

MSBI-SSIS SSRS & SSAS Course Content
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Introduction to Business Intelligence and Data warehouse

Introduction to SQL Server Integration Services

- Product History
- SSIS Package Architecture Overview
- Development and Management Tools
- Deploying and Managing SSIS Packages
- Source Control for SSIS Packages

SSIS for DBAs: Using SQL Server Management Studio

- The Import and Export Wizard
- Importing and Exporting Data
- Working with Packages
- Database Maintenance Plans
- Creating Database Maintenance Plans using SSMS
- Scheduling and Executing Plans
Examining Database Maintenance Plan Packages

Business Intelligence Development Studio

- Launching BIDS
- Project templates
- The package designer
- The Toolbox
- Solution Explorer
- The Properties window
- The Variables window. The SSIS menu

Introduction to Control Flow

- Control Flow Overview
- Precedence Constraints
- The Execute SQL Task
- The Bulk Insert Task
- The File System Task
- The FTP Task
- The Send Mail Task

Advanced Control Flow

- Containers – grouping and looping
- The Web Service Task
- The WMI tasks
- The Analysis Services tasks
- The Execute Process Task
- The Execute Package Task

Introduction to Data Flow

- Data Flow Overview
- Data Sources
- Data Destinations
- Data Transformations
- The Copy Column Transformation
- The Derived Column Transformation
- The Data Conversion Transformation
- The Conditional Split Transformation
- The Aggregate Transformation
- The Sort Transformation
- Data Viewers

Variables and Configurations

- Variables Overview
- Variable scope
- SSIS system variables
- Using variables in control flow
- Using variables in data flow
- Using variables to pass information between packages
- Property expressions
- Configuration Overview
- Configuration options

Debugging, Error Handling and Logging

- SSIS debugging overview
- Breakpoints in SSIS
- SSIS debugging windows
- Control Flow: The On Error event handler
- Data Flow: Error data flow

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- Configuring Package Logging • Built-in log providers

- Scheduling packages with SQL Server Agent

Advanced Data Flow

- Revisiting data sources and destinations
- The Lookup Transformation
- Getting Fuzzy: The Fuzzy Lookup and Fuzzy Grouping Transformations
- The Multicast Transformation
- The Merge and Merge Join Transformations
- The Data Mining Query Transformation
- The Data Mining Model Training Destination
- The Slowly Changing Dimension Transformation

CDC (Change data capture) Control flow & Data flow task

SSIS Catalog Reports (Dashboard)

Package upgrades from legacy to SSIS 2012

SQL Server Reporting Services (SSRS):

Introducing SQL Server Reporting Services

- Tour of Features
- Reporting Services Architecture
- Reporting Services Terminology
- Reporting Services Editions

Extending SSIS through Custom Code

- Introduction to SSIS scripting
- The SSIS script editor
- The SSIS object model
- Script in Control flow: The Script Task
- Script in Data flow: The Script Component
- Introduction to SSIS component development

Creating Reports

- Deconstructing Reporting Services
- Shared Data Sources
- Creating Reports from Scratch

Calculations and Formatting

- Creating Expressions
- Using the Global Collections
- Formatting Items
- Conditional Formatting

SSIS Package Deployment

- Configurations and deployment
- The deployment utility
- Deployment options
- Deployment security
- Executing packages – DTExec and DTExecUI

Grouping and Sorting

- Creating Groups
- Calculating Totals and Percentages
- Interactive Sorting
- Creating Drill-Down Reports

SSIS Package Management

- The SSIS Service
- Managing packages with DTUtil
- Managing packages with SQL Server Management Studio

Report Parameters

- Creating Report Parameters
- Creating Drop-Down Parameters
- Multi-Valued Parameters
- Debugging Parameter Issues

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Creating Matrix Reports and Charts

- Creating a Basic Matrix Report
- Matrix Subtotals
- Creating a Basic Chart
- Exploring the Charting Possibilities

Managing Reporting Services

- Deploying Reports and Data Sources
- Exporting Reports and Printing
- Using the Web-Based Report Manager

Reporting Services Security

- Two Parts to Reporting Services Security
- Securing Access to Reports
- Data Source Security

Programming Reporting Services

- The Many Reporting Services APIs
- Integrating Reporting Services into Applications using URL Access
- Using the Report Viewer Controls

Advanced Reporting Services Programming

- Using the Reporting Services Web Service
- Working with Custom Assemblies

Snapshots and Subscriptions

- Caching and Snapshots
- Creating Standard Subscriptions
- Creating Data-Driven Subscriptions
- Managing Subscriptions

Ad-Hoc Reporting with Report Builder

- The Report Builder Architecture
- Creating Report Model Projects
- Running Report Builder

SQL Server Analysis Services (SSAS)

What Is Microsoft BI?

- Core concept – BI is the cube or UDM
- Example cube as seen using Excel pivot table
- MS BI is comprehensive – more than Analysis Services on SQL Server
- Demonstration of SQL Reporting Services with cube as data source

Using SSAS in BIDS

- Understanding the development environment
- Creating Data Sources and Data Source Views
- Creating cubes – using the UDM and the Cube Build Wizard
- Refining Dimensions and Measures in BIDS

Intermediate SSAS

- KPIs
- Perspectives
- Translations – cube metadata and currency localization
- Actions – regular, drill-through and reporting

Advanced SSAS

- Using multiple fact tables
- Modeling intermediate fact tables
- Modeling M:M dimensions, Fact (degenerate) dimensions, Role-playing dimensions, writeback dimensions
- Modeling changing dimensions – Dimension Intelligence w/ Wizard
- Using the Add Business Intelligence Wizards – write-back, semi-additive

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measures, time intelligence,
account intelligence

Cube Storage and Aggregation

- Storage topics – basic aggregations, MOLAP
- Advanced Storage Design – MOLAP, ROLAP, HOLAP
- Partitions – relational and Analysis Services partitions
- Customizing Aggregation Design – Processing Design
- Rapidly changing dimensions / ROLAP dimensions
- Welcome to the Real Time – Proactive Caching
- Cube processing options

MDX

- Basic syntax
- Using the MDX query editor in SQL Server Management Studio
- Adding calculated members
- Adding scripts
- Adding named sets
- SSAS Administration
- Best practices – health monitoring
- XMLA scripting (SQL Mgmt Studio)
- Security – roles and permissions
- Disaster Recovery – backup / restore

Introduction to Reporting Clients

- Excel 2007/ Power pivot
- SQL RS & Report Builder
- Sharepoint Performance Point Services 2010