

# Wizards Training

MS-SQL Server With Business Intelligence (SSIS, SSRS, SSAS) Training Outline\_Course Curriculum

Duration:

## MS-SQL Server With Business Intelligence (SSIS, SSRS, SSAS) Training Outline

### A Tour of SQL Server 2008

- ✦ SQL Server 2008 Editions, Components, and Tools
- ✦ Using SQL Server Management Studio (SSMS)
- ✦ Working with Tables, Queries, and Views
- ✦ Business Intelligence Services

### Designing and Creating a Database

- ✦ Relational Database Design Principles
- ✦ Implementing the Design

### Basics of Database Design

- Relational Database Design Principles
- Implementing the Design
- Normalization
- Denormalization
- Creating a Database

### Working with SQL Server Management Studio

- ❖ Getting Started with Management Studio
- ❖ Exploring the Object Explorer
- ❖ Working with the Query Editor
- ❖ Using SQL Server Books Online

### Data Selection Queries

- ✓ Understanding Transact-SQL
- ✓ The SELECT Statement
- ✓ The WHERE Clause
- ✓ Using ORDER BY to Sort Data
- ✓ The GROUP BY Clause
- ✓ Joining Tables

### Advanced Data Types

- Introduction
- The HierarchyID Data Type
- Sparse Columns and Column Sets

Training Location: 1033 Sterling Road, Ste. 205, Herndon-VA-20170. USA.  
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Duration:

- FILESTREAM Storage
- Spatial Data

## Complex Querying

- Working with NULL Values
- Ranking Grouped Data
- Writing Correlated Subqueries
- Using Common Table Expressions

## Modifying Data

- ✚ Modifying Data with Transact-SQL
- ✚ Inserting Data
- ✚ Updating Data
- ✚ Deleting Data
- ✚ Understanding Transaction Isolation

## Transact-SQL Programming

- ✓ Overview of Transact-SQL
- ✓ Using Built-In Functions
- ✓ Controlling Flow
- ✓ Ranking Results

## Transactions and Error Handling

- ❖ Transaction Concepts
- ❖ Applications and Transactions
- ❖ Creating Explicit Transactions
- ❖ Using TRY/CATCH Error Handling

## Working with XML

- ✚ The XML Data Type
- ✚ XML Schema Collections
- ✚ Querying XML
- ✚ Best Practices

## Creating Views

- ✚ What Is a View?
- ✚ Creating Views

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Duration:

- ✦ Updating Data Using a View
- ✦ Using Computed Columns
- ✦ Indexed Views
- ✦ Partitioned Views

## Creating User-Defined Functions

- ❖ User-Defined Function Overview
- ❖ Scalar Functions
- ❖ Inline Table-Valued Functions
- ❖ Multi-Statement Table-Valued Functions
- ❖ Using Functions, Views, and Stored Procedures

## Creating Stored Procedures and Triggers

- Creating Stored Procedures
- Creating Triggers

## Advanced Query Techniques

- Full-Text Search
- Advanced T-SQL Techniques
- Executing Dynamic SQL

## SSIS 2008 Training Outline

### A Guided Tour of Integration Services

- ✦ Understanding Integration Services
- ✦ Exploring and Executing an Integration Services Package in BIDS
- ✦ Exploring and Executing a Package Outside of BIDS

### Control Flow

- Overview of Control Flow in Integration Services
- Working with Workflow Tasks
- Precedence Constraints

### Data Flows

- ❖ The Data Flow Task
- ❖ Data Viewers
- ❖ Data Flow Transformations

### Variables and Configurations

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Duration:

- ❖ Understanding Variables
- ❖ Using Variables in Control Flow
- ❖ Using Variables in Data Flow
- ❖ Configurations
- ❖ Using Variables and Configurations between Packages

## Advanced Control Flow

- ✚ Advanced Control Flow Overview
- ✚ Using Containers
- ✚ Transactions Support in Integration Services

## Error Handling and Logging

- ❖ When Things Go Wrong
- ❖ Checkpoints
- ❖ Handling Errors and Debugging
- ❖ Packaging Logging
- ❖ Event Handling

## Advanced Data Flow

- Synchronous and Asynchronous Transformations
- Using Advanced Transformations
- Handling Slowly Changing Dimensions

## Package Deployment

- Deploying Packages
- Create a Package Deployment Utility
- Installing a Package
- Redeploying Updated Packages

## Package Management

- ✚ Overview of Package Management
- ✚ Managing Integration Services Packages
- ✚ Executing Packages
- ✚ Integration Services Security

## Scripting and Custom Components

- ✓ Extending Integration Services Capabilities through Code
- ✓ Scripting in Control Flows with the Script Task
- ✓ Scripting in Data Flows with the Script Component

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Duration:

- ✓ Custom Integration Services Components

## Best Practices

- ✚ Best Practices for Using Integration Services
- ✚ Best Practices for Package Development and Design
- ✚ Data Flow Best Practices
- ✚ Deployment and Management Best Practices

## Going Beyond ETL

- ✚ Using Integration Services Beyond ETL
- ✚ Migrating and Maintaining SQL Servers with Integration Services
- ✚ Working with Analysis Services
- ✚ Working with Windows Management Instrumentation

## SSRS 2008 Training Outline

### Introducing SQL Server Reporting Services

- ❖ Investigate what SQL Server Reporting Services can do
- ❖ Explore the basic architecture of SQL Server Reporting Services
- ❖ Gain a basic understanding of the components behind SQL Server Reporting Services
- ❖ Learn how to create a basic report using the SQL Server Reporting Services Wizard

### Creating Tabular and List Reports

- Learn how to create a tabular report from scratch
- Learn about datasets and data regions
- Discover how to add textboxes and other controls to reports
- Investigate the list data region
- Learn how to work with rich text to produce mail merge style reports

### Calculations and Formatting

- ✚ Explore how to create expressions in your reports using
- ✚ Learn how to create custom functions using the Code window
- ✚ Discover the various global collections that you can reference in your expressions
- ✚ Learn how to format report items using the formatting toolbars, the Properties window, and the Textbox Properties dialog box
- ✚ Find out how you can use conditional formatting to make your reports more dynamic

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Duration:

- ✚ Learn about report variables and when you might need to use them

## Grouping and Sorting

- Explore creating groups
- Master the Reporting Services Grouping pane
- Learn how to calculate group totals and percentages
- Understand scope as it applies to aggregate functions
- Discover interactive sorting
- Find out how to create drill-down reports

## Working with Parameters

- ❖ Understanding how Reporting Services parameters work with stored procedure parameters
- ❖ Learn how to create parameters in ad-hoc SQL
- ❖ Find out how to display parameter values in report headers
- ❖ Discover how to improve parameter prompts using drop-down list parameters
- ❖ Dig into the use of unbound, multivalued, and cascading parameters
- ❖ Learn how to solve common parameter issues

## Creating Matrix Reports and Charts

- Learn how to create matrix reports
- Investigate Reporting Services charts
- Explore the use of Reporting Services gauges

## Managing Reporting Services

- ✚ Understand how to plan and configure for deployment
- ✚ Learn how to deploy Reporting Services projects and individual reports and data sources
- ✚ Explore exporting reports to a variety of formats and using the client-side printing feature of Reporting Services
- ✚ Investigate how to manage Reporting Services projects using Report Manager
- ✚ Explore creating linked reports

## Security

- Investigate how Reporting Services secures access to reports and other Reporting Services resources
- Find out how to use Report Manager to manage user accounts and roles

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Duration:

- Learn how to enable basic authentication for reports and how to require SSL for report operations
- Explore the storing of credentials within a data source

## Programming Reporting Services

- Discover the many application programming interfaces of Reporting Services
- Learn how to use URL to integrate Reporting Services reports into your applications
- Explore the use of the Report Viewer controls to create Web pages and Windows Forms that render Reporting Services reports in place
- Investigate how to use the Report Views controls in local mode to display reports that don't involve Reporting Services

## Advanced Reporting Services Programming

- ❖ Discover the classes and methods exposed by the Reporting Services Web Service API
- ❖ Learn how to call the Report Server Web Service
- ❖ Investigate how to call a custom assembly from a report
- ❖ Explore the potential deployment and security issues that might arise when working with custom assemblies

## Snapshots and Subscriptions

- Learn how to enable and control report caching
- Investigate the scheduling of report snapshots
- Explore the maintenance of report history
- Discover how to create standard report subscriptions
- Learn how to create data-driven report subscriptions

## Ad-Hoc Reporting with Report Builder 2.0

- Learn the differences between Report Builder 1.0 and Report Builder 2.0
- Explore how to use Report Builder to build ad-hoc tabular, matrix and chart reports
- Discover how to create Report Builder reports without using the wizards
- Learn how to create Report Model projects using Visual Studio and deploy them to a Reporting Services server

## SSAS 2008 Training Outline

### What Is Microsoft Business Intelligence?

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Duration:

- ✦ Define Business Intelligence
- ✦ Understand the Cube Structure
- ✦ Deploy and View a Sample Cube
- ✦ View a Cube by using Excel
- ✦ View a Cube by using SQL Reporting Services

## OLAP Modeling

- Understand Basic OLAP Modeling (star schema)
- Understand Dimensional Modeling (stars and snowflakes)
- Understand Measure (fact) and Cube Modeling
- Model with SQL Server Business Intelligence Development Studio (BIDS)

## Using SSAS in BIDS

- ❖ Understand the Development Environment
- ❖ Create Data Sources
- ❖ Create Data Source Views
- ❖ Create Cubes by using the Cube Wizard

## Intermediate SSAS

- Learn how to Create Key Performance Indicators (KPIs)
- Discover how to Create Perspectives
- See how to Create Translations for Cubes and Dimensions
- Review the three SSAS Action Object Types: Regular, Drillthrough, and Reporting

## Advanced SSAS

- ✓ Work with Multiple Fact Tables and the Dimension Usage Subtab in BIDS
- ✓ Explore Advanced Dimension Types
- ✓ Learn how to use the Business Intelligence Wizard
- ✓ Understand Writeback in Dimensions
- ✓ Review Semi-Additive Measures in OLAP Cubes

## Cube Storage and Aggregation

- View Aggregation Designs
- Customize Aggregation Designs
- Implement Proactive Caching
- Use Relational and SSAS Partitions
- Customize Cube and Dimension Processing

## Introduction to MDX Queries

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Duration:

- Understand Basic MDX Syntax
- Use the MDX Query Editor in SSMS
- Understand Common MDX Functions and Tasks
- Review MDX Functions New to SSAS 2008

## MDX Expressions

- ✦ Understand the Calculation Subtab
- ✦ Learn how to add Calculated Members
- ✦ Explore how to add MDX Script Commands
- ✦ Discover how to add .NET Assemblies

## Introduction to Data Mining

- ✦ Understand Data Mining Concepts
- ✦ Review the Algorithms that SSAS Includes
- ✦ Consider Data Mining Clients
- ✦ Understand Mining Structure Processing

## SSAS Administration

- ❖ Implement SSAS Security
- ❖ Implement XMLA Scripts in SSMS
- ❖ Deploy and Synchronize Databases
- ❖ Understand SSAS Database Backup and Restore

## Advanced Administration and Optimization

- ✓ Implement SSIS to Manage SSAS Databases
- ✓ Explore Clustering
- ✓ Explore Scalability Options
- ✓ Understand Performance Tuning and Optimization

## Introduction to SSAS Clients

- Design Reports using Reporting Services
- Design Reports by using Report Builder
- Implement Excel 2007 Pivot Tables and Charts
- Use Excel 2007 as a Data Mining Client
- Review Microsoft Office SharePoint Server 2007

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