Vendor: Microsoft

Exam Code: 70-467

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

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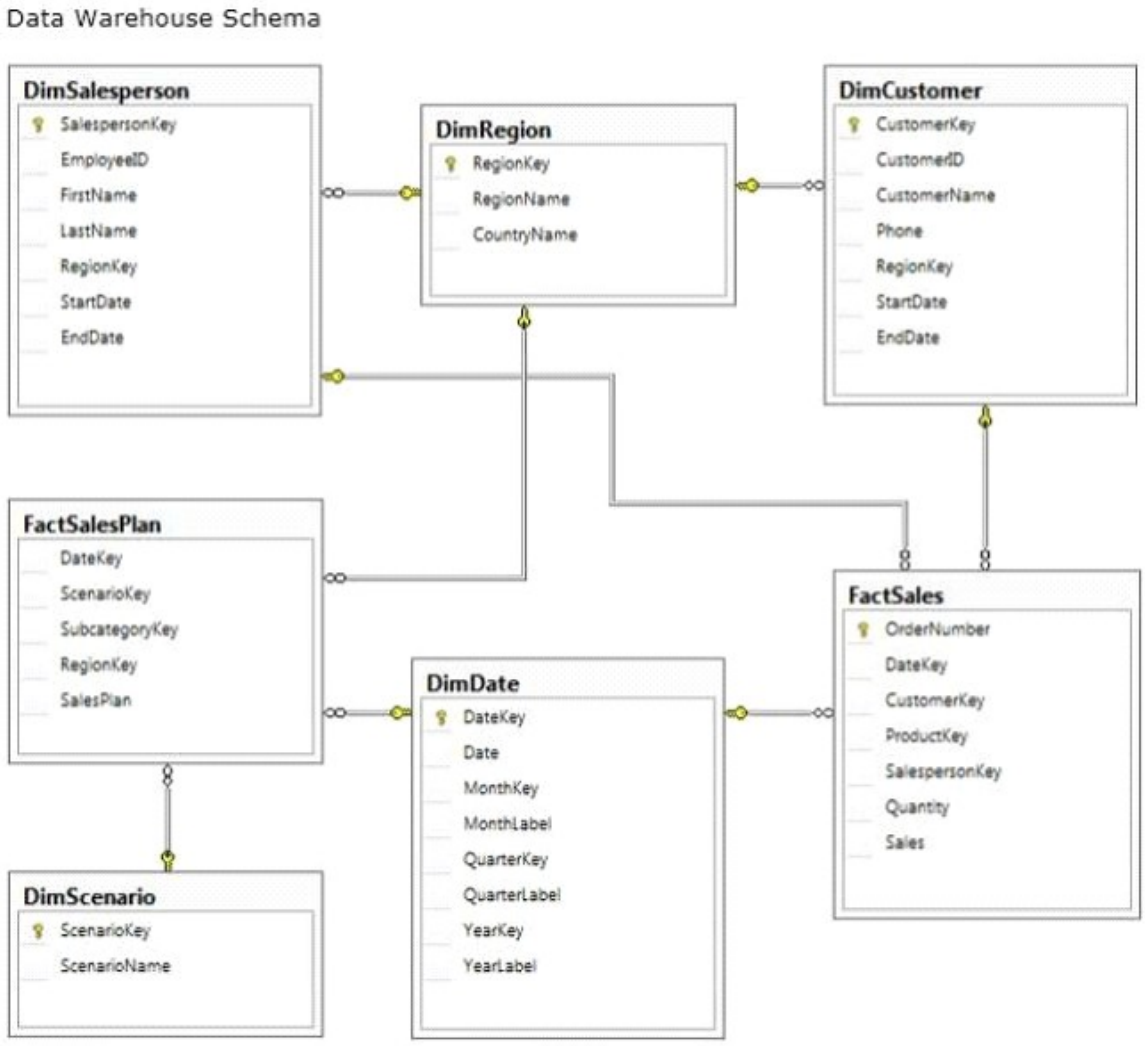
Topic 1, Tailspin Toys Case A

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.)



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.

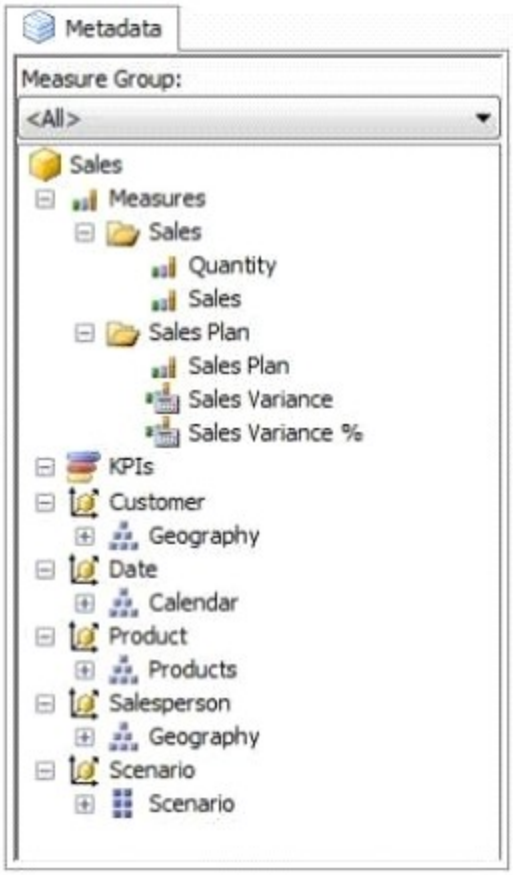
Extract, transform, load (ETL) processes populate the data warehouse every 24 hours.

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 • Year • Quarter • Month • Date	All attributes are hidden. The appropriate dimension and attribute Type properties have been configured.
Salesperson	Geography • Country • Region • Salesperson	Based on the DimSalesperson and DimRegion tables. All attributes are hidden.
Scenario	Scenario (attribute hierarchy) • Scenario	Current hierarchy level is All. All contains Budget and Forecast.