

## Introduction to Microsoft® Tools for Business Intelligence: Hands-On - 3 Days Integrating SQL Server, Excel and SharePoint

### *Course 146 Overview*

- You Will Learn How To**
- Leverage the Microsoft toolset for building each business intelligence component
  - Integrate data from multiple sources using SQL Server Integration Services (SSIS)
  - Consolidate data for easy interpretation with SQL Server Analysis Services
  - Extract patterns with data mining add-ins for Microsoft Office Excel
  - Create KPIs, scorecards and dashboards using SharePoint PerformancePoint Services
  - Deliver and share business intelligence solutions with Microsoft SharePoint Services

**Course Benefits** Business Intelligence is not a software program, but the application of software technologies that enables business users to make better and faster decisions based on enterprise data. In this course, you are introduced to the Microsoft Business Intelligence suite of software technologies. You learn how to build and integrate Microsoft tools into a comprehensive business solution in order to achieve competitive advantage.

**Who Should Attend** Anyone who is involved or interested in implementing business intelligence solutions using Microsoft Business Intelligence tools. Knowledge of business fundamentals is assumed.

**Hands-On Training** Throughout this course, extensive hands-on exercises provide practical experience working with business intelligence tools. Exercises include:

- Reviewing a finished BI solution
- Creating a KPI within a cube
- Publishing an Excel workbook to SharePoint
- Building a scorecard with Dashboard Designer
- Forecasting trends with data mining techniques
- Designing a dashboard in SharePoint
- Visualizing data with PerformancePoint analytic grids and charts

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### Course 146 Outline

#### Introducing Business Intelligence (BI) Proposing an integrated solution

- Identifying problems with current business practices as they relate to business intelligence
- Aligning business objectives at all levels of the enterprise
- Introducing the Microsoft BI vision and strategy

#### Identifying components of the Microsoft BI platform

- SQL Server
- Integration Services
- Analysis Services
- Reporting Services
- Microsoft Excel
- Microsoft SharePoint Server

#### Collecting BI Data with Integration Services

- ##### Integrating data from multiple sources
- Connecting to external data sources
  - Creating a package for data imports

#### Working with Integration Services in a data warehouse

- Populating a star and snowflake schema in SQL Server with Integration Services

#### Leveraging SQL Server Relational Engine

- Denormalizing into star or snowflake schemas
- Introducing surrogate keys
- Dealing with slowly changing dimensions

#### Leveraging SQL Server Analysis Services

##### Defining and building a cube

- Facts
- Dimensions
- Hierarchies
- Measures
- Creating a cube with Analysis Services wizards
- Denormalizing the database
- Creating Key Performance Indicators (KPIs)

##### Extracting insight with data mining

- Determining data mining algorithms for specific business data problems

- Utilizing data mining to perform targeted marketing

#### Presenting Data with Reporting Services Authoring a basic report

- Building Tabular and Matrix reports with the Report Wizard
- Creating a report based on an Analysis Services cube

#### Taking advantage of interactivity

- Implementing drill down/up and expand/collapse
- Exporting to other formats such as Excel

#### Exploiting Excel for Predictive Analysis Creating models for data mining

- Preparing and cleaning input data
- Partitioning data into training and testing sets
- Applying available models to solve business problems
- Analyzing key influencers of desired outcomes
- Discovering natural clusters of large volumes of data

#### Pivoting table data

- Creating charts and pivot tables from different data sources
- Connecting to Analysis Services with Excel
- Drilling down to multiple levels of detail
- Slicing and dicing to flexibly analyze data

#### Publishing reports and models

- Saving a workbook to a SharePoint document library
- Viewing an Excel workbook from a Web browser

#### Delivering BI through SharePoint

##### Identifying the components of SharePoint

- Leveraging the PowerPivot Gallery
- Benefits of the BI tools available in Microsoft SharePoint Server

##### Preparing to display BI data in SharePoint

- Creating a Report Builder report
- Deploying data sources to a data source library
- Uploading reports to a report library

#### Displaying dashboards

- Building a dashboard with SharePoint PerformancePoint Services Dashboard Designer
- Embedding KPIs, scorecards and reports

#### Identifying Components of a BI Infrastructure

##### Integrating Analysis Services with SharePoint

- Leveraging PowerPivot for SharePoint
- Providing an Analysis Services processing engine with SharePoint

##### Delivering self-service BI tools to users

- In-memory processing with PowerPivot for Excel
- Performing sophisticated calculations with DAX expressions
- Creating data visualization reports with Excel 2010