SQL Server 2012 : Business Intelligence

Hands-on course of 5 days - 35h
Ref.: BUI - Price 2024: contact us

EDUCATIONAL OBJECTIVES
At the end of the training, the trainee will be able to:

Create a control flow and implementing data transformations with the ETL, SSIS

Create an Analysis Services base and set up analysis dimensions

Cover the concepts of change data capture, data quality, and master data services

Understand the concepts of PowerPivot and Powerview, DAX queries for analysis

Creating and setting up reports with SSRS

Participants

Workshops built around actual business cases.

TRAINING PROGRAM

THE PROGRAMME

last updated: 01/2018

1) » Introduction to Business Intelligence
- The reasons why BI projects are launched.
- What is a data warehouse?
- The components of a data warehouse solution
- The steps of modeling a DW (Ralph Kimball)
- Understanding the principles of modeling (star, snowflake, fact constellation).
- SQL Server BI, DataWarehouse platform.
- Architecture of SQL Server 2012's BI tools.
- Demonstration¤ implementations and uses of SQL Server 2012 Business Intelligence.

2) » Data Quality and Master Data Management (MDM)
- The notion of a data quality standard.
- Goals of Master Data management (MDS). Applying management rules in order to ensure the validity of the data.
- Master Data Services.
- The Master Data Management component DQS Cleansing.
- Data deduplication.
- Example¤Overview of quality models..

3) » Integration Services (SSIS), objects worked with
- Understanding the principles and model of ETL. Overview.
- The notion of Packages, the notion of Workflows.
- Defining the control flow and the package.
- Different tasks of a control flow: an SQL script, sending emails, updating the cube.
- The "Change Data Capture" task.
- Add-in tasks (filewatcher).
- Sequence container.
- ForEach loop container.
- Exercise ¤Creating and editing control flows.

4) » Integration Services (SSIS), knowing how to add to tables

- Sources, destinations, and transformations.
- Different transformations: Conditional split, derived column, grouping, etc.)
- Slowly changing dimensions.
- Deploying and running packages.
- Scheduling and configuring packages.
- Logging, security.
- Exercise ¤Adding to a table. Implementing transformations. Creating and using packages. Using logs.

5) » Analysis Services (SSAS), building cubes and star schemas

- Introduction to multidimensional cubes.
- SSAS tab models.
- Using dimension tables and fact tables.
- Introduction to tabular cubes and to PowerPivot.
- Creating cubes in BIDS.
- Designing the dimension.
- User hierarchies.
- Attribute relationships.
- Composite keys.
- Exercise ¤Creating an Analysis Services database. Setting up dimensions. Creating cubes.

6) » SSAS: Advanced features

- Introduction to the MDX language.
- Calculated members and named assemblies.
- Extraction and reports.
- Partitions and aggregation designs.
- DMX graphical prediction queries.
- Backing up and restoring cubes.
- Incremental updates and cube security.
- Hands-on work ¤Working with the MDX language. Writing queries Implementing simple and complex calculations. Backing up a

7) » Introduction to Data Mining

- The analytical business: Issues and approach.
- Data mining algorithms: Decision Tree, Clustering, Sequence Clustering, Naive Bayes, Association etc.
- The selection process with Data Mining.
- The CRISP model.
- Analysis tools in SSAS. Integration Services and Data Mining.
- Group discussion¤Presentation of a marketing case study.

8) » Reporting Services (SSRS): Building reports

- The report server.
- Report Designer vs Report Builder 3.0.
- Using Tablix (tables and matrices).
- Advanced formatting elements (dates and currency).
- Advanced presentation elements (conditional formatting, graphs and charts, sorting).
- Analysis elements (expressions, KPIs, grouping and data mining, totals and subtotals).
- The Report Model.
- Other reports (MDX cube reports, related subreports and reports, extracting data with DMX).
- Exercise ¤Getting started with tools. Creating, formatting, and enhancing the presentation and content of reports on the

9) » SSRS: Deploying and managing reports

- Exporting reports in Excel and PDF, Word.
- Using PowerPivot in Excel, DAX language.
- PerformancePoint.
- Configuration manager.
- Deploying reports and report management with SharePoint.
- Caching, report snapshots
- Subscriptions (sending reports by email).
- Safety
- Exercise ¤Publishing reports in different formats. Working with PowerPivot in Excel.

DATES

Contact us