Course : SQL Server Analysis Services

Versions 2022 to 2012

Practical course - 3d - 21h00 - Ref. NAA

Price : 1970 € E.T.

This training course will introduce you to the different ways of performing multidimensional analysis with the SQL Server BI suite. You'll create SQL Server Analysis Services (SSAS) cubes, select, structure and enrich data for interactive analysis and extract relevant information.

Teaching objectives

At the end of the training, the participant will be able to:

- Creating a multidimensional cube with SSAS
- Add performance indicators (KPIs) to the cube
- Define cube update and deployment modes
- Implementing a tabular project with Power Pivot
- Explore cube data with various modules (PowerView for Excel, Reporting Services, etc.)

Intended audience

BI managers, developers, project managers or business intelligence consultants, anyone who needs to deploy OLAP solutions in the SQL server environment.

Prerequisites

Basic knowledge of RDBMS and decision support (datamart concepts, star modeling). Experience in SQL.

Course schedule

1 Introduction

- Recall the principles of multidimensional modeling and OLAP.
- Star modeling, fact tables, dimension tables.
- Presentation of the SSAS tool.
- Essential terminology.

PARTICIPANTS

BI managers, developers, project managers or business intelligence consultants, anyone who needs to deploy OLAP solutions in the SQL server environment.

PREREQUISITES

Basic knowledge of RDBMS and decision support (datamart concepts, star modeling). Experience in SQL.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

2 The main new features

- The extension of the UDM: the BISM (BI Semantic Model).
- The xVelocity tabular model and in-memory engine.
- The DAX language ("Data Analysis Expression"), an intermediary between SQL and MDX.
- Le modèle tabulaire de Power Pivot .

3 Multidimensional cube creation

- Different types of projects (OLAP, tabular).
- Definition of a data source view in the project.
- Creation of analysis dimensions and attributes (facts).
- Relationships between dimensions and measurement groups.

Exercise
Multidimensional cube creation.

4 Enriching the OLAP cube

- Creating calculated members with the MDX language. MDX syntax.
- Create performance indicators (KPIs) for a measure.
- Named games.
- Data mining: clustering, forecasting, decision trees, etc.
- Graphical DMX prediction queries.

Exercise
Handling the MDX language. Writing queries. Performing calculations.

5 OLAP cube deployment and security

- Deployment settings.
- Cube update modes. Storage (ROLAP, MOLAP, etc.).
- Security roles.
- Manage access rights to dimensions.

Exercise
Changes to deployment and security parameters.

6 Power Pivot implementation (tabular)

- Select and filter data for analysis.
- Creation of analysis dimensions and attributes (facts).
- Fact and dimension table display modes.
- Creation of hierarchies, perspectives.
- Creation of measures and groups of measures.
- Generate analysis pivot table. Saving.

Exercise
Creating projects in tabular mode. Handling Power Pivot in Excel.

7 Explore cube data

- PowerView for Excel and SharePoint.
- Reporting Services.
- Analysis in Excel.

Exercise
Design reports on cube data.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.