

Course Outline



Tel: +44 (0) 118 979 4000 Fax: +44 (0) 118 979 4000

Email: training@ptr.co.uk Web: www.ptr.co.uk

Tabular Modeling For On-Premise & Azure Analysis Services (SSAS)

Course Description:

This 3 day course is aimed Business Intelligence Developers who will be responsible for the design, creation and implementation of Tabular Model solutions in an On-Premise or Azure Analysis Services deployment.

The course introduces the architecture and components of such deployments, and the development and analysis tools associated with such deployments.

Delegates will learn how to develop Tabular Model Projects using SQL Server Data Tools (SSDT), and the course will cover all the steps from the initial creation of the models through to deploying the models to an On-Premise SSAS instance or an Azure SSAS instance, and refreshing the content thereafter.

Once models are deployed delegates will also learn how to connect to the tabular models from Excel, PowerPivot & Power BI and create simple reports, pivot tables and charts.

The course also covers the ongoing administrative tasks associated with Tabular SSAS deployments such as administration and maintenance with SQL Server Management Studio, implementing Security through Roles and Row Filtering, and achieving optimum performance with Table Partitioning

Pre-requisites:

Course Content:

- **Semantic Models in Analysis Services**
- **Introduction to Tabular Calculation Engines**
- Multidimensional v Tabular
- VertiPaq
- DirectQuery

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- **Working With SSDT**
 - Creating a Project
 - Configuring a Project
 - Importing From PowerPivot
 - Contents of a Tabular Project
- **Building a Tabular Model**
 - Loading Data Into Tables
 - Working in Diagram View
 - Tabular Model Explorer
 - Deploying a Tabular Model
- **Working With SQL Server Management Studio**
 - DAX Query Editor
 - Using DAX Studio Instead
- **Loading data Into Tabular Models**
 - Data Sources
 - Impersonation
 - Server-side and Client-side Credentials
 - Loading From SQL Server
 - Loading From Other Sources
- **Introducing Calculations in DAX**
 - DAX Syntax
 - DAX data types and operators
 - Columns & Measures
 - Aggregate Functions
 - Table Functions
 - Evaluation Context
 - CALCULATE and CALCULATETABLE
 - Variables
 - Calculated Tables
 - Writing DAX Queries

21a Peach Street Wokingham Berkshire RG40 1XJ

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Registered Office: Grenville Court Britwell Road Burnham Bucks SL1 8DF Company Registered No: 2442290 – VAT registration No:532 1929 56

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- **Building Hierarchies**
 - Basic Hierarchies
 - Hierarchies Spanning Multiple Tables
 - Natural & Unnatural Hierarchies
 - Parent Child Hierarchies
- **Data Modeling In Tabular**
 - OLTP v OLAP
 - Working With Dimensional Models
 - Relationship Types
 - Active State of Relationships
 - Implementing Relationships in DAX
 - Normalisation v De-normalisation
- **Tabular Model Scripting Language (TMSL)**
 - Defining Objects
 - Commands
- **Tabular Presentation Layer**
 - Metadata for a Data Table
 - Naming, Sorting & Formatting
 - Perspectives
 - Power View-related Properties
 - KPIs
 - Translations
- **Using DirectQuery**
 - Configuring DirectQuery
 - Limitations in Tabular Models for DirectQuery
 - Choosing Between DirectQuery and VertiPaq

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- **Security**
 - User Authentication
 - Roles
 - Administrative Security
 - Data Security
 - Dynamic Security with DAX Functions
 - Security in DirectQuery
 - Monitoring Security
- **Processing & Partitioning Tabular Models**
 - Automating Deployment
 - Table Partitioning
 - Processing Options
 - Processing Automation
 - Processing Scripts
- **Inside VertiPaq**
 - VertiPaq Structures
 - Reading VertiPaq Internal Metadata
 - Memory Usage
 - Processing Option

Course Duration:

3 Days