(SSAS) SQL Server Analysis Services Tabular Model

Duration: 3 Days

OBJECTIVES

In this course, you will learn how to use Microsoft SQL Server Analysis Services (SSAS) to design and implement Tabular PowerPivot Models to support Business Intelligence (BI) solutions. You will learn about the Microsoft SQL Server Visual Studio development environment (SQL Server 2012/2014 Data Tools) for design, creation and deployment of SQL Server BISM (Business Intelligence Semantic Model) Tabular Mode projects, and SQL Server Management Studio for the management of Tabular Models. Delegates will be introduced to the concepts of Transactional Relational Databases, Data Warehouse Relational Databases, other sources of data, and Tabular (PowerPivot) Models fundamentals, becoming familiar with terminology such as Tables, Data Sources, Relationships, Hierarchies, Calculations and Measures. The course will take delegates through building a Tabular Model in its simplest form through to extending the features within the model by implementing DAX calculations and measures, and Key Performance Indicators (KPIs).

The main emphasis of the course is on the design and creation of Tabular Models, but basic administration and security of models are also covered. An introduction to the DAX language will provide an insight into extending data models by adding simple aggregate type measures and calculations to the model through to complex Time-Intelligence based measures, such as parallel period calculations, year to date, month to date, etc. This course also covers the interrogation of Tabular Models from Microsoft Excel 2010/2013 through Pivot Tables and Charts, and the use of Tabular Models as data sources for SQL Server Reporting Services (SSRS). This course is suitable for delegates working with SQL Server 2012 and SQL Server 2014.

PRE-REQUISITES

This course assumes no prior knowledge of SQL Server Reporting Services. This course does assume prior knowledge of the SQL language to the level of the SQL Server Database Querying course.

COURSE OUTLINE

Introduction to Business Intelligence
- OLTP databases
- OLAP databases
- Data Warehouses
- SSIS ETL, SSRS and SSAS

Introduction to PowerPivot and Analysis Services Tabular Mode
- What Is PowerPivot?
- PowerPivot Deployment Options
- Self-Service Business Intelligence (SSBI)
- Differences between SSAS Tabular Mode and Multidimensional
- Power Pivot Data Models
- Pivot Tables and Charts

A First Look at Tabular BISM
- Using Visual Studio and working with Projects

- The Tabular Designer
- Importing Data
- Relationships
- Calculations
- Browsing Models
- Modelling and Deploying
- Administering Tabular Models with SSMS

Enhancing Your Tabular BISM
- Refining the Tabular Model
- Hierarchies
- Measures
- KPIs
- Perspectives
- Partitions
- Processing a Tabular Database
- Creating and Applying Security Roles

Introduction To DAX
- DAX Fundamentals
- DAX Operators
- DAX Functions
- DAX as a Query Language

Advanced Topics in DAX
- Parent-Child Hierarchies
- Cross Filtering with Many-to-Many Relationships
- Multiple Relationships Between Tables
- Time Based Analysis
- Non-Aggregatable Columns

Analysing Tabular BISMS in Excel
- Pivot Tables
- Sheet Data Reports
- Pivot Charts
- Local Cubes
- Excel Services

Reporting on Tabular Models with SSRS
- PowerPivot
- PowerPivot Add-In for Excel
- PowerPivot data model