Microsoft

Workshop - SQL Server - Analysis Services Tabular Model

Workshop

Target Audience::

This is an advanced course for SQL Server 2016 Analysis Services Tabular Model.

It is mainly designed for IT staff, Architects, DBAs or BI developers, with good understanding of data warehousing, business intelligence and general OLAP techniques, and want acquire deep knowledge on SSAS Tabular.

An understanding of Unified Dimensional Model as well as an understanding of the MDX are encouraged for this course but not requiered..

Overview

The SQL Server 2016 Analysis Services Tabular Model WorkshopPLUS provides attendees with deep knowledge and understanding of architecture, configuration, design, administration, monitoring and optimization needed to build, manage, secure and use SQL Server 2016 Analysis Services. Through presentations, white-board discussions, and goal-based labs, this 3-days workshop covers the individual approaches for creating and administering elements of an enterprise deployment of Analysis Service 2016 using the Tabular Model.

Key Features and Benefits

This training is aimed at advanced Business Intelligence and Analysis Services architects, developers and DBAs who want to master the concept of the Tabular Model in SQL Server 2016 Analysis Services. The course includes hands-on lab exercises for creating an in-memory model, solving business problems, administrating the, writing DAX to query the model, and use advanced tools to monitor and optimize the solution.

Technical Highlights

After completing this course, you will be able to:
- Understand the architecture, functionality and configuration of Analysis Services Tabular data model
- Understand how to design a semantic model to solve business problems
- Use SQL Server Data Tools to rapidly build and deploy Tabular Models
- Understand optimization of tabular processing and querying
- Understand how to manage and monitor Analysis Services

Syllabus

SQL Server 2016 Analysis Services Tabular model workshop covers fundamentals of this OLAP service, including the overall BI stack, service features and architecture.

To provide valuable knowledge and great experience for attendees, this workshop can be delivered under 2 differents formats, which need to be established <u>before</u> the delivery :

- **The BI Developers program (3 days)** is designed to provide hands on experience to BI developers who need to gain experience and expertise on SQL Server Analysis Services 2016 Tabular development, including DAX implementation and model optimization. Administration topic will also been introduced.

- **The BI Administrators program (3 days)** is designed to provide hands on experience to BI administrators who need to gain experience and expertise on SQL Server Analysis Services 2016 Tabular administration, including setup, administration and monitoring. Model development topic will also bee introduced.

These 2 program contains demos and labs to enhance attendees training experience. Early departure on any day is not recommended.

NOTE : each workshop delivery session will target a single program (BI Developers or BI Administrators).

Hardware requirements

This Workshop is based on a set of 2 Virtual Machines for each student : Domain Controler and Business Intelligence server.

Minimal recommended configuration for lab environnements :

- *Domain Controler: 2 V-CPU / 2GB RAM*
- *BI Server : 6 V-PCU / 20GB RAM*

The domain controler can eventually be mutualized between students.

Pre-Configured Hyper-V VM exports can be provided for a local deployment, or VM can be configured based on the pre-requisites document provided by the engineer:

Pre-Configured Hyper-V VMs need the following disk space :
- *Domain Controler : 32GB*
- *BI Server : 78GB*

Main BI Server Prerequisites
- *SQL Server 2016 SP1 (min) Developper Edition.*
- *SQL Server Management Studio 17.5*
- *SQL Server Data Tools 2017*
- *Excel 2013/2017*
- *PowerBI Desktop*

Students workstation requirements :
- *Operating System: Windows 7/10*
- *Hard drive with 50 GB of free disk space*
- *A USB port*
- *A 100 megabits per second (Mbps) or faster network adapter*
- *A PDF reader*

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