SQL Server Analysis Services (SSAS)

Using SSAS and the Business Intelligence (BI) tools, this class covers how to develop multi-dimensional cubes, KPIs, MDX queries, DMX queries, and data mining models. Additional topics include Star and Snowflake schema designs, dimensional attributes, hierarchies, measures, measure groups, and cube administration. Students will be introduced to creating a data warehouse, creating ETL processes to load measure and dimensional tables with SSIS, and creating cube driven reports with Excel and Reporting Services.

Who should take this course?

This course is designed for the student who wishes to learn beginning and intermediate operations of the Microsoft SQL Server Analysis Services. The course is for the individual whose job responsibilities include working with ETL or business intelligence.

Course Objectives

• Determine the architectural requirements of a Business Intelligence Solution.
• Design and implement an Online Analytical Processing solution using SQL Server Analysis Services.
• Manage an SSAS solution by writing DDL scripts wrapped in XMLA.
• Develop data mining solutions using SQL Server Analysis Services data mining algorithms.
• Design and develop reporting packages using Excel and PowerPivot.

Course Details

• Length: 40 hours
• Format: Classroom
• Prerequisites: Database Design and Structured Query Language: (T-SQL) Level 2 or equivalent

The above prerequisites are considered to be the basic skills and knowledge needed prior to taking this class. Instructors will assume your readiness for the class materials and will NOT use class time to discuss prerequisite materials.
Course Contents

Determine the architectural requirements of a Business Intelligence Solution.

- Identify Business Intelligence from an end user’s perspective
- Identify the business problems that BI addresses
- Apply star and snowflake schema to model OLAP data source.
- Describe Dimensional modeling and fact modeling.
- Restore data from a bak file to populate the data source.

Design and implement an Online Analytical Processing solution using SQL Server Analysis Services.

- Build and browse your first cube using BIDS
- Refine the cube by adding attributes, hierarchies and member properties
- Add key performance indicators (KPIs), perspectives, translations and actions to the cube.
- Use proactive caching and advanced storage options to refine the cube.
- Add roles to build more secure cubes.

Manage an SSAS solution by writing DDL scripts wrapped in XMLA.

- Create xmla scripts using the Deployment Wizard.
- Deploy cube using the generated xmla.
- Identify performance tuning tips for the cube

Develop data mining solutions using SQL Server Analysis Services data mining algorithms.

- Identify the need and considerations for data mining models
- Describe the nine included data mining algorithms
- Create and process the data mining model
- Work with the DMX language to query the data mining model
Course Contents, continued

Design and develop reporting packages using Excel and PowerPivot.

• Design and develop reports using PowerPivot.
• Use Excel to design reports.