Click the OK button.

\* There is no write permissions on a cube.

Reference: Grant Process Permissions on an Analysis Services Multidimensional Database

## QUESTION 29

A SQL Server Analysis Services (SSAS) cube contains a large measure group. The fact table supporting the

measure group is loaded with new data throughout the day.

You have the following requirements:

?Ensure that the cube displays current data as quickly as possible.

?Maximize availability of the cube.

?Maximize query performance for all aggregation levels. You need to choose a partitioning strategy that meets the requirements. Which partitioning strategy should you choose? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Create one partition for the current day that uses multidimensional OLAP (MOLAP) with proactive caching as a storage mode.
- B. Create one partition for the current month that uses hybrid OLAP (HOLAP) as a storage mode.
- C. Create one partition for the current day that uses relational OLAP (ROLAP) as a storage mode.
- D. Create one partition for the current day that uses multidimensional OLAP (MOLAP) as a storage mode. Process the partition each night.

**Correct Answer: A**

**Section: (none)**

**Explanation**

### QUESTION 30

You are designing an extract, transform, load (ETL) process for loading data from a SQL Azure database into a large fact table in a data warehouse each day with the prior day's sales data. The ETL process for the fact table must meet the following requirements:

?Load new data in the shortest possible time.

?Remove data that is more than 36 months old.

?Minimize record locking.

?Minimize impact on the transaction log.

You need to design an ETL process that meets the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Partition the fact table by date. Insert new data directly into the fact table and delete old data directly from the fact table.
- B. Partition the fact table by customer. Use partition switching both to remove old data and to load new data into each partition.
- C. Partition the fact table by date. Use partition switching and staging tables both to remove old data and to load new data.
- D. Partition the fact table by date. Use partition switching and a staging table to remove old data. Insert new data directly into the fact table.

**Correct Answer: C**

**Section: (none)**

**Explanation**

### QUESTION 31

DRAG DROP

You are validating whether a SQL Server Integration Services (SSIS) package named Master.dtsx in the SSIS catalog is executing correctly. You need to display the number of rows in each buffer passed between each data flow component of the package. 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.)



Execute a SQL statement with a package name of Master.dtsx against the **catalog.executions** view and return its execution ID.

Run the Master.dtsx package with the logging level set to **Basic**.

Execute a SQL statement with the execution ID equal to the previously retrieved execution ID against the **catalog.execution\_data\_statistics** view and return the **rows\_sent** column values for all the rows.

Run the Master.dtsx package with the logging level set to **Verbose**.

Execute a SQL statement with a package name of Master.dtsx against the **catalog.event\_messages** view and return its execution ID.

A.

Execute a SQL statement with a package name of Master.dtsx against the **catalog.executions** view and return its execution ID.

Execute a SQL statement with the execution ID equal to the previously retrieved execution ID against the **catalog.execution\_data\_statistics** view and return the **rows\_sent** column values for all the rows.

Run the Master.dtsx package with the logging level set to **Verbose**.

Execute a SQL statement with a package name of Master.dtsx against the **catalog.event\_messages** view and return its execution ID.

Run the Master.dtsx package with the logging level set to **Basic**.

B.

C.

D.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

\* You are going to become very very familiar indeed with [catalog].[executions]. It is a view that provides a record of all package executions on the server and, most importantly, it contains [execution\_id] ?the identifier

for each execution and the field to which all other objects herein will be related.

### QUESTION 32

#### DRAG DROP

You plan to deploy a SQL Server Integration Services (SSIS) project by using the project deployment model. You need to monitor control flow tasks to determine whether any of them are running longer than usual. 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.)

Write a query against the **catalog.execution\_component\_phases** view. Add a calculation to the query to compare durations to the **catalog.executions** view.

Write a query against the **catalog.execution\_data\_statistics** view. Add a calculation to the query to compare durations to the **catalog.executions** view.

Write a query against the **catalog.execution\_data\_statistics** view. Add a calculation to the query to compare durations to the **catalog.execution\_data\_taps** view.

Write a query against the **catalog.execution\_component\_phases** view. Add a calculation to the query to compare durations to the **catalog.execution\_data\_taps** view.

Execute the query.

Connect to the **SSISDB** database.

Connect to the **msdb** database.

A.

Write a query against the **catalog.execution\_component\_phases** view. Add a calculation to the query to compare durations to the **catalog.executions** view.

Execute the query.

Connect to the **msdb** database.

Write a query against the **catalog.execution\_data\_statistics** view. Add a calculation to the query to compare durations to the **catalog.executions** view.

Write a query against the **catalog.execution\_data\_statistics** view. Add a calculation to the query to compare durations to the **catalog.execution\_data\_taps** view.

Write a query against the **catalog.execution\_component\_phases** view. Add a calculation to the query to compare durations to the **catalog.execution\_data\_taps** view.

Connect to the **SSISDB** database.

B.

C.

D.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

\* execution\_component\_phases

Displays the time spent by a data flow component in each execution phase.

\* The following example uses the catalog.execution\_component\_phases view to find the total amount of time that a specific package has spent executing in all phases (active\_time), and the total elapsed time for the package (total\_time).

use SSISDB

```
select package_name, task_name, subcomponent_name, execution_path, SUM(DATEDIFF
(ms,start_time,end_time)) as active_time, DATEDIFF(ms,min(start_time), max(end_time)) as total_time from
catalog.execution_component_phases
```

```
where execution_id = 1841
```

```
group by package_name, task_name, subcomponent_name, execution_path order by package_name,
task_name, subcomponent_name, execution_path
```

\* catalog.executables

This view displays a row for each executable in the specified execution. An executable is a task or container that you add to the control flow of a package.

\*(incorrect) catalog.executions (SSISDB Database)

Displays the instances of package execution in the Integration Services catalog. Packages that are executed with the Execute Package task run in the same instance of execution as the parent package.

This view displays a row for each instance of execution in the catalog.

\*(incorrect) catalog.operation\_messages

Displays messages that are logged during operations in the Integration Services catalog. This view displays a row for each message that is logged during an operation in the catalog. The message can be generated by the server, by the package execution process, or by the execution engine.

Reference: catalog.execution\_component\_phases

Reference: catalog.executables

### QUESTION 33

#### DRAG DROP

You are designing a SQL Server Reporting Services (SSRS) solution. A report project must access multiple SQL Server databases. Each database is on a different instance. The databases have identical schema and security configurations. You have the following requirements:

?The report must support subscriptions.

?Users must be able to select the host when running the report.

What should you do?

To answer, drag the appropriate phrase or phrases from the list to the correct location or locations in the answer area. (Answer choices may be used once, more than once, or not all.)

The interface shows a list of phrases on the left and four configuration steps on the right, separated by a vertical blue line.

**Phrases (Left):**

- a shared dataset.
- stored credentials.
- integrated security.
- SQL Server data.
- SQL Server instances.
- data source in the report.
- an expression-based connection string.
- shared data source in the report

**Configuration Steps (Right):**

- Create a
- Create a report parameter that displays available values of
- Create
- Configure the data source to use

A.

Option A shows a subset of the phrases and configuration steps. The phrases on the left are: a shared dataset., integrated security., SQL Server data., and shared data source in the report. The configuration steps on the right are: Create a data source in the report., Create a report parameter that displays available values of SQL Server instances., Create an expression-based connection string., and Configure the data source to use stored credentials.

B.

C.

D.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

The report need a data source.

Through a report parameter the user can select among the available SQL Server instances. This selection is used through an expression-based connection string. Authentication is handled through stored credentials.

### QUESTION 34

#### DRAG DROP

You are designing a SQL Server Reporting Services (SSRS) solution. An existing report aggregates data from a SQL Azure database in a chart. You need to use the chart in a new report and ensure that other users can use the chart in their reports. 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.)

In Report Builder, insert the report part into a new report.

In Report Designer, open the report that contains the chart.

In Report Designer, insert the report part into a new report.

In Power View, open the report that contains the chart.

Select the chart for publication as a report part and publish the report.

A.

In Report Builder, insert the report part into a new report.

Select the chart for publication as a report part and publish the report.

In Report Designer, insert the report part into a new report.

In Power View, open the report that contains the chart.

In Report Designer, open the report that contains the chart.

B.

C.

D.

**Correct Answer: A**

**Section: (none)**

**Explanation**

#### Explanation/Reference:

Explanation:

Note:

\* In Report Designer, after you create tables, charts, and other report items in a project, you can publish them as report parts to a report server or SharePoint site integrated with a report server so that you and others can reuse them in other reports.

\* . By using Report Builder, you can customize and update reports that were created in SQL Server Data Tools (SSDT) Report Designer.

\* In Report Builder, IT pros and power users can create powerful operational reports, and reusable report parts and shared datasets.

Incorrect:

\* (incorrect) Power View, a feature of SQL Server 2012 Reporting Services Add-in for Microsoft SharePoint Server 2010 Enterprise Edition, is an interactive data exploration, visualization, and presentation experience. It



provides intuitive ad-hoc reporting for business users such as data analysts, business decision makers, and information workers. They can easily create and interact with views of data from data models based on PowerPivot workbooks published in a PowerPivot Gallery, or tabular models deployed to SQL Server 2012 Analysis Services (SSAS) instances. Power View is a browser-based Silverlight application launched from SharePoint Server 2010 that enables users to present and share insights with others in their organization through interactive presentations.

Reference: Getting Started with Report Builder

Reference: Report Parts in Report Designer (SSRS)

### QUESTION 35

You are designing a multidimensional OLAP (MOLAP) cube. The MOLAP cube must meet the following requirements:

Ensure that workloads for aggregation tuning can be automatically collected. Require the least amount of effort to perform manual aggregation tuning. Minimize impact on the performance of previously tuned queries. You need to design a MOLAP cube that meets the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Enable SQL Server Analysis Services (SSAS) query logging. Run the Usage-Based Optimization Wizard to generate aggregations. Merge the wizard results with existing aggregation designs.
- B. Set up multiple partitions. Run the Aggregation Design Wizard periodically for each measure group. After the wizard finishes, discard the old aggregation design and accept the new one.
- C. Set up multiple partitions. Run the Aggregation Design Wizard on each partition. Schedule the aggregations by using an XMLA script in SQL Server Agent.
- D. Set the AggregationUsage property of all attributes based on natural keys to Full.

**Correct Answer: A**

**Section: (none)**

**Explanation**

### QUESTION 36

You are designing a fact table in a SQL Server database. The fact table must meet the following requirements:

?Include a columnstore index.

?Allow users to choose up to 10 dimension tables and up to five facts at one time. ?Maximize performance of queries that aggregate measures by using any of the 10 dimensions.

?Support billions of rows.

?Use the most efficient design strategy.

You need to design the fact table to meet the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Design a fact table with 5 dimensional key columns and 10 measure columns. Place the columnstore index on the dimensional key columns.
- B. Design a fact table with 5 dimensional key columns and 10 measure columns. Place the columnstore index on the measure columns.
- C. Design a fact table with 10 dimensional key columns and 5 measure columns. Place the columnstore index on the dimensional key columns and the measure columns.
- D. Design a fact table with 10 dimensional key columns and 5 measure columns. Place the columnstore index on only the measure columns.

**Correct Answer: C**

**Section: (none)**

**Explanation**

### QUESTION 37

DRAG DROP

You are designing a SQL Server Analysis Services (SSAS) data model on a very large data warehouse. The fact tables in the data warehouse contain terabytes of data in tens of billions of rows. You must support the

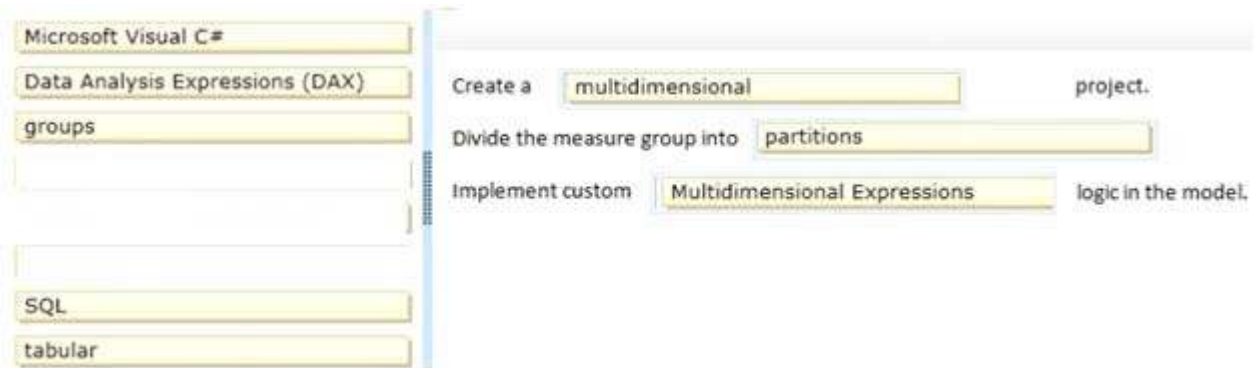
following features:

?Complex attribute/column relationships

?Advanced calculations in the data model definition ?Advanced calculations using logic deployed in a custom assembly You need to choose the correct SSAS design strategy. What should you do? To answer, drag the appropriate term or terms to the correct location or locations in the answer area. (Answer choices may be used once, more than once, or not all.)

<http://www.lead2pass.com/70-467.html>

A.



**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

Box 1:

The primary reason for building an Analysis Services multidimensional model is to achieve fast performance of ad hoc queries against business data. A multidimensional model is composed of cubes and dimensions that can be annotated and extended to support complex query constructions.

Box 2:

A partition is a container for a portion of the measure group data. Partitions are not seen from MDX queries; all queries reflect the whole content of the measure group, regardless of how many partitions are defined for the measure group. The data content of a partition is defined by the query bindings of the partition, and by the slicing expression.

Box 3:

Multidimensional Expressions (MDX) is the query language that you use to work with and retrieve multidimensional data in Microsoft SQL Server 2005 Analysis Services (SSAS).

### QUESTION 38

You are creating a Multidimensional Expressions (MDX) calculation for Projected Revenue in a cube. For Product A, Projected Revenue is defined as 150 percent of the Total Sales of the product. For all other products, Projected Revenue is defined as 110 percent of the Total Sales of the product. You need to calculate the Projected Revenue as efficiently as possible. Which calculation should you use? (More than one answer choice may achieve the goal. Select the BEST answer.)



- ☐ A. `CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]  
AS CASE WHEN [Product].[Product Name].CurrentMember.Name = "Product  
THEN [Measures].[Total Sales] * 1.5  
ELSE [Measures].[Total Sales] * 1.1 END`
- ☐ B. `CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]  
AS [Measures].[Total Sales] * 1.1;  
SCOPE ([Product].[Product Name].MEMBERS, [Measures].[Projected Revenue]  
[Product].[Product Name].&[Product A] = [Measures].[Total Sales]  
END SCOPE;`
- ☐ C. `CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]  
AS [Measures].[Total Sales] * 1.1;  
SCOPE ([Product].[Product Name].&[Product A], [Measures].[Projected Revenue]  
THIS = [Measures].[Total Sales] * 1.5;  
END SCOPE;`
- ☐ D. `CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]  
AS [Measures].[Total Sales];  
SCOPE ([Product].[Product Name].MEMBERS, [Measures].[Projected Revenue]  
[Measures].[Total Sales] * 1.1;  
IF [Product].[Product Name].CurrentMember.Name = "Product A"  
THEN [Measures].[Total Sales] * 1.5  
END IF;  
END SCOPE;`

- A.  
B.  
C.  
D.

**Correct Answer:** C

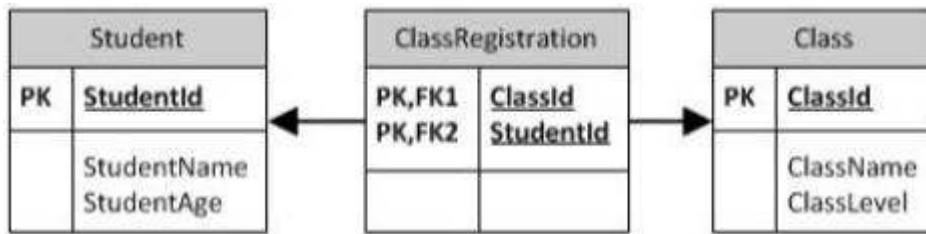
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 39

You are developing the database schema for a SQL Server Analysis Services (SSAS) BI Semantic Model (BISM). The BISM will be based on the schema displayed in the following graphic.



You have the following requirements:

?Ensure that queries of the data model correctly display average student age by class. ?Ensure that the solution supports role-based security and partitions.

?Minimize development effort.

You need to design the data model. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Create a multidimensional project and define measures and a many-to-many dimensional relationship. Create partitions in SQL Server Management Studio (SSMS).
- B. Create a multidimensional project and define measures and a reference relationship. Create partitions in SQL Server Data Tools (SSDT).
- C. Create a tabular project and define measures. Create partitions in SQL Server Data Tools (SSDT).
- D. Create a tabular project and define calculated columns. Create partitions in SQL Server Management Studio (SSMS).

**Correct Answer:** A

**Section:** (none)

**Explanation**

#### QUESTION 40

You are defining a named set by using Multidimensional Expressions (MDX) in a sales cube. The cube includes a Customer dimension that contains a Geography hierarchy and a Gender attribute hierarchy. You need to return only the female customers in the Geography hierarchy. Which set should you use? (More than one answer choice may achieve the goal. Select the BEST answer.)

<http://www.lead2pass.com/70-467.html>

- ☐ A. Exists
- ```
(
    [Customer].[Customer Geography].[Customer Name].Members,
    [Customer].[Gender].[Female]
)
```
- ☐ B. Generate
- ```
(
    [Customer].[Gender].[Female],
    [Customer].[Model Name].[Model Name].Members, ALL
)
```
- ☐ C. Filter
- ```
(
    [Customer].[Customer Geography].[Customer Name].Members,
    ([Customer].[Gender].[Female], [Measures].[Sales Amount]) > 0
)
```
- ☐ D. CrossJoin
- ```
(
    [Customer].[Customer Geography].[Customer Name].Members,
    [Customer].[Gender].[Female]
)
```

- A.  
B.  
C.  
D.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

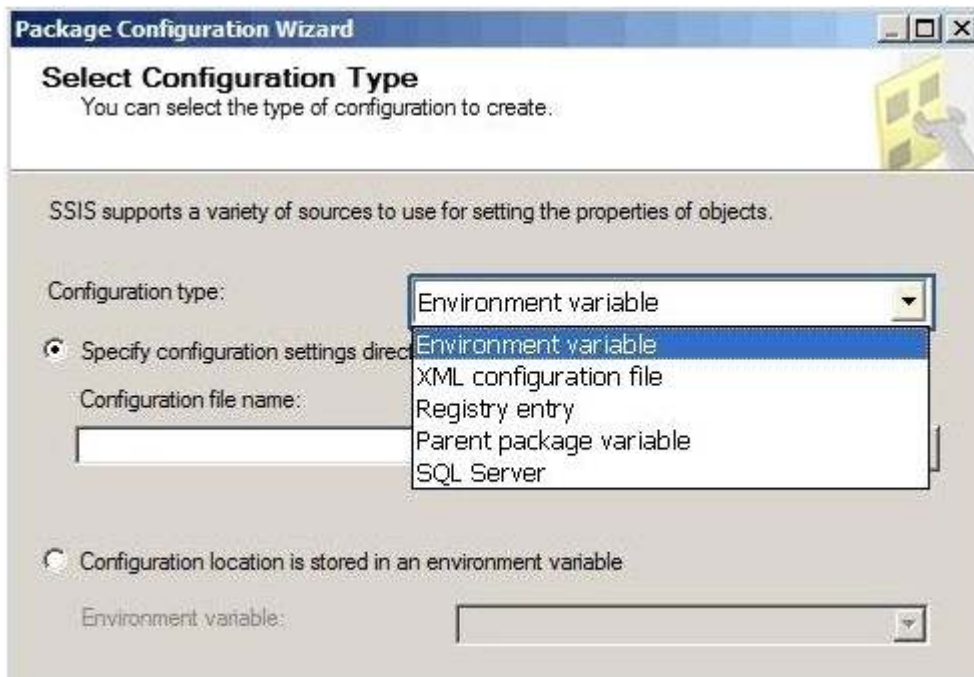
#### QUESTION 41

##### HOTSPOT

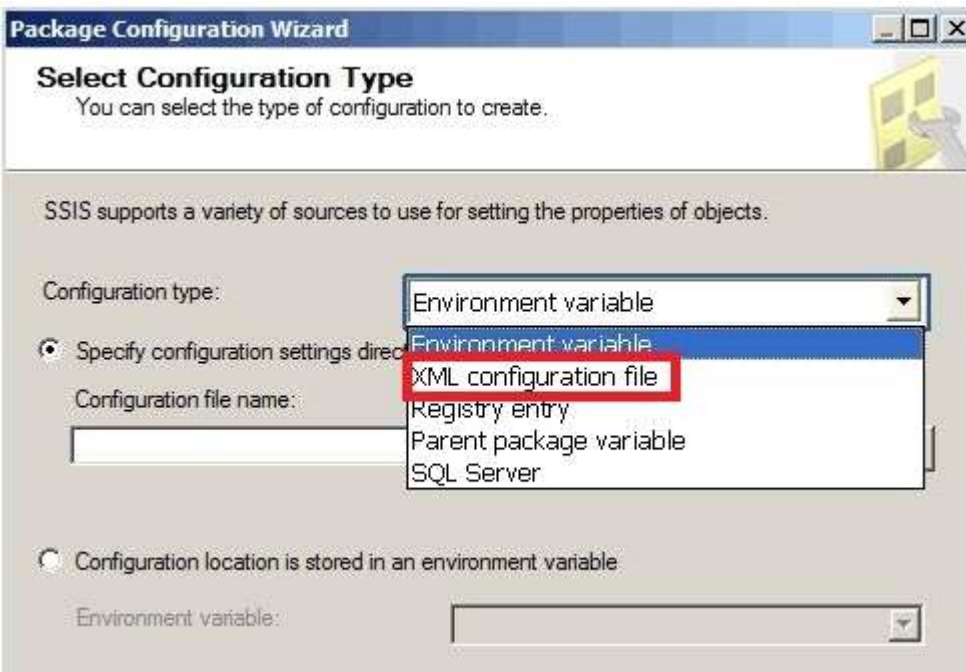
You are designing a SQL Server Integration Services (SSIS) package configuration strategy. The package configuration must meet the following requirements:

- ?Include multiple properties in a configuration.
- ?Force packages to load all settings in the configuration.
- ?Support Encrypting File System (EFS) formats.

You need to select the appropriate configuration. Which configuration type should you use? To answer, select the appropriate option from the drop-down list in the dialog box.



A.



**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

Package Configuration Types

The following table describes the package configuration types.

\* SQL Server table

A table in a SQL Server database contains the configuration. The table can include multiple configurations.

\* XML configuration file

An XML file contains the configurations. The XML file can include multiple configurations.

\* Environment variable

An environment variable contains the configuration.

\* Registry entry

A Registry entry contains the configuration.

\* Parent package variable

A variable in the package contains the configuration. This configuration type is typically used to update properties in child packages.

Reference: Package Configurations

#### QUESTION 42

You are designing a SQL Server Integration Services (SSIS) solution that will load multiple Online Transactional Processing (OLTP) data sources into a SQL Server data mart. You have the following requirements:

?Ensure that the process supports the creation of an exception report that details possible duplicate key values, null ratios within columns, and column-length distributions of values. ?Ensure that users can generate the exception report in an XML format.

?Use the minimum development effort.

You need to design the SSIS solution to meet the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Use a Data Profiling task. Use a Data Flow task to extract the XML output of the Data Profiling task into a SQL Server table. Query the table to view the exceptions.
- B. Use Data Flow tasks to process the clean data.
- C. Use a Data Profiling task. Read the exceptions in Data Profile Viewer.
- D. Design a stored procedure that examines data for common dirty data patterns. Use an Execute SQL task.

**Correct Answer: C**

**Section: (none)**

**Explanation**

#### QUESTION 43

You are designing a SQL Server Integration Services (SSIS) solution. The solution will contain an SSIS project that includes several SSIS packages. Each SSIS package will define the same connection managers and variables. You have the following requirements:

?The deployment model must support changing the content of connection strings by using parameters at execution time.

?The deployment model must automatically log events to the SSISOB database.

?Maximize performance at execution time.<http://www.lead2pass.com/70-467.html>

You need to design a solution that meets the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Use a project deployment model. Modify connection manager properties to use project parameters.
- B. Use a package deployment model. Save each SSIS package to a file share that can be accessed from all environments.
- C. Use a package deployment model. Configure connections in an XML configuration file referenced by an environment variable that corresponds to the SQL Server environment of each SSIS package.
- D. Use a project deployment model. Modify connection manager properties to use package parameters.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Case Study: 1

Tailspin Toys

Background

You are the business intelligence (BI) solutions architect for Tailspin Toys. You produce solutions by using SQL Server 2012 Business Intelligence edition and Microsoft SharePoint Server 2010 Service Pack 1 (SP1) Enterprise edition.

#### Technical Background

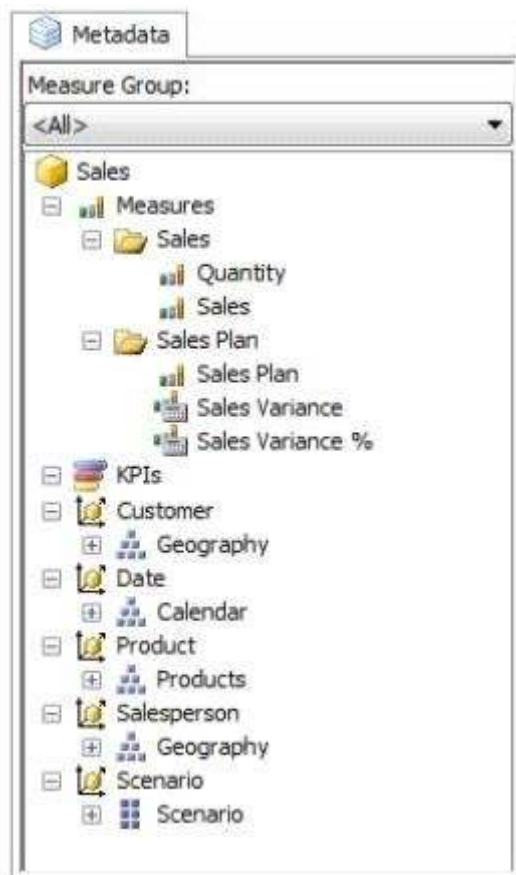
Extract, transform, load (ETL) processes populate the data warehouse every 24 hours.

#### ETL Processes

One SQL Server Integration Services (SSIS) package is designed and developed to populate each data warehouse table. The primary source of data is extracted from a SQL Azure database. Secondary data sources include a Microsoft Dynamics CRM 2011 on-premises database. ETL developers develop packages by using the SSIS project deployment model. The ETL developers are responsible for testing the packages and producing a deployment file. The deployment file is given to the ETL administrators. The ETL administrators belong to a Windows security group named SSISOwners that maps to a SQL Server login named SSISOwners.

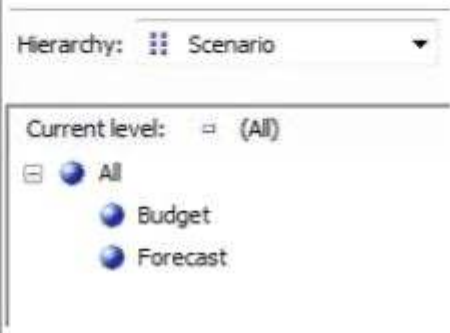
#### Data Models

The IT department has developed and manages two SQL Server Analysis Services (SSAS) BI Semantic Model (BISM) projects: Sales Reporting and Sales Analysis. The Sales Reporting database has been developed as a tabular project. The Sales Analysis database has been developed as a multidimensional project. Business analysts use PowerPivot for Microsoft Excel to produce self-managed data models based directly on the data warehouse or the corporate data models, and publish the PowerPivot workbooks to a SharePoint site. The sole purpose of the Sales Reporting database is to support business user reporting and ad-hoc analysis by using Power View. The database is configured for DirectQuery mode and all model queries result in SSAS querying the data warehouse. The database is based on the entire data warehouse. The Sales Analysis database consists of a single SSAS cube named Sales. The Sales cube has been developed to support sales monitoring, analysts, and planning. The Sales cube metadata is shown in the following graphic.



Details of specific Sales cube dimensions are described in the following table.



Dimension	Hierarchies and levels	Additional information
Date	Calendar <ul style="list-style-type: none"> <li>• Year</li> <li>• Quarter</li> <li>• Month</li> <li>• Date</li> </ul>	All attributes are hidden. The appropriate dimension and attribute Type properties have been configured.
Salesperson	Geography <ul style="list-style-type: none"> <li>• Country</li> <li>• Region</li> <li>• Salesperson</li> </ul>	Based on the DimSalesperson and DimRegion tables. All attributes are hidden.
Scenario	Scenario (attribute hierarchy) <ul style="list-style-type: none"> <li>• Scenario</li> </ul>	

The Sales measure group is based on the FactSales table. The Sales Plan measure group is based on the FactSalesPlan table. The Sales Plan measure group has been configured with a multidimensional OLAP (MOLAP) writeback partition. Both measure groups use MOLAP partitions, and aggregation designs are assigned to all partitions. Because the volumes of data in the data warehouse are large, an incremental processing strategy has been implemented. The Sales Variance calculated member is computed by subtracting the Sales Plan forecast amount from Sales. The Sales Variance % calculated member is computed by dividing Sales Variance by Sales. The cube's Multidimensional Expressions (MDX) script does not set any color properties.

#### Analysis and Reporting

SQL Server Reporting Services (SSRS) has been configured in SharePoint integrated mode. A business analyst has created a PowerPivot workbook named Manufacturing Performance that integrates data from the data warehouse and manufacturing data from an operational database hosted in SQL Azure. The workbook has been published in a PowerPivot Gallery library in SharePoint Server and does not contain any reports. The analyst has scheduled daily data refresh from the SQL Azure database. Several SSRS reports are based on the PowerPivot workbook, and all reports are configured with a report execution mode to run on demand. Recently users have noticed that data in the PowerPivot workbooks published to SharePoint Server is not being refreshed. The SharePoint administrator has identified that the Secure Store Service target application used by the PowerPivot unattended data refresh account has been deleted.

#### Business Requirements

##### ETL Processes

All ETL administrators must have full privileges to administer and monitor the SSIS catalog, and to import and manage projects.

##### Data Models

The budget and forecast values must never be accumulated when querying the Sales cube. Queries should return the forecast sales values by default. Business users have requested that a single field named SalespersonName be made available to report the full name of the salesperson in the Sales Reporting data model. Writeback is used to initialize the budget sales values for a future year and is based on a weighted

allocation of the sales achieved in the previous year.

#### Analysis and Reporting

Reports based on the Manufacturing Performance PowerPivot workbook must deliver data that is no more than one hour old. Management has requested a new report named Regional Sales. This report must be based on the Sales cube and must allow users to filter by a specific year and present a grid with every region on the columns and the Products hierarchy on the rows. The hierarchy must initially be collapsed and allow the user to drill down through the hierarchy to analyze sales. Additionally, sales values that are less than \$5000 must be highlighted in red.

#### Technical Requirements

##### Data Warehouse

Business logic in the form of calculations should be defined in the data warehouse to ensure consistency and availability to all data modeling experiences. The schema design should remain as denormalized as possible and should not include unnecessary columns. The schema design must be extended to include the product dimension data.

##### ETL Processes

Package executions must log only data flow component phases and errors.

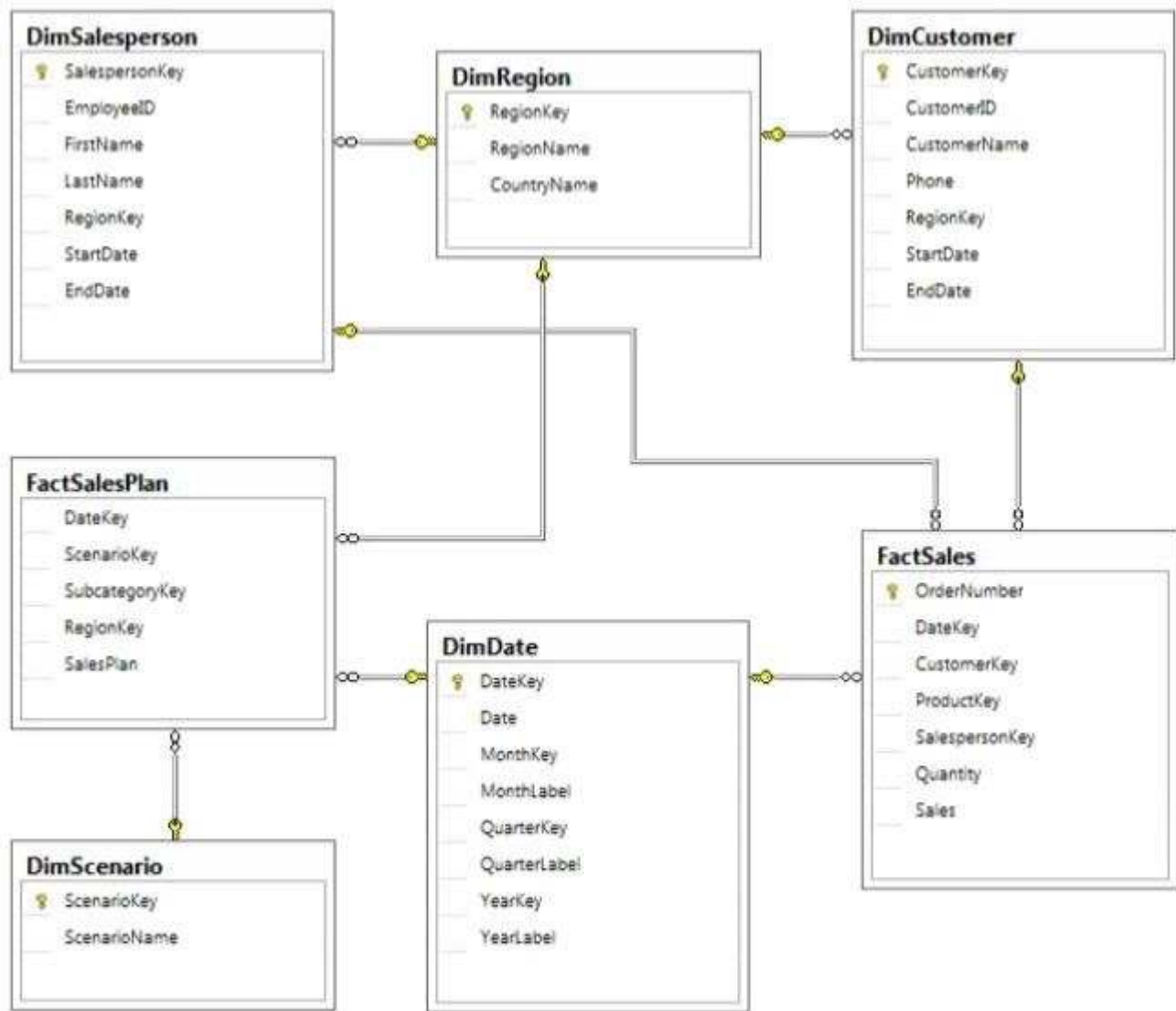
##### Data Models

Processing time for all data models must be minimized. A key performance indicator (KPI) must be added to the Sales cube to monitor sales performance. The KPI trend must use the Standard Arrow indicator to display improving, static, or deteriorating Sales Variance % values compared to the previous time period.

#### Analysis and Reporting

IT developers must create a library of SSRS reports based on the Sales Reporting database. A shared SSRS data source named Sales Reporting must be created in a SharePoint data connections library.

## Data Warehouse Schema



### QUESTION 44

You need to fix the PowerPivot data refresh problem by using the least amount of administrative effort. What should you do?

- A. Use the PowerPivot Configuration Tool and select the Upgrade Features, Services, Applications and Solutions option.
- B. Use the PowerPivot Configuration Tool and select the Configure or Repair PowerPivot for SharePoint option.
- C. Reinstall SSAS in PowerPivot for SharePoint mode by using the SQL Server 2012 installation media.
- C. In SharePoint Central Administration, create a target application and configure the PowerPivot service application settings to use the target application.

**Correct Answer: B**

**Section: (none)**

**Explanation**

### QUESTION 45

You need to grant appropriate permissions to the SSISOwners SQL Server login. What should you do?

- A. Map the login to the SSISDB database. Assign the user to the ssis\_admin role.
- B. Map the login to the msdb database. Assign the user to the db\_owner role.
- C. Map the login to the msdb database. Assign the user to the db\_ssisadmin role.
- D. Map the login to the SSISDB database. Assign the user to the db\_ssisadmin role.
- E. Map the login to the SSISDB database. Assign the user to the db\_owner role.
- F. Map the login to the msdb database. Assign the user to the ssis\_admin role.

**Correct Answer:** E

**Section:** (none)

**Explanation**

#### QUESTION 46

You need to configure the Scenario attribute to ensure that business users appropriately query the Sales Plan measure. What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Set the AttributeHierarchyVisible property to False.
- B. Set the IsAggregatable property to False.
- C. Set the Usage property to Parent.
- D. set the DefaultMember property to the Forecast member.
- E. Set the AttributeHierarchyEnabled property to False.
- F. Set the RootMemberIf property to ParentIsMissing.

**Correct Answer:** CD

**Section:** (none)

**Explanation**

#### Explanation/Reference:

Explanation:

Note:

\* From scenario:

The Sales measure group is based on the FactSales table. The Sales Plan measure group is based on the FactSalesPlan table. The Sales Plan measure group has been configured with a multidimensional OLAP (MOLAP) writeback partition. Both measure groups use MOLAP partitions, and aggregation designs are assigned to all partitions.

#### QUESTION 47

##### DRAG DROP

You need to configure the attribute relationship types for the Salesperson dimension. Which configuration should you use?

To answer, drag the appropriate pair of attributes and attribute relationships from the list to the correct location or locations in the answer area. (Answer choices may be used once, more than once, or not all.)





- B.  
C.  
D.

**Correct Answer: A**  
**Section: (none)**  
**Explanation**

**Explanation/Reference:**

Explanation:

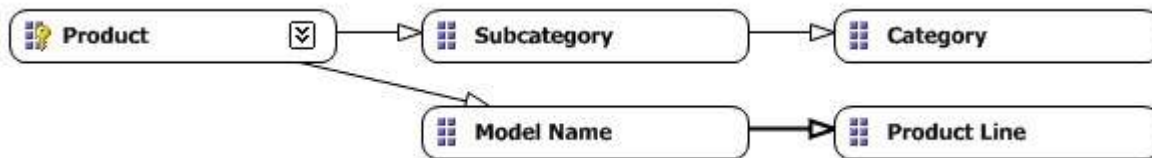
Note:

\* You connect a "higher-level" attribute to a "lower-level" attribute.

\* Best practice design says relationships should be rigid (bold filled lines) when members aren't shifting around.

\*

Example:



**QUESTION 48**

You need to define the trend calculation for the sales performance KPI. Which KPI trend MDX expression should you use?

- A. CASE  
 WHEN [Sales Variance %] < ([Sales Variance %], [Date].[Calendar].PrevMember) THEN -1 WHEN [Sales Variance %] = ([Sales Variance %], [Date].[Calendar].PrevMember) THEN 0 ELSE 1 END
- B. IIF([Sales Variance %] < ([Sales Variance %], [Date].[Calendar].PrevMember), 1, 0)
- C. IIF([Sales Variance %] < ([Sales Variance %], [Date].[Calendar].PrevMember), 0, 1)
- D. CASE  
 WHEN [Sales Variance %] < ([Sales Variance %], [Date].[Calendar].PrevMember) THEN 1 WHEN [Sales Variance %] = ([Sales Variance %], [Date].[Calendar].PrevMember) THEN 0 ELSE -1 END

**Correct Answer: A**  
**Section: (none)**  
**Explanation**

**QUESTION 49**

DRAG DROP

You need to extend the schema design to store the product dimension data. Which design should you use? To answer, drag the appropriate table or tables to the correct location or locations in the answer area. (Fill from left to right. Answer choices may be used once, more than once, or not all.)

### DimCategory

CategoryKey  
CategoryName

### DimSubcategory

SubcategoryKey  
SubcategoryName  
CategoryName

### DimProduct

ProductKey  
ProductSKU  
ProductName  
Size  
SubcategoryKey  
SubcategoryName  
CategoryName

### DimProduct

ProductKey  
ProductSKU  
ProductName  
Size  
SubcategoryKey  
SubcategoryName  
CategoryName  
StartDate  
EndDate

### DimSubcategory

SubcategoryKey  
SubcategoryName  
CategoryKey

### DimProduct

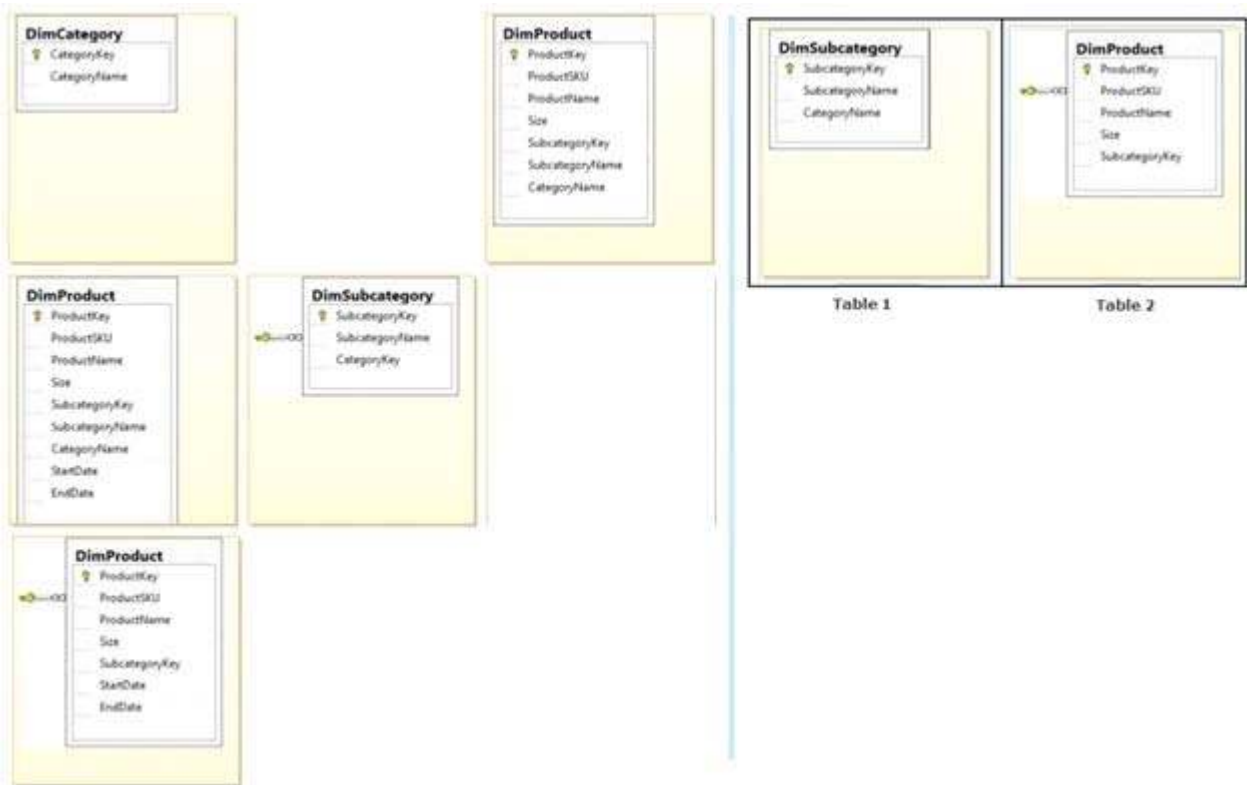
ProductKey  
ProductSKU  
ProductName  
Size  
SubcategoryKey

### DimProduct

ProductKey  
ProductSKU  
ProductName  
Size  
SubcategoryKey  
StartDate  
EndDate



A.



B.

C.

D.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

\* From scenario:

/ The schema design must be extended to include the product dimension data.

\* DimProduct table need to contain a foreign key to the DimSubCategory table. No further SubCategory data should be stored in the DimProduct table.

\* No time related columns (StartDate, EndDate) should be included in the DimProduct table.

Case Study: 2

Contoso, Ltd

General Background

You are the SQL Server Administrator for Contoso, Ltd. You have been tasked with upgrading all existing SQL Server instances to SQL Server 2012.

Technical Background

The corporate environment includes an Active Directory Domain Services (AD DS) domain named contoso.com. The forest and domain levels are set to Windows Server 2008. All default containers are used for computer and user accounts. All servers run Windows Server 2008 R2 Service Pack 1 (SP1). All client computers run Windows 7 Professional SP1. All servers and client computers are members of the contoso.com domain. The current SQL Server environment consists of a single instance failover cluster of SQL Server 2008 R2 Analysis Services (SSAS). The virtual server name of the cluster is SSASCluster. The cluster includes two nodes: Node1 and Node2. Node1 is currently the active node. In anticipation of the upgrade, the prerequisites and shared components have been upgraded on both nodes of the cluster, and each node was rebooted during a weekly maintenance window. A single- server deployment of SQL Server 2008 R2 Reporting Services (SSRS) in native mode is installed on a server named SSRS01. The Reporting Server service is configured to

use a domain service account. SSRS01 hosts reports that access the SSAS databases for sales data as well as modeling data for the Research team. SSRS01 contains 94 reports used by the organization. These reports are generated continually during business hours. Users report that report subscriptions on SSRS01 are not being delivered. You run the reports on demand from Report Manager and find that the reports render as expected. A new server named SSRS02 has been joined to the domain, SSRS02 will host a single-server deployment of SSRS so that snapshots of critical reports are accessible during the upgrade. The server configuration is shown in the exhibit. (Click the Exhibit button.) The production system includes three SSAS databases that are described in the following table.

Database name	Size
Customer Sales	350 MB
Manufacturing	1.2 GB
Research	620 MB

All SSAS databases are backed up once a day, and backups are stored offsite.

#### Business Requirements

After the upgrade users must be able to perform the following tasks:

- ?Ad-hoc analysis of data in the SSAS databases by using the Microsoft Excel PivotTable client.
- ?Daily operational analysis by executing a custom application that uses ADOMD.NET and existing Multidimensional Expressions (MDX) queries. The detailed data must be stored in the model.

#### Technical Requirements

You need to minimize downtime during the SSASCluster upgrade. The upgrade must minimize user intervention and administrative effort. The upgrade to SQL Server 2012 must maximize the use of all existing servers, require the least amount of administrative effort, and ensure that the SSAS databases are operational as soon as possible. You must implement the highest level of domain security for client computers connecting to SSRS01. The SSRS instance on SSRS01 must use Kerberos delegation to connect to the SSAS databases. Email notification for SSRS01 has not been previously configured. Email notification must be configured to use the SMTP server SMTP01 with a From address of reports@contoso.com. Report distribution must be secured by using SSL and must be limited to the contoso.com domain. You have the following requirements for SSRS02:

- ?Replicate the SSRS01 configuration.
- ?Ensure that all current reports are available on SSRS02.
- ?Minimize the performance impact on SSRS01.

In preparation for the upgrade, the SSRS-related components have been installed on the new SSRS02 server by using the Reporting Services file-only installation mode. The Reporting Services databases have been restored from SSRS01 and configured appropriately. You must design a strategy to recover the SSRS instance on SSRS01 in the event of a system failure. The strategy must ensure that SSRS can be recovered in the minimal amount of time and that reports are available as soon as possible. Only functional components must be recovered.

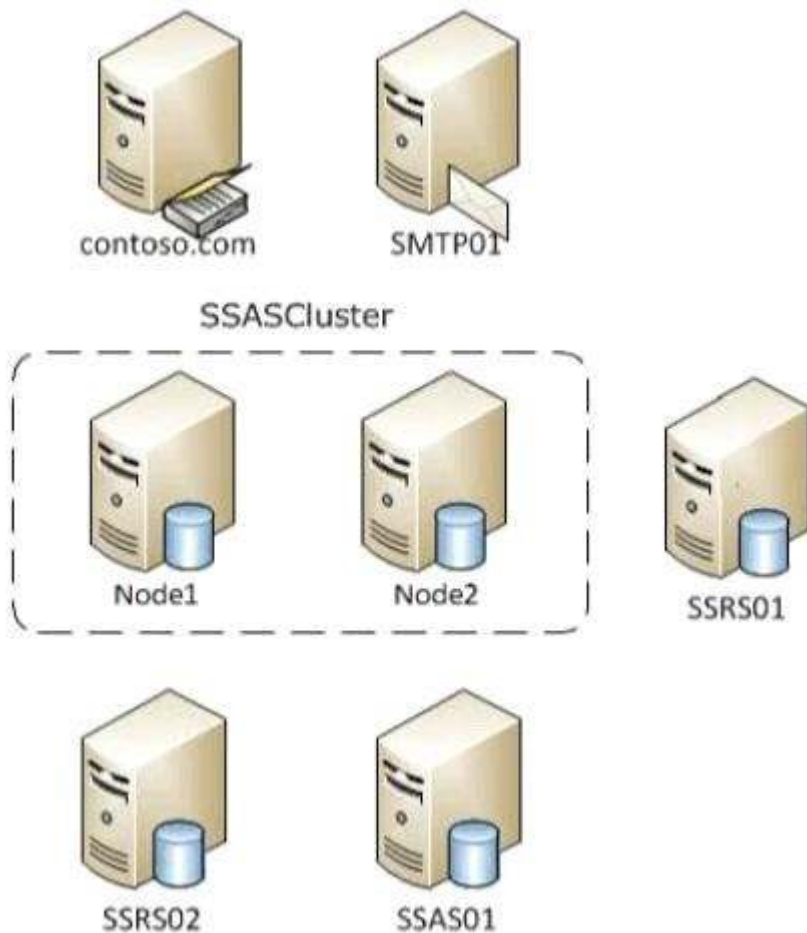
SSRS02 is the recovery server and is running the same version of SSRS as SSRS01. A full backup of the SSRS databases on SSRS01 is performed nightly. The report server configuration files, custom assemblies, and extensions on SSRS02 are manually synchronized with SSRS01.

Prior to implementing the upgrade to SQL Server 2012, you must back up all existing SSAS databases. Databases on SSRS01 is performed nightly. The report server configuration files, custom assemblies, and extensions on SSRS02 are manually synchronized with SSRS01. Prior to implementing the upgrade to SQL Server 2012, you must back up all existing SSAS databases. The backup must include only the partitioning, metadata, and aggregations to minimize the processing time required when restoring the databases. You must minimize processing time and the amount of disk space used by the backups. Before upgrading SSAS on the SSASCluster, all existing databases must be moved to a temporary staging server named SSAS01 that hosts a default instance of SQL Server 2012 Analysis Services. This server will be used for testing client applications connecting to SSAS 2012, and as a disaster recovery platform during the upgrade. You must move the databases by using the least amount of administrative effort and minimize downtime. All SSAS databases other than the Research database must be converted to tabular BI Semantic Models (BISMs) as part of the upgrade to SSAS 2012. The Research team must have access to the Research database for modeling throughout the upgrade. To facilitate this, you detach the Research database and attach it to SSAS01. While testing the

Research database on SSAS01, you increase the compatibility level to 1100. You then discover a compatibility issue with the application. You must roll back the compatibility level of the database to 1050 and retest. After completing the upgrade, you must do the following:

1. Design a role and assign an MDX expression to the Allowed member set property of the Customer dimension to allow sales representatives to browse only members of the Customer dimension that are located in their sales regions. Use the sales representatives' logins and minimize impact on performance.
2. Deploy a data model to allow the ad-hoc analysis of data. The data model must be cached and source data from an OData feed.

### Server Configuration



### QUESTION 50

You need to configure security for the SSRS instance on SSRS01 to connect to SSAS and minimize downtime. What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Register a service principal name for the Report Server service.
- B. Register a service principal name for the Analysis Services service.
- C. Restart the IIS service.
- D. Configure SSRS01 to use the Negotiate authentication type.
- E. Configure SSRS01 to use the Custom authentication type.

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Explanation:

A (not B): If you are deploying Reporting Services in a network that uses the Kerberos protocol for mutual authentication, you must create a Service Principal Name (SPN) for the Report Server service if you configure it to run as a domain user account.

D (not E):

\* See step 6 below.

To register an SPN for a Report Server service running as a domain user ?Install Reporting Services and configure the Report Server service to run as a domain user account. Note that users will not be able to connect to the report server until you complete the following steps.

?Log on to the domain controller as domain administrator.

?Open a Command Prompt window.

?Copy the following command, replacing placeholder values with actual values that are valid for your network:

?Setspn -a http/<computer-name>.<domain-name>:<port> <domain-user-account> ?Run the command.

?Open the RsReportServer.config file and locate the <AuthenticationTypes> section. Add

<RSWindowsNegotiate/> as the first entry in this section to enable NTLM.

\* RSWindowsNegotiate. If you initially set the Windows service account for the report server to NetworkService or LocalSystem in Reporting Services Configuration Manager, RSWindowsNegotiate is added to the RsReportServer.config file as the default setting. With this setting, the report server can accept requests from client applications requesting Kerberos or NTLM authentication. If Kerberos is requested and the authentication fails, the report server switches to NTLM authentication and prompts the user for credentials unless the network is configured to manage authentication transparently.

Using RSWindowsNegotiate is your best option because it provides the greatest flexibility for multiple clients in an intranet environment.

Not C: IIS is not mention in this scenario.

Note:

\* From scenario:

/ A single-server deployment of SQL Server 2008 R2 Reporting Services (SSRS) in native mode is installed on a server named SSRS01. The Reporting Server service is configured to use a domain service account.

Reference: Register a Service Principal Name (SPN) for a Report Server

**QUESTION 51**

You need to perform the pre-upgrade database backup operation by using SQL Server Management Studio (SSMS). How should you configure the backup options?

- A. Select the Apply compression check box. Select the Encrypt backup file check box and supply a password.
- B. Clear the Apply compression check box. Select the Encrypt backup file check box and supply a password.
- C. Clear the Apply compression check box. Clear the Encrypt backup file check box.
- D. Select the Apply compression check box. Clear the Encrypt backup file check box.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**QUESTION 52**

You need to implement the Customer Sales and Manufacturing data models. What should you do? (Each correct answer presents a partial solution. Choose all that apply.)

- A. Use the Database Synchronization Wizard to upgrade the database to tabular mode.
- B. Use SQL Server Integration Services (SSIS) to copy the database design to the SSAS instance, and specify tabular mode as the destination.
- C. Use SQL Server Data Tools (SSDT) to redevelop and deploy the projects.
- D. Use the current SSAS instance.
- E. Install a new instance of SSAS in tabular mode.

**Correct Answer: CE**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

C: Tabular models are authored in SQL Server Data Tools (SSDT) using new tabular model project templates. You can import data from multiple sources, and then enrich the model by adding relationships, calculated columns, measures, KPIs, and hierarchies. Models can then be deployed to an instance of Analysis Services where client reporting applications can connect to them. Deployed models can be managed in SQL Server Management Studio just like multidimensional models. They can also be partitioned for optimized processing and secured to the row-level by using role based security.

E: If you are installing Analysis Services to use the new tabular modeling features, you must install Analysis Services in a server mode that supports that type of model. The server mode is Tabular, and it is configured during installation.

After you install the server in this mode, you can use it host solutions that you build in tabular model designer. A tabular mode server is required if you want tabular model data access over the network.

\* From scenario:

/ Deploy a data model to allow the ad-hoc analysis of data. The data model must be cached and source data from an OData feed.

/ All SSAS databases other than the Research database must be converted to tabular BI Semantic Models (BISMs) as part of the upgrade to SSAS 2012. The Research team must have access to the Research database for modeling throughout the upgrade. To facilitate this, you detach the Research database and attach it to SSAS01.

\* The Business Intelligence Semantic Model (BISM) is a single unified BI platform which has both multi-dimensional as well as tabular data modeling capabilities to offer best of both worlds and choice for the developer.

Reference: Install Analysis Services in Tabular Mode Reference: Tabular Modeling (SSAS Tabular)

### **QUESTION 53**

You need to re-establish subscriptions on SSRS01. What should you do?

- A. Manually failover the active node.
- B. Install prerequisites and upgrade shared components on Node1 and Node2.
- C. Generate a SQL Server 2012 configuration file by running the SQL Server Setup executable.
- D. Upgrade Node1 by using the SQL Server 2012 Upgrade wizard.

**Correct Answer: A**

**Section: (none)**

**Explanation**

### **QUESTION 54**

You need to roll back the compatibility level of the Research database. What should you do?

- A. Restore a backup of the previous version of the database.<http://www.lead2pass.com/70-467.html>
- B. Use an ALTER DATABASE statement to set the compatibility option.
- C. Change the CompatibilityLevel property in the XMLA script, and then execute the script.
- D. In SQL Server Management Studio (SSMS), change the compatibility level in the database properties.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

### **QUESTION 55**

You need to develop a BISM that meets the business requirements for ad-hoc and daily operational analysis. You must minimize development effort. Which development approach and mode should you use?

- A. Develop a tabular project and configure the model with the DirectQuery mode setting on and the project query mode set to DirectQuery.
- B. Develop a tabular project and configure the model with the DirectQuery mode setting on and the project query mode set to In-Memory with DirectQuery.
- C. Develop a multidimensional project and configure the model with the DirectQuery mode setting off.
- D. Develop a multidimensional project and configure the cube to use hybrid OLAP (HOLAP) storage mode.

**Correct Answer: B**

**Section: (none)**

**Explanation**

#### **QUESTION 56**

You need to use SQL Server Management Studio (SSMS) to make the SSAS databases available for application testing. What should you do?

- A. Restore the SSAS databases from the latest backup to SSAS01.
- B. Script the databases as a Create script to a new window and then execute the script on SSAS01.
- C. Detach the SSAS databases from the SSASCluster, and then attach them to SSAS01.
- D. Use the Import/Export Wizard to copy the databases from the production server to the development server.

**Correct Answer: A**

**Section: (none)**

**Explanation**

#### **QUESTION 57**

You need to configure SSRS to send the required notification messages. Which configuration settings should you use? (Each correct answer presents a partial solution. Choose all that apply.)

- A. <SendUsing>2</SendUsing>http://www.lead2pass.com/70-467.html
- B. <SendUsing>contoso.com</SendUsing>
- C. <SMTPServer>SMTP01/SMTPServer>
- D. <SMTPServerPort>110</SMTPServerPort>
- E. <SMTPServer>SSRS01/SMTPServer>
- F. <From>reports@contoso.com</From>
- G. <PermittedHosts>contoso.com</PermittedHosts>

**Correct Answer: ACF**

**Section: (none)**

**Explanation**

#### **Explanation/Reference:**

Explanation:

A:

\* In the configuration file, the delivery method is set through the SendUsing configuration setting.

\* SendUsing specifies a method for sending messages. You can choose between a network SMTP service or a local SMTP service pickup directory. To use a remote SMTP service, this value must be set to 2 in the RSReportServer.config file.

C, F:

\* From scenario: Email notification for SSRS01 has not been previously configured. Email notification must be configured to use the SMTP server SMTP01 with a From address of reports@contoso.com.



\* SMTPServer specifies the remote SMTP server or forwarder. This value is a required value if you are using a remote SMTP server or forwarder.

Note:

Configuration Options for Remote SMTP Service

The connection between the report server and an SMTP server or forwarder is determined by the following configuration settings:

\* SendUsing specifies a method for sending messages. You can choose between a network SMTP service or a local SMTP service pickup directory. To use a remote SMTP service, this value must be set to 2 in the RSReportServer.config file.

\* SMTPServer specifies the remote SMTP server or forwarder. This value is a required value if you are using a remote SMTP server or forwarder.

\* From sets the value that appears in the From: line of an e-mail message. This value is a required value if you are using a remote SMTP server or forwarder. Other values that are used for remote SMTP service include the following (note that you do not need to specify these values unless you want to override the default values).

\* SMTPServerPort is configured for port 25.

\* SMTPAuthenticate specifies how the report server connects to the remote SMTP server. Reference:

Configure a Report Server for E-Mail Delivery (Reporting Services), Configuration Options for Remote SMTP Service

### QUESTION 58

DRAG DROP

You need to upgrade the SSASCluster. 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.)

Install prerequisites and upgrade shared components on Node1 and Node2.

Upgrade Node1 by using the SQL Server 2012 Upgrade Wizard.

Upgrade Node2 by using the SQL Server 2012 Upgrade Wizard.

Upgrade Node2 from the command prompt by using a configuration file. Specify the /  
**FAILOVERCLUSTERROLLOWNERS HIP=1** option.

Upgrade Node2 from the command prompt by using a configuration file. Specify the /  
**FAILOVERCLUSTERROLLOWNERS HIP=0** option.

Manually failover the active node.

Generate a SQL Server 2012 configuration file by running the SQL Server Setup executable.

Upgrade Node1 from the command prompt by using a configuration file.

A.

Install prerequisites and upgrade shared components on Node1 and Node2.

Upgrade Node1 by using the SQL Server 2012 Upgrade Wizard.

Upgrade Node2 from the command prompt by using a configuration file. Specify the / **FAILOVERCLUSTERROLLOWNERS HIP=1** option.

Manually failover the active node.

Generate a SQL Server 2012 configuration file by running the SQL Server Setup executable.

Upgrade Node1 from the command prompt by using a configuration file.

Upgrade Node2 from the command prompt by using a configuration file. Specify the / **FAILOVERCLUSTERROLLOWNERS HIP=0** option.

Upgrade Node2 by using the SQL Server 2012 Upgrade Wizard.

B.

C.

D.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Explanation:

Note:

\* From scenario:

/ The current SQL Server environment consists of a single instance failover cluster of SQL Server 2008 R2 Analysis Services (SSAS). The virtual server name of the cluster is SSASCluster. The cluster includes two nodes: Node1 and Node2. Node1 is currently the active node. In anticipation of the upgrade, the prerequisites and shared components have been upgraded on both nodes of the cluster, and each node was rebooted during a weekly maintenance window. / Before upgrading SSAS on the SSASCluster, all existing databases must be moved to a temporary staging server named SSAS01 that hosts a default instance of SQL Server 2012 Analysis Services. This server will be used for testing client applications connecting to SSAS 2012, and as a disaster recovery platform during the upgrade. You must move the databases by using the least amount of administrative effort and minimize downtime.

\* (box 1)

/ SQL Server Setup provides the ability to generate a configuration file based upon the system default and run-time inputs. You can use the configuration file to deploy SQL Server throughout the enterprise with the same configuration. You can also standardize manual installations throughout the enterprise, by creating a batch file

that launches Setup.exe.

/ How to generate a configuration file

Insert the SQL Server installation media. From the root folder, double-click Setup.exe. To install from a network share, locate the root folder on the share, and then double-click Setup.exe. Follow the wizard through to the Ready to Install page. The path to the configuration file is specified in the Ready to Install page in the configuration file path section. For more information about how to install SQL Server, see Install SQL Server 2012 from the Installation Wizard (Setup). Cancel the setup without actually completing the installation, to generate the INI file.

\* (box 2) First upgrade the passive node node2.

To be able to use the configuration file we use the command prompt.

We do not want node2 as the active node.

\*( Box 3) upgrade the active mode.

\* You can upgrade a SQL Server failover cluster to a SQL Server 2008 failover cluster by using the SQL Server Installation Wizard or a command prompt. One of the main features of SQL Server 2008 failover clustering is minimal downtime for rolling upgrades and updates.

\* To control the failover behavior of cluster nodes during the upgrade process, run the upgrade operation at the command prompt and use the /FAILOVERCLUSTERROLLOWNERSHIP parameter.

\* To upgrade a SQL Server failover cluster to SQL Server 2008 R2, you must run the Setup on one failover cluster node at a time, starting with the passive nodes. Setup determines when to fail over to the upgraded node, depending on the total number of nodes in the failover cluster instance, and the number of nodes that have already been upgraded. When half of the nodes or more have already been upgraded, Setup by default will cause a failover to an upgraded node. To control the failover behavior of cluster nodes during the upgrade process, run the upgrade operation at the command prompt and use the /FAILOVERCLUSTERROLLOWNERSHIP parameter to control the failover behavior before the upgrade operation takes the node offline. Use of this parameter is as follows:

/FAILOVERCLUSTERROLLOWNERSHIP=0 will not roll cluster ownership (move group) to upgraded nodes, and does not add this node to the list of possible owners of the SQL Server cluster at the end of upgrade.

/FAILOVERCLUSTERROLLOWNERSHIP=1 will roll cluster ownership (move group) to upgraded nodes, and will add this node to the list of possible owners of the SQL Server cluster at the end of upgrade. /

FAILOVERCLUSTERROLLOWNERSHIP=2 is the default setting. It will be used if this parameter is not specified. This setting indicates that SQL Server Setup will manage cluster ownership (move group) as needed. Reference: Install SQL Server 2012 Using a Configuration File Reference: How to: Install SQL Server 2008 R2 from the Command Prompt

### Case Study: 3

#### Scenario Data Architect

#### General Background

You are a Data Architect for a company that uses SQL Server 2012 Enterprise edition. You have been tasked with designing a data warehouse that uses the company's financial database as the data source. From the data warehouse, you will develop a cube to simplify the creation of accurate financial reports and related data analysis.

#### Background

You will utilize the following three servers:

?ServerA runs SQL Server Database Engine. ServerA is a production server and also hosts the financial database.

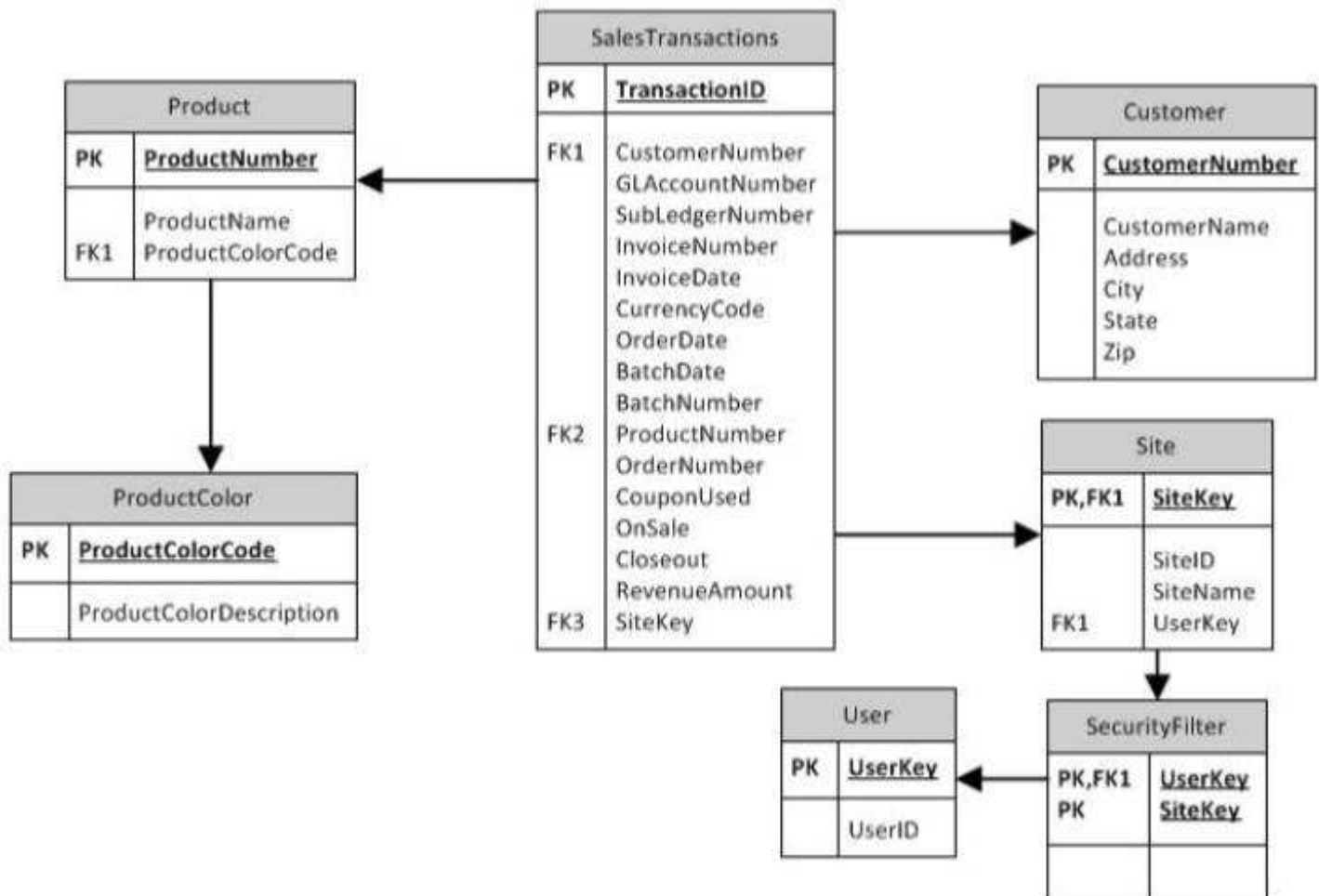
?ServerB runs SQL Server Database Engine, SQL Server Analysis Services (SSAS) in multidimensional mode, SQL Server Integration Services (SSIS), and SQL Server Reporting Services (SSRS).

?ServerC runs SSAS in multidimensional mode.

?The financial database is used by a third-party application and the table structures cannot be modified.

The relevant tables in the financial database are shown in the exhibit. (Click the Exhibit button.)

## Financial Database tables



The SalesTransactions table is 500 GB and is anticipated to grow to 2 TB. The table is partitioned by month. It contains only the last five years of financial data. The CouponUsed, OnSale, and Closeout columns contain only the values Yes or No. Each of the other tables is less than 10 MB and has only one partition. The SecurityFilter table specifies the sites to which each user has access.

### Business Requirements

The extract, transform, load (ETL) process that updates the data warehouse must run daily between 8:00 P.M. and 5:00 A.M. so that it doesn't impact the performance of ServerA during business hours. The cube data must be available by 8:00 A.M. The cube must meet the following business requirements:

- Ensure that reports display the most current information available.
- Allow fast access to support ad-hoc reports and data analysis. Business Analysts will access the data warehouse tables directly, and will access the cube by using SSRS, Microsoft Excel, and Microsoft SharePoint Server 2010 PerformancePoint Services. These tools will access only the cube and not the data warehouse.

### Technical Requirements

SSIS solutions must be deployed by using the project deployment model. You must develop the data warehouse and store the cube on ServerB. When the number of concurrent SSAS users on ServerB reaches a specific number, you must scale out SSAS to ServerC and meet following requirements:

- Maintain copies of the cube on ServerB and ServerC.
- Ensure that the cube is always available on both servers.

- Minimize query response time.

The cube must meet the following technical requirements:

- The cube must be processed by using an SSIS package.
- The cube must contain the prior day's data up to 8:00 P.M. but does not need to contain same-day data.

- The cube must include aggregation designs when it is initially deployed.
- A product dimension must be added to the cube. It will contain a hierarchy comprised of product name and product color.

Because of the large size of the SalesTransactions table, the cube must store only aggregations--the data warehouse must store the detailed data. Both the data warehouse and the cube must minimize disk space usage.

As the cube size increases, you must plan to scale out to additional servers to minimize processing time. The data warehouse must use a star schema design. The table design must be as denormalized as possible. The history of changes to the Customer table must be tracked in the data warehouse. The cube must use the data warehouse as its only data source. Security settings on the data warehouse and the cube must ensure that queries against the SalesTransactions table return only records from the sites to which the current user has access.

The ETL process must consist of multiple SSIS packages developed in a single project by using the least amount of effort. The SSIS packages must use a database connection string that is set at execution time to connect to the financial database. All data in the data warehouse must be loaded by the SSIS packages.

You must create a Package Activity report that meets the following requirements:

?Track SSIS package execution data (including package name, status, start time, end time, duration, and rows processed).

?Use the least amount of development effort.

#### **QUESTION 59**

You need to identify changes in the financial database. What should you do?

- A. Add SQL Server replication to each table.
- B. Extract data from the current partition of each table.
- C. Add a timestamp column to each table.
- D. Perform a full extract of each table.
- E. Enable change data capture on each table.

**Correct Answer: D**

**Section: (none)**

**Explanation**

#### **QUESTION 60**

You need to create the Package Activity report. What should you do?

- A. Create a log table and use SSIS event handlers to write to the log table. Then create an SSRS report that uses the log table.
- B. Use the SSIS log provider for SQL Server. Then create an SSRS report that uses the sysssislog table.
- C. Create a log table and build a custom log provider to write to the log table. Then create an SSRS report that uses the log table.
- D. Create an SSRS report that uses the catalog.executions and catalog.execution\_data\_statistics views.

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

<http://www.lead2pass.com/70-467.html>

#### **QUESTION 61**

You need to implement the aggregation designs for the cube. What should you do?

- A. Use the CREATE CACHE statement.
- B. Use the Aggregation Design Wizard.
- C. Create relational indexes on the source tables.
- D. Use the Usage-Based Optimization Wizard.

**Correct Answer:** B  
**Section:** (none)  
**Explanation**

**QUESTION 62**

You need to slice data by the CouponUsed, OnSale, and Closeout columns. What should you do?

- A. Create one linked dimension for each column.
- B. Create one degenerate dimension.
- C. Create one role-playing dimension.
- D. Create one junk dimension.

**Correct Answer:** D  
**Section:** (none)  
**Explanation**

**QUESTION 63**

You need to design a cube partitioning strategy to be implemented as the cube size increases. What should you do?

- A. Use relational OLAP (ROLAP) on all local partitions.
- B. Implement monthly remote partitions.
- C. Use multidimensional OLAP (MOLAP) on all local partitions.
- D. Implement monthly local partitions.

**Correct Answer:** B  
**Section:** (none)  
**Explanation**

**QUESTION 64**

You need to choose the appropriate key to use when designing a dimension table based on the Customer table. What should you do?

- A. Use a surrogate key.
- B. Use a natural key.<http://www.lead2pass.com/70-467.html>
- C. Use the CustomerNumber column as the key.
- D. Concatenate the CustomerName and CustomerNumber columns and use the concatenated string as the key.
- D. Use the CustomerName column as the key.

**Correct Answer:** A  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

**QUESTION 65**

You need to implement the product dimension. What should you do?

- A. In the data warehouse, create a product dimension from a view that joins the Product and ProductColor tables in the financial database and contains product name and product color attributes.



- B. In the data warehouse, create a dimension table that contains product name and a dimension table that contains product color.
- C. In the data warehouse, create a product dimension table that contains product name and product color.
- D. In the cube, create a named query that joins the Product and ProductColor tables in the financial database.

**Correct Answer:** C

**Section:** (none)

**Explanation**

#### **QUESTION 66**

You need to scale out SSAS. What should you do?<http://www.lead2pass.com/70-467.html>

- A. Back up the cube on ServerB and restore it on ServerC each day.
- B. Create an empty cube on ServerC and link to the objects in the cube on ServerB.
- C. Process the cube on both ServerB and ServerC each day.
- D. Synchronize the cube from ServerB to ServerC each day.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 67**

You need to implement security in the cube to limit the sites visible to each user. What should you do?

- A. Create an SSAS database role in the cube for each user and assign the sites each user can access to his or her database role.
- B. Create an SSAS server role for each user and assign the sites each user can access to his or her server role.
- C. Create an SSAS database role and define a Multidimensional Expressions (MDX) calculation to implement dynamic dimension security.
- D. Create a view on the SalesTransactions table that uses the SecurityFilter and User table data to limit the sites for each user.<http://www.lead2pass.com/70-467.html>

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### **QUESTION 68**

You need to implement the aggregation designs for the cube. What should you do?

- A. Use the Usage-Based Optimization Wizard.
- B. Use the Aggregation Design Wizard.
- C. Partition the cube by month.
- D. Implement cache warming in SSAS via an SSIS package.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**QUESTION 69**

You need to identify changes in the financial database. What should you do?

- A. Enable change data capture on each table.
- B. Add SQL Server mirroring to each table.
- C. Perform a full extract of each table.
- D. Add SQL Server log shipping to each table.
- E. Create an AlwaysOn Availability Group that includes all the tables.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 70**

You are designing a subscription strategy for a SQL Server Reporting Services (SSRS) report. You have an application that populates a table with user-specific subscription schedules and report formats. You need to ensure that users can receive reports by email according to their preferences. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

- A. Create a standard subscription for each record in the table.
- B. Create a data-driven subscription for each record in the schedule table.
- C. Create one data-driven subscription. Schedule the subscription to frequently retrieve user preferences.
- D. Create a standard subscription for each subscription schedule.

**Correct Answer:** C

**Section:** (none)

**Explanation**