

SQL Server Integration Services

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

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 OnError 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

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

SSIS Package Deployment

- ✓ Configurations and deployment
- ✓ The deployment utility
- ✓ Deployment options
- ✓ Deployment security
- ✓ Executing packages – DTEXec and DTEXecUI

SSIS Package Management

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

SQL Server Reporting Services

Introducing 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

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

OLAP Modeling

- ✓ Modeling source schemas-stars and snowflakes
- ✓ Understanding dimensional modeling- Dimensions (Type 1, 2, or 3) or rapidly changing
- ✓ Understanding fact (measures) and cube modeling

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 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

Beginning MDX (All Basics)

- ✓ Basic syntax
- ✓ Using the MDX query editor in SQL Server Management Studio
- ✓ Most-used Functions & Common tasks
- ✓ New MDX functions

Intermediate MDX

- ✓ Adding calculated members
- ✓ Adding scripts
- ✓ Adding named sets

SSAS Administration

- ✓ Best practices – health monitoring
- ✓ XMLA scripting (SQL Mgmt Studio)
- ✓ Other Documentation methods
- ✓ Security – roles and permissions
- ✓ Disaster Recovery – backup / restore
- ✓ Clustering – high availability

Introduction to Data Mining

- ✓ What and why?

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- ✓ Examples of using each of the 9 algorithms (MS Clustering, MS Decision Trees, Naïve Bayes, MS Sequence Clustering, MS Time Series, MS Association Rules, MS Neural Network)
- ✓ Data mining dimensions
- ✓ Data mining clients
- ✓ Processing mining models

Introduction to Reporting Clients

- ✓ Excel 2003 Pivot Tables
- ✓ SQL RS & Report Builder

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