

2015 SQL Saturday PreCon Proposal:

Organizational BI with SSAS 2012 Tabular - Introduction



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Length:	Eight (8) Hours
Language(s):	English
Audience(s):	SSAS Tabular Developers, Analysts, other Interested BI Practitioners
Level:	100-200
Technology:	SQL Server 2012 Analysis Services Tabular
Type:	PreCon Course
Delivery Method:	Instructor-led

Course Description

SQL Server MVP and Business Intelligence Architect Bill Pearson leads this hands-on introduction to using SQL Server Analysis Services 2012 Tabular ("SSAS Tabular") to deliver corporate-level business intelligence solutions. The focus of the course is to help those new to SSAS Tabular to assemble data from diverse sources, and to then build and query a basic Tabular model. Participants will gain introductory hands-on exposure to accessing and relating data, and to employing the Data Analysis eXpressions (DAX) language, to construct SASAS Tabular models that support rapid analysis and reporting throughout the enterprise.

Intended Audience

Developers and other Information Workers (business- or IT-based) tasked with choosing between SSAS Multidimensional or SSAS Tabular for one or more enterprise BI solutions; Practitioners and Developers who want to gain familiarity with SSAS Tabular to build and use compelling analysis and reporting applications.

Course Objectives

Upon completion of this course, attendees will be able to:

- Ascertain when an Analysis Services solution is a good fit for your environment, and to choose between Multidimensional and Tabular options
- Understand the similarities and differences between, and the best uses for each of, PowerPivot and Tabular models
- Import and integrate data from different data sources, and to model it in Tabular Designer
- Grasp the basics of the Data Analysis eXpressions (DAX) language
- Employ the Data Analysis eXpressions (DAX) language to add calculations to, and to query, a Tabular model

Prerequisites

Attendees with the following will benefit the most from this course:

- Basic familiarity with the Microsoft Windows operating system
- Exposure to Excel PivotTables
- Exposure to standard Excel functions
- Exposure to basic relational database concepts
- Exposure to basic dimensional models

Module 1: Getting Started With SSAS Tabular

In this module we briefly overview the course layout and preview the objectives of the individual modules. We then overview the Tabular model, contrasting it to the Analysis Services Multidimensional model, and exploring its place within the contexts of Analysis Services 2012 and the integrated Microsoft business intelligence solution. Finally, we consider criteria in selecting the Tabular or the Multidimensional model, exploring real world examples to illustrate approaches for given need-based scenarios.

Module 2: SSAS Tabular vs. PowerPivot

Even though SSAS Tabular and PowerPivot for Excel hold in common both modeling methods and the use of the Data Analysis eXpressions (DAX) language, and even though both are powered by the xVelocity engine, there are differences between the two. In this Module, we compare and contrast the two options, and offer guidance on how to choose between the two to meet a given business intelligence need.

Module 3: Importing Data into Tabular

Implicit in the design of a Tabular model is the importation and integration of data, from a single source or multiple sources, into a model upon which we can perform analysis and reporting. In this module, we examine options for importing the data we need – from diverse sources - into our Tabular models.

Module 4: Introducing Data Analysis eXpressions (DAX)

In this module we introduce the Data Analysis eXpressions (DAX) language, which we use to create calculated columns and measures in our Tabular models, as well as to query those models. While DAX expressions and Microsoft Office Excel expressions hold various functions and operators in common, DAX contains more additional functions designed to meet specific needs for more sophisticated calculations, to be performed across multiple data tables imported from diverse data sources. Here we will explore the basics, and build a foundation with DAX upon which we will build in subsequent modules.

Module 5: Using Excel and Data Analysis eXpressions (DAX) to Query SSAS Tabular

In this module we examine querying our Tabular models with both Excel and Data Analysis eXpressions (DAX). We introduce the use of Excel to query our models, as it offers ease of browsing for both developers (who can use it to ascertain propriety of design and model behavior) and information consumers. We then focus upon the use of DAX to manipulate the tables within our models, and to return datasets. As a part of our efforts, we will reinforce what we have already learned about DAX, concentrating upon syntax and techniques to query a Tabular model.

Course Hardware and Software Requirements (Suggested to get the most from the course)

- Windows 8, 7, Windows XP (SP3), Windows Vista (SP2), or Windows Server 2008 SP2 (either 32- or 64- bit) or greater
- 4 GB RAM minimum
- 4 GB free disk space
- 2.0GHz or greater x64 or x86 processor

- Microsoft SQL Server 2012 R2 installed, or available for connection
- A SQL Server 2012 Tabular instance, installed with client components
- Excel 2010, with PowerPivot 2012 add-on installed; or Excel 2013, with embedded PowerPivot add-on enabled

About the Instructor



Bill Pearson, MVP (SQL Server BI), SSAS Analysis Services Maestro, CPA, CITP, CMA, CIA, MCDBA, MCSE, is a consultant, author, mentor and business intelligence architect who has been working with business intelligence for over 18 years, and with the integrated Microsoft Business Intelligence solution since its inception. Bill has been awarded the Microsoft Most Valuable Professional multiple times for his technical experience implementing Microsoft BI, as well as his contributions to the community as an author and speaker. Bill's recent series' include the *Stairway to MDX* and *Stairway to PowerPivot and DAX* columns at SQLServerCentral.com, and he presents regularly at SQL Saturdays and other diverse events globally.