



Vendor: Microsoft

Exam Code: 70-467

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

Version: Demo

Topic 1, Tailspin Toys Case A

Background

You are the business intelligence (BI) solutions architect for Tailspin Toys.

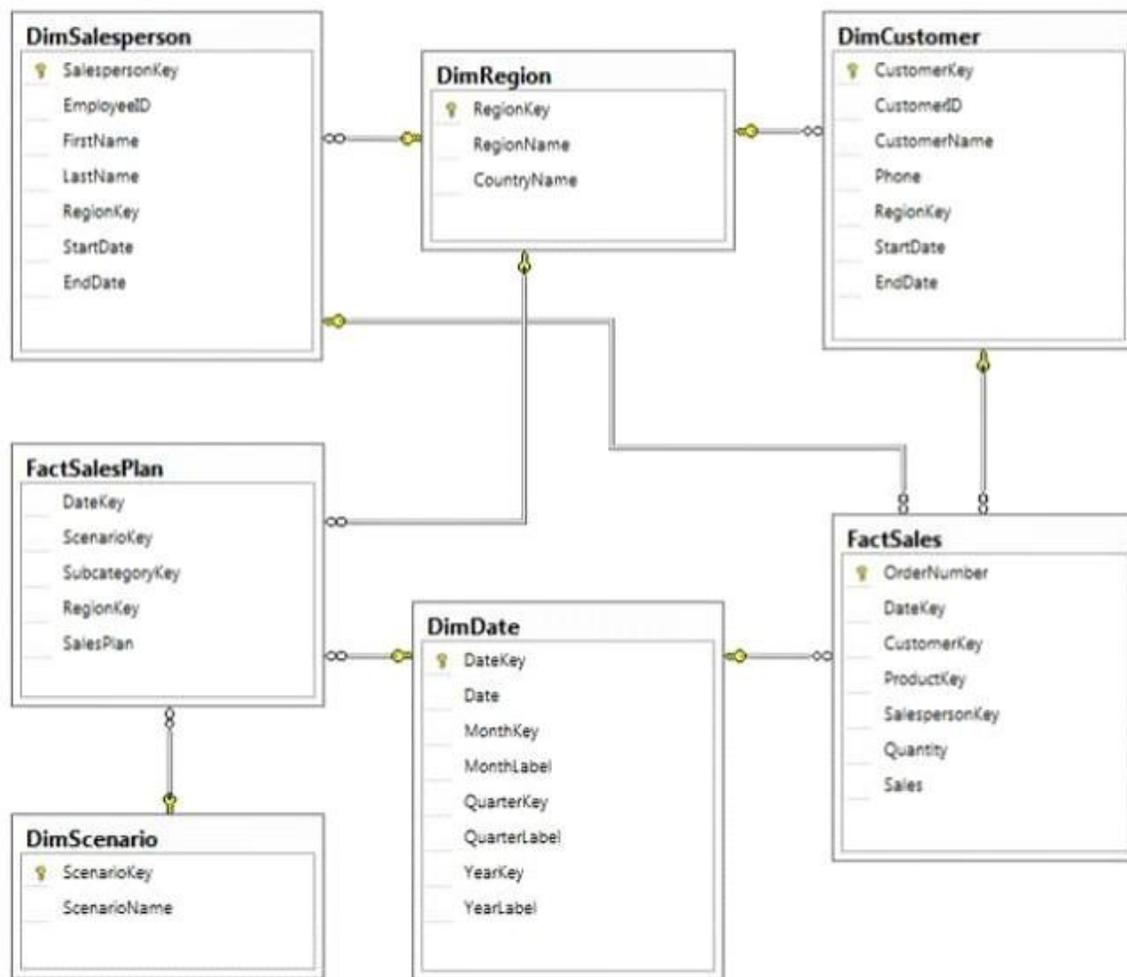
You produce solutions by using SQL Server 2012 Business Intelligence edition and Microsoft SharePoint Server 2010 Service Pack 1 (SP1) Enterprise edition.

Technical Background

Data Warehouse

The data warehouse is deployed on a SQL Server 2012 relational database. A subset of the data warehouse schema is shown in the exhibit. (Click the Exhibit button.)

Data Warehouse Schema



The schema shown does not include the table design for the product dimension.

The schema includes the following tables:

- FactSalesPlan table stores data at month-level granularity. There are two scenarios: Forecast and Budget.
- The DimDate table stores a record for each date from the beginning of the company's

operations through to the end of the next year.

- The DimRegion table stores a record for each sales region, classified by country. Sales regions do not relocate to different countries.
- The DimCustomer table stores a record for each customer.
- The DimSalesperson table stores a record for each salesperson. If a salesperson relocates to a different region, a new salesperson record is created to support historically accurate reporting. A new salesperson record is not created if a salesperson's name changes.
- The DimScenario table stores one record for each of the two planning scenarios.

All relationships between tables are enforced by foreign keys. The schema design is as denormalized as possible for simplicity and accessibility. One exception to this is the DimRegion table, which is referenced by two dimension tables.

Each product is classified by a category and subcategory and is uniquely identified in the source database by using its stock-keeping unit (SKU). A new SKU is assigned to a product if its size changes. Products are never assigned to a different subcategory, and subcategories are never assigned to a different category.

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

ETL Processes

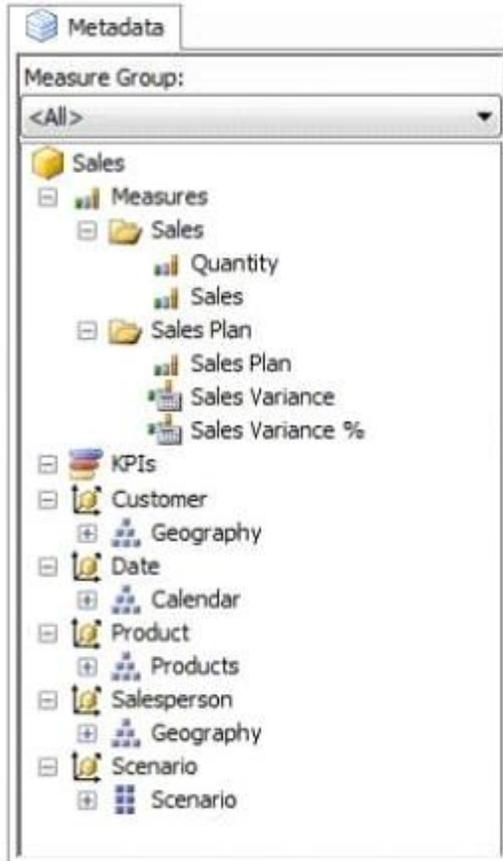
One SQL Server Integration Services (SSIS) package is designed and developed to populate each data warehouse table. The primary source of data is extracted from a SQL Azure database. Secondary data sources include a Microsoft Dynamics CRM 2011 on-premises database. ETL developers develop packages by 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"> Year Quarter Month Date 	All attributes are hidden. The appropriate dimension and attribute Type properties have been configured.
Salesperson	Geography <ul style="list-style-type: none"> Country Region Salesperson 	Based on the DimSalesperson and DimRegion tables. All attributes are hidden.
Scenario	Scenario (attribute hierarchy) <ul style="list-style-type: none"> Scenario 	Current hierarchy level is All. All contains Budget and Forecast.

The Sales cube dimension usage is shown in the following graphic.

Measure Groups		
Dimensions	Sales	Sales Plan
Date	Date	Month
Customer	Customer	
Salesperson	Salesperson	Region
Product	Product	Subcategory
Scenario		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. 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.

QUESTION 1

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.
- D. In SharePoint Central Administration, create a target application and configure the PowerPivot service application settings to use the target application.

Correct Answer: B

QUESTION 2

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: D

QUESTION 3

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 ParentsMissing.

Correct Answer: CD

Explanation:

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 4

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.)



Correct Answer:



QUESTION 5

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

QUESTION 6

You need to configure package execution logging to meet the requirements. What should you do?

- A. Configure logging in each ETL package to log the OnError, OnInformation, and Diagnostic events.
- B. Set the SSIS catalog's Server-wide Default Logging Level property to Performance.
- C. Set the SSIS catalog's Server-wide Default Logging Level property to Basic.
- D. Set the SSIS catalog's Server-wide Default Logging Level property to Verbose.
- E. Configure logging in each ETL package to log the OnError, OnPreExecute, and OnPostExecute events.

Correct Answer: B

QUESTION 7

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.)

The interface shows five table cards on the left and two empty slots on the right. The cards are:

- DimCategory**: CategoryKey (PK), CategoryName
- DimSubcategory**: SubcategoryKey (PK), SubcategoryName, CategoryName
- DimProduct**: ProductKey (PK), ProductSKU, ProductName, Size, SubcategoryKey, SubcategoryName, CategoryName
- DimProduct**: ProductKey (PK), ProductSKU, ProductName, Size, SubcategoryKey, SubcategoryName, CategoryName, StartDate, EndDate
- DimProduct**: ProductKey (PK), ProductSKU, ProductName, Size, SubcategoryKey, SubcategoryName, CategoryName, StartDate, EndDate

The right side has two empty slots labeled **Table 1** and **Table 2**.

Correct Answer:

The correct answer shows the following arrangement:

- Table 1**: DimSubcategory (SubcategoryKey, SubcategoryName, CategoryName)
- Table 2**: DimProduct (ProductKey, ProductSKU, ProductName, Size, SubcategoryKey)

A relationship line connects the SubcategoryKey in Table 2 to the SubcategoryKey in Table 1.

QUESTION 8

You need to create the Sales Reporting shared SSRS data source. Which SSRS data connection type should you use?

- A. OData
- B. Microsoft SQL Server
- C. ODBC
- D. OLE DB

Correct Answer: B

QUESTION 9

You need to select an appropriate tool for creating the Regional Sales report. Which tool or tools should you use? (Each correct answer presents a complete solution. Choose all that apply.)

- A. Excel 2010, using the CUBE functions
- B. Power View, using a Matrix
- C. Excel 2010, using a PivotTable
- D. Report Builder, using a Matrix

Correct Answer: BCD

Explanation:

B: Working with a matrix in Power View

A matrix is a type of visualization that is similar to a table in that it is made up of rows and columns. However, a matrix can be collapsed and expanded by rows and/or columns. If it contains a hierarchy, you can drill down/drill up.

C: Using an Excel Pivot Table, connecting to the Cube, will give you the option to drill down the cube. Using conditional formatting you can highlight specific value ranges.

D: Matrices provide functionality similar to crosstabs and pivot tables. At run time, as the report data and data regions are combined, a matrix grows horizontally and vertically on the page. Values in matrix cells display aggregate values scoped to the intersection of the row and column groups to which the cell belongs. You can format the rows and columns to highlight the data you want to emphasize. You can also include drilldown toggles that initially hide detail data; the user can then click the toggles to display more or less detail as needed.

* From scenario:

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.

QUESTION 10

DRAG DROP

You need to complete the following UPDATE statement to initialize the budget sales values for 2012.

Which MDX weight value expression should you use?

To answer, drag the appropriate weight value expression to the answer area.

Expressions	Answer area
<pre>{ [Measures].[Sales], [Date].[Calendar] } / { [Measures].[Sales], Ancestor ([Date].[Calendar], [Date].[Calendar].[Year]) }</pre>	<pre>UPDATE CUBE [Sales] SET ([Measures].[Sales Plan], [Scenario].[Scenario].[Budget], [Date].[Calendar].[2012]) = 12000000 USE_WEIGHTED_ALLOCATION BY</pre> <div style="border: 1px solid gray; height: 60px; margin-top: 10px; text-align: center;">Expression</div>
<pre>{ [Measures].[Sales], [Date].[Calendar].Lag (12) } / { [Measures].[Sales], Ancestor ([Date].[Calendar], [Date].[Calendar].[Year]).PrevMember }</pre>	
<pre>{ [Measures].[Sales], ParallelPeriod ([Date].[Calendar].[Month], 12, [Date].[Calendar]) } / { [Measures].[Sales], Ancestor ([Date].[Calendar], [Date].[Calendar].[Year]).PrevMember }</pre>	
<pre>{ [Measures].[Sales], ParallelPeriod ([Date].[Calendar].[Month], 12, [Date].[Calendar]) } / { [Measures].[Sales], Ancestor ([Date].[Calendar], [Date].[Calendar].[Year]).PrevMember, Root ([Salesperson]), Root ([Product]) }</pre>	

Correct Answer:

Expressions	Answer area
<pre>{ [Measures].[Sales], [Date].[Calendar] } / { [Measures].[Sales], Ancestor ([Date].[Calendar], [Date].[Calendar].[Year]) }</pre>	<pre>UPDATE CUBE [Sales] SET ([Measures].[Sales Plan], [Scenario].[Scenario].[Budget], [Date].[Calendar].[2012]) = 12000000 USE_WEIGHTED_ALLOCATION BY</pre> <div style="border: 1px solid gray; height: 60px; margin-top: 10px; text-align: center;">Expression</div>
<pre>{ [Measures].[Sales], [Date].[Calendar].Lag (12) } / { [Measures].[Sales], Ancestor ([Date].[Calendar], [Date].[Calendar].[Year]).PrevMember }</pre>	
<pre>{ [Measures].[Sales], ParallelPeriod ([Date].[Calendar].[Month], 12, [Date].[Calendar]) } / { [Measures].[Sales], Ancestor ([Date].[Calendar], [Date].[Calendar].[Year]).PrevMember }</pre>	
<pre>{ [Measures].[Sales], ParallelPeriod ([Date].[Calendar].[Month], 12, [Date].[Calendar]) } / { [Measures].[Sales], Ancestor ([Date].[Calendar], [Date].[Calendar].[Year]).PrevMember, Root ([Salesperson]), Root ([Product]) }</pre>	

QUESTION 11

You need to select an appropriate tool for creating the Regional Sales report. Which tools or tools should you use? (Each correct answer presents a complete solution. Choose all that apply.)

- A. Power View, using a table configured for vertical multiples
- B. Excel 2010, using a PivotTable
- C. Report Builder, using a Matrix
- D. Power View, using a table configured for horizontal multiples

Correct Answer: BC

QUESTION 12

You need to create the calculation for SalespersonName. What should you do? (Each correct answer presents a complete solution. Choose all that apply.)

- A. Create a computed column in the data warehouse's DimSalesperson table. Include the column in the Sales Reporting model's Salesperson table.
- B. Modify the data warehouse's DimSalesperson table and add a new column. Use an UPDATE statement to populate the new column with values. Update the SSIS package developed to populate the data warehouse's DimSalesperson table to use a Derived Column transformation to produce the calculation.
- C. Configure the Sales Reporting model's Salesperson table properties to be based on a query. Define a derived column in the query.
- D. Add a calculated column to the Sales Reporting model's Salesperson table by using the Data Analysis Expressions (DAX) language CONCATENATE function.
- E. Create a view in the data warehouse that defines a derived column based on the DimSalesperson table. Base the Sales Reporting model's Salesperson table on the view. Include the column in the Sales Reporting model's Salesperson table.
- F. Add a calculated column to the Sales Reporting model's Salesperson table by using the Data Analysis Expressions (DAX) language ADDCOLUMNS function.

Correct Answer: BE

QUESTION 13

You need to configure data refresh for the Manufacturing Performance PowerPivot workbook. What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Configure the PowerPivot Data Refresh Timer Job to run every 60 minutes.
- B. Restore the PowerPivot workbook to an SSAS instance in tabular mode.
- C. Script a process command and configure a SQL Server Agent job to execute the command every 60 minutes.
- D. Restore the PowerPivot workbook to an SSAS instance in PowerPivot for SharePoint mode.

Correct Answer: A

Topic 2, Contoso, Ltd Case A

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.

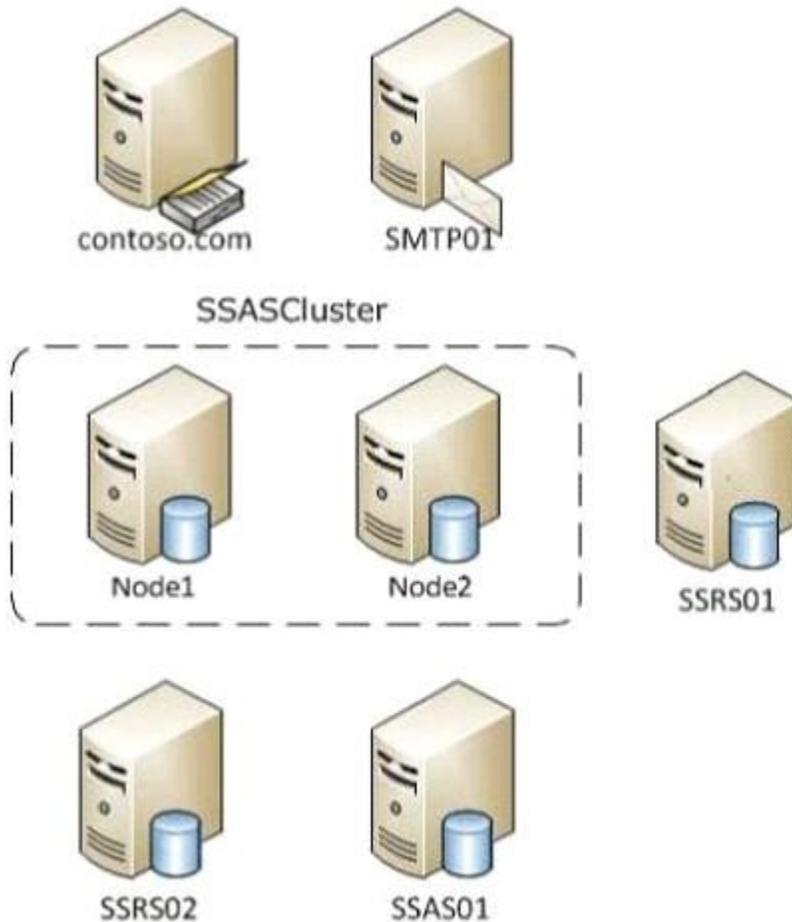
The current SQL Server environment consists of a single instance failover cluster of SQL Server 2008 R2 Analysis Services (SSAS). The virtual server name of the cluster is SSASCluster. The cluster includes two nodes: Node1 and Node2. Node1 is currently the active node. In anticipation of the upgrade, 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.)

Server Configuration



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 SSR501.

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.

QUESTION 14

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

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 15

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: D

QUESTION 16

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

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 17

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

Explanation:

SSRS reports are scheduled by SQL server Agent jobs.

Start the SQL Server Agent on SSRS01.

QUESTION 18

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.
- 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

QUESTION 19

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: C

Explanation:

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 (which uses MDX).

Daily operational analysis by executing a custom application that uses ADOMD.NET and existing Multidimensional Expressions (MDX) queries.

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.

We cannot use DirectQuery mode so C is the only answer that will provide the required caching.

When a model is in DirectQuery mode, it can only be queried by using DAX. You cannot use MDX to create queries. This means that you cannot use the Excel Pivot Client, because Excel uses MDX.

QUESTION 20

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

QUESTION 21

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>
- B. <SendUsing>contoso.com</SendUsing>
- C. <SMTPServer>SMTP01/SMTPServer</SMTPServer>
- D. <SMTPServerPort>110</SMTPServerPort>
- E. <SMTPServer>SSRS01/SMTPServer</SMTPServer>
- F. <From>reports@contoso.com</From>
- G. <PermittedHosts>contoso.com</PermittedHosts>

Correct Answer: ACFG

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.

G:

* From scenario:

Report distribution must be secured by using SSL and must be limited to the contoso.com domain.

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 22

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.

Correct Answer:

- 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.
- Generate a SQL Server 2012 configuration file by running the SQL Server Setup executable.
- Upgrade Node2 from the command prompt by using a configuration file. Specify the / **FAILOVERCLUSTERROLLOWNERS HIP=1** option.
- Upgrade Node1 from the command prompt by using a configuration file.

QUESTION 23

You need to implement the security requirement for the sales representatives. Which MDX expression should you use?

- A. `Exists([Customer].[Customer Number].Members, StrToMember("[Employees].[Login].&[" + Username + "]"), "Security Filter")`
- B. `NonEmpty([Customer].[Customer Number].Members + StrToMember("[Employees].[Login].&[" + Username + "]")`
- C. `NonEmpty([Customer].[Customer Number].Members, (StrToMember("[Employees].[Login].&[" + Username + "]"), Measures.[Security Filter Count]))`
- D. `Exists([Customer].[Customer Number].Members + StrToMember("[Employees].[Login].&[" + Username + "]")`

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

Correct Answer: A

QUESTION 24

You need to use Reporting Services Configuration Manager to configure SSRS to complete the installation on SSRS02. What should you do? (Each correct answer presents a partial solution. Choose all that apply.)

- A. Change the encryption key.
- B. Specify the execution account.
- C. Join the scale-out deployment.
- D. Set the Report Server Web Service URL.
- E. Set the Report Manager URL.
- F. Delete the encryption key.

Correct Answer: ABE

Explanation:

A: We need to restore a copy of the encryption key from SSRS01. This step is necessary for enabling reversible encryption on pre-existing connection strings and credentials that are already in the report server database.

B: Reporting Services provides a special account that is used for unattended report processing and for sending connection requests across the network. The account is used in the following ways:

Send connection requests over the network for reports that use database authentication, or connect to external report data sources that do not require or use authentication.

Retrieve external image files that are used in report. If you want to use an image file and the file cannot be accessed through Anonymous access, you can configure the unattended report processing account and grant the account permission to access the file.

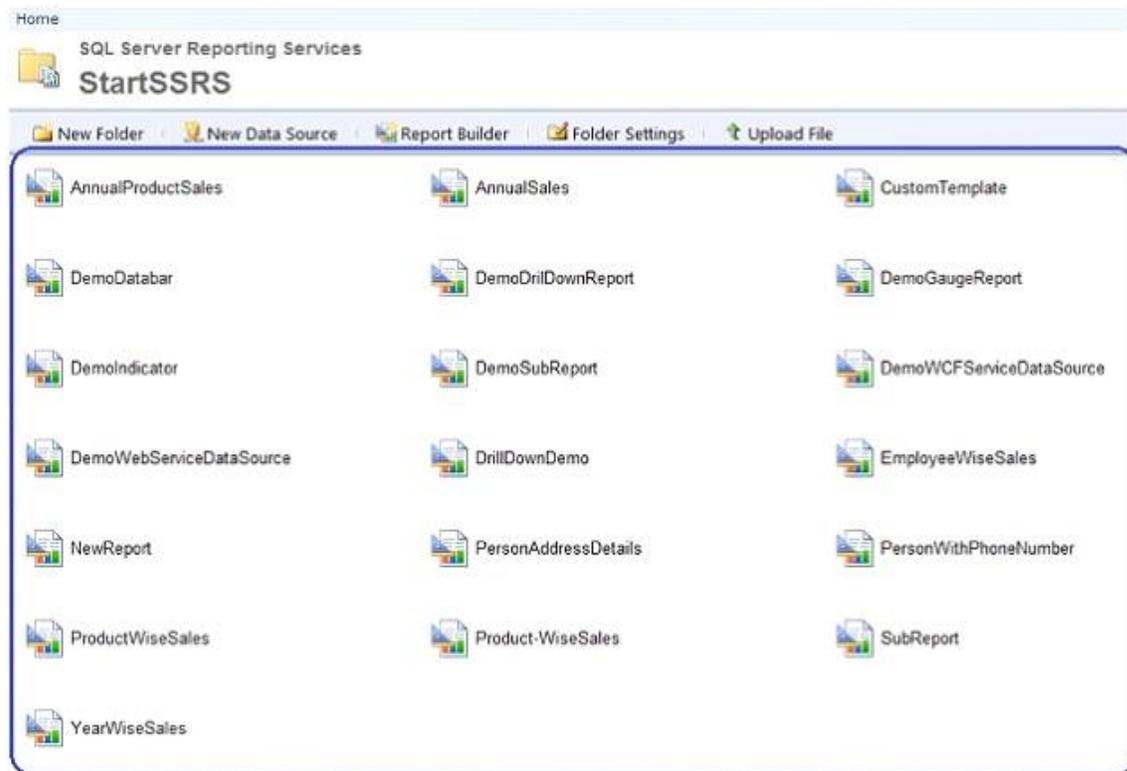
E: Example:

1. First of all open Internet Explorer and go to Report Manager URL which is something like below:

<http://string-pc/Reports2012>

2. Click on your SSRS project. So now it will show you the list of reports which are deployed on

your report server.



3. Now click on down arrow on the report which you want to subscribe and select Manage. Etc.

* From Scenario:

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. 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.

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

QUESTION 25

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

- A. Start the SQL Server Agent on SSRS01.
- B. Restore the ReportServer database.

- C. Restore the ReportServerTempDB database.
- D. Use the SQL Server Configuration Manager to reset the SQL Service account credentials.

Correct Answer: A

QUESTION 26

You need to design the recovery strategy for SSRS01. What should the strategy include? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Re-create the SQL Server Agent jobs that are used to trigger schedules.
- B. Restore the ReportServer and ReportServerTempDB databases with recovery.
- C. Restore the ReportServer and ReportServerTempDB databases with no recovery.
- D. Restore the msdb database.
- E. Restore the Report Server encryption key.
- F. Restore the database encryption key.

Correct Answer: ABE

Topic 3, 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.

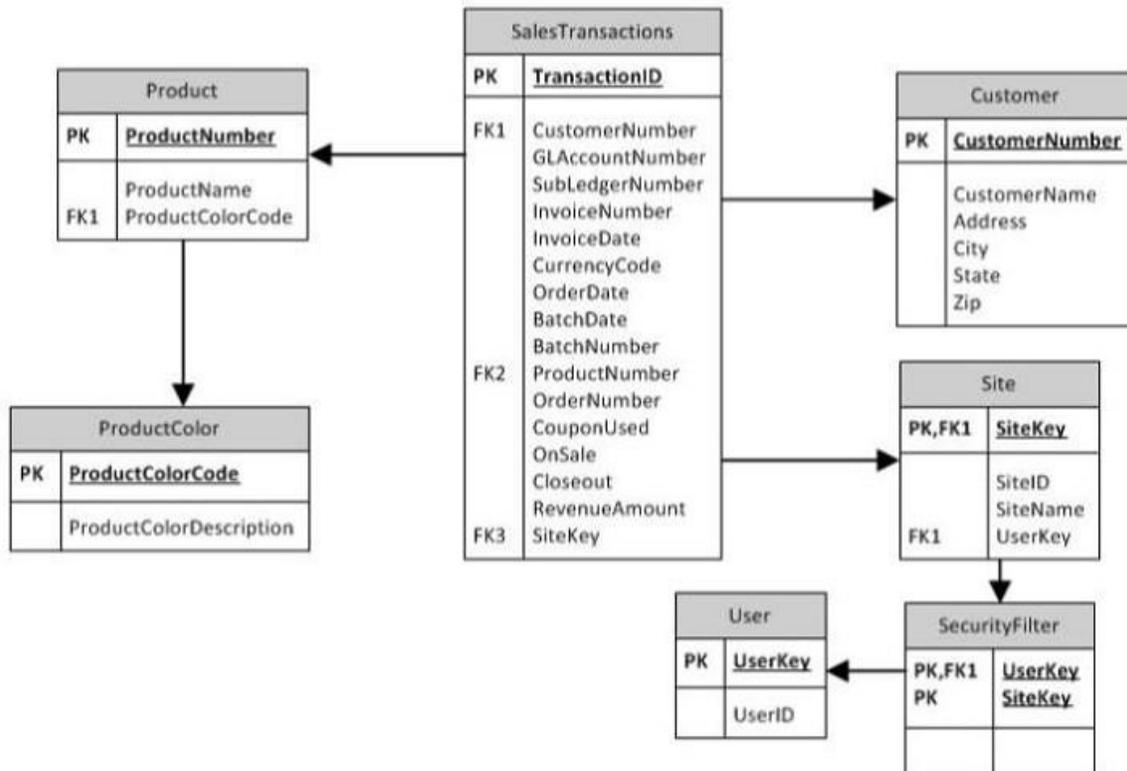
Background

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 27

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: E

QUESTION 28

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 thecatalog.executions and catalog.execution_data_statistics views.

Correct Answer: D

QUESTION 29

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

QUESTION 30

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

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70-332	70-414	70-485	70-649
70-336	70-417	70-486	70-668
70-337	70-461	70-487	70-680
70-341	70-462	70-488	70-687
70-342	70-463	70-489	70-688
70-346	70-464	70-513	70-689

