

MSBI Training Syllabus

SQL Server Integration Services- SSIS

Introduction to SQL Server Integration Services

- SSIS Framework/Architecture
- SSIS Package Architecture Overview
- Development and Management Tools
- The Import and Export Wizard

Introduction to Data Flow

- Data Flow Overview
- Data Sources
- Data Destinations
- Data Flow Transformations
- Data Viewers

Data Sources

- Excel Source
- Flat File Source
- OLE DB Source
- XML Source

Data Flow Transformations

- Aggregate Transformation
- Audit Transformation
- Character Map Transformation
- Conditional Split Transformation
- Copy Column Transformation
- Derived Column Transformation
- Data Conversion Transformation
- Multicast Transformation
- OLE DB Command Transformation
- Percentage Sampling Transformation
- Row Count Transformation
- Sort Transformation
- Union All Transformation

Advanced Data Flow Transformations

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- Lookup Transformation
- Merge Transformation
- Merge Join Transformation
- Slowly Changing Dimension Transformation
- Pivot Transformation
- Export Transformation
- Import Transformation
- Un pivot Transformation

Data Flow Destinations

- Data Reader Destination
- Excel Destination
- Flat File Destination
- OLE DB Destination

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
- Bulk Insert Task
- Data Flow Task
- Execute DTS 2000 Package Task
- Execute Package Task
- Execute Process Task
- Web Service Task
- XML Task

Advanced Control Flow

- For Loop Container
- For Each Loop Container
- Sequence Container

Variables and Configurations

- Variables Overview

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- 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
- Configuring Package Logging
- Breakpoints in SSIS
- Event handler in SSIS
- Configure Error output in Data Flow
- Data Viewers
- Configure Check Points
- Transactions in SSIS
- SSIS Security

Extending SSIS through Custom Code – Scripting

- 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 Deployment

- Create Configuration Files
- Implement Logging
- Different Deployment Options
- Executing packages using utilities – DTEXEC and DTEXECUI
- Schedule SSIS Packages with SQL Server Agent Jobs
- Monitoring Jobs in SQL Server
- Call SSIS Packages in Stored Procedures
- Call SSIS Packages in command prompt

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SQL Server Reporting Services (SSRS)

SQL Server Reporting Services (SSRS) Architecture

- Architecture of SSRS
- Components in SSRS
- Phases of Report Development Life Cycle
- Report types and formats
- SSRS Web Services
- Report Server
- Report Builder
- Model Designer
- Data sources: SQL Server, Oracle, OLE DB

Creating basic reports

- Tabular
- List
- Matrix
- Chart
- Constructing data sources and Datasets
- Inserting a data region, fields and images

Report Authoring

- Table Reports and Matrix Reports
- Report Designer Paging Options
- Drill-down Reports
- Chart Reports, Indicator, Gauge Control Reports
- List Reports
- Use Page Header and Page Footer
- Drill-Through or Linked Reports
- Sub Reports
- Create Report Template and use it in new Reports
- Parameter Reports
- Single Parameter
- Multiple Parameters
- Cascading Parameter
- Create Calendar in Parameters

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- Default Values and Drop Down list options
- Expressions in SSRS
- Understand conditional formatting
- Adding images
- Grouping and Sorting
- Page Header and Page Footer
- Aggregate Functions
- Sub Totals and Grand Totals
- Document Map Reports
- Create Reports with Stored Procedures
- Create Reports with SSAS Cube

Deploying reports to the server

- Report Server Configuration
- Configure Report Server details in SSRS Project
- Report Deployment to Report Server

Creating reports with Report Builder

- Deploying Report Builder to users
- Dragging and dropping entities onto charts and tabular reports
- Navigating data with infinite drill through

Report Manager and Delivery

- Report Builder to create ad-hoc Reports
- Create Linked Reports
- Create Subscriptions
- Standard Subscriptions
- Data Driven Subscriptions
- Cache a Report
- Snapshot a Report
- Report Logging

Data Warehouse Concepts with Mini Project

- Intro to OLTP and OLAP
- Intro to Data Warehouse
- Dimension Modeling
- Star and Snowflake Schema
- Dimensions and Measures/Facts

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- Data Warehouse Vs Data Mart
- Build the DWH from Source System (OLTP)
- Loading the data from OLTP to DWH using SSIS Packages
- Understand Time Table in DWH

SQL Server Analysis Services (SSAS)

Introduction to SSAS

- Brief Introduction to SSAS
- Using SSAS in BIDS
- Understanding BIDS
- Creating Data Sources
- Creating Data Source Views
- Creating a Cube Using the Wizard
- Refining Dimensions and Measures

Intermediate SSAS

- Creating KPIs
- Creating Perspectives
- Creating Translations
- Creating Actions
- Advanced SSAS
- Working with Multiple Fact Tables
- Using Advanced Dimension Types
- Working with Changing Dimensions
- Using the Business Intelligence Wizard

Cube Designing and development

- Different Ways to Create CUBE
- Measures and Measure Groups
- Diff between BUILD, DEPLOY and PROCESS
- Calculated Columns

Hierarchies

- Creating and Managing Hierarchies
- Translations

Beginning MDX

- Understanding MDX

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- About Members, Tuples and Sets
- Common MDX Functions Explained
- New or Updated MDX Functions or Keywords

Intermediate MDX

- Understanding the Calculations Sub tab
- Adding Calculated Members
- Adding MDX Scripts
- Adding Named Sets

SSAS Administration

- Implementing SSAS Security
- Implementing XMLA Scripts
- Understanding SSAS Backup and Restore
- Understanding Performance Optimization

Introduction to SSAS Clients

- Using Excel 2007 Pivot Tables
- Using SQL Server Reporting Services

Partitions-Aggregations

- What are Partitions and How to create Partitions?
- On what basis a Partition are created?

Actions, Calculations, Perspectives and KPIs

- What are Actions and How to create IT?
- Understand KPIs and Create KPIs
- Understand Calculations and Create Calculations
- Creating Perspectives

Deploying the Cube

- Generate XMLA Script and Deploy a Cube in SQL Server
- Create Jobs to process the cube in SQL Server
- Different Approaches to Deployment
- Client Interactions with Excel