20768: Developing SQL Data Models

Duration: 3 Days
Method: Instructor-Led Training (ILT) | Live Online Training

Course Description

The focus of this course is on creating managed enterprise BI solutions. It describes how to implement both multidimensional and tabular data models and how to create cubes, dimensions, measures, and measure groups.

Target Audience

This course is intended for:
- Database professionals who need to fulfil BI Developer role to create enterprise BI solutions.
- Personnel who are responsible for implementing multidimensional databases by using SQL Server® Analysis Services.
- Professionals who Create tabular semantic data models for analysis by using SQL Server Analysis Services

Prerequisites

To attend this course, candidates must have:
- Experience with querying data using Transact-SQL

Course Objectives

Upon successful completion of this course, attendees will be able to:
- Describe the components, architecture, and nature of a BI solution.
- Create a multidimensional database with Analysis Services.
- Implement dimensions in a cube.
- Implement measures and measure groups in a cube.
- Use MDX syntax.
- Customize a cube.
- Implement a tabular database.
- Use DAX to query a tabular model.
- Use data mining for predictive analysis.

Course Topics

Module 1: Introduction to Business Intelligence and Data Modeling
- Introduction to Business Intelligence
- The Microsoft Business Intelligence Platform

Module 2: Creating Multidimensional Databases
- Introduction to Multidimensional Analysis
- Data Sources and Data Source Views
- Cubes
- Overview of Cube Security
- Configure SSAS
- Monitoring SSAS

Module 3: Working with Cubes and Dimensions
- Configuring Dimensions
- Defining Attribute Hierarchies
- Implementing Sorting and Grouping Attributes
- Slowly Changing Dimensions

Module 4: Working with Measures and Measure Groups
- Working with Measures
- Working with Measure Groups

Module 5: Introduction to Multidimensional Data Expressions (MDX)
- MDX Fundamentals
- Adding Calculations to a Cube
- Using MDX to Query a Cube

Module 6: Customizing Cube Functionality
- Implementing Key Performance Indicators (KPIs)
- Implementing Actions
- Implementing Perspectives
- Implementing Translations

Module 7: Implementing a Tabular Data Model by Using Analysis Services
- Introduction to Tabular Data Models
- Creating a Tabular Data Model
- Using an Analysis Services Tabular Data Model in an Enterprise BI Solution

Module 8: Introduction to Data Analysis Expression (DAX)
- DAX Fundamentals
- Using DAX to Create Calculated Columns and Measures in a Tabular Data Model

Module 9: Performing Predictive Analysis with Data Mining
- Overview of Data Mining
- Creating a Custom Data Mining Solution
- Validating a Data Mining Model
- Connecting to and Consuming a Data-Mining Model
- Using the Data Mining Add-In for Excel®

LABS INCLUDED