

## SQL Server Integration Services (SSIS)

### 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

### SSISforDBAs: UsingSQLServer 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 (BIDS)

- 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
- Configuration discipline

## 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
- Configuring Package Logging
- Built-in log providers

## 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

## 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

## SSIS Package Deployment

- Configurations and deployment
- The deployment utility
- Deployment options
- Deployment security
- Executing packages – DTEXEC and DTEXECUI

## SSIS Package Management

- The SSIS Service

## SQL Server Reporting Services (SSRS) Introduction to SQL Server Reporting Services

- Tour of Features
- Reporting Services Architecture
- Reporting Services Terminology
- Reporting Services Editions
- Taking Reporting Services for a Spin

## 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

## Grouping and Sorting

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

## Report Parameters

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

## 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
- Using SQL Server Management Studio-based Reporting Services Manager

## 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 datasource

## Using SSAS in BIDS

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

## Intermediate SSAS

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

## 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
- Welcome to the Real Time – Proactive Caching
- Cube processing options

## MDX

- Basic syntax
- Using the MDX query editor in SQL
- Server Management Studio
- Most-Used Functions & Common tasks New MDX functions
- Adding calculated members
- Adding scripts
- Adding named sets

## **Resume preparation & placement Assistance**