

SQL Sever Developer (MSBI) Course Content

Course Content:

Introduction to MSBI and Datawarehouse concepts

- Definition of Data Warehouse
- Why Data Warehouse
- DWH Architecture
- Star and Snowflake schema
- Transaction Data
- Dimension Table
- Fact Table
- OLTP(Online Transaction Processing System)
- OLAP(Online Analytical Processing System)

SQL Server Reporting Services

- Reporting Services Architecture
- Core Components of SSRS Reports
- Types of Reports
- Basic SSRS Report
- Data Sources and Shared Data Sources
- Datasets and Shared Datasets
- Report Parameters
- Cascading parameters
- Drill down Report
- Drill Through Report
- Report Formatting
- Custom Expressions
- Subscriptions
- Report Manager and Report Server
- Report Security
- Improving Report Performance

SQL Server Integration Services

1. Getting started with SSIS

- SSIS Overview
- Import and Export Wizard
- SSIS Architecture – Packages, Control Flow, Data Flow, Variables, Parameters, Error Handling and Logging
- Creating a Solution and Project
- Exploring SQL Server Data Tools

- The SSIS Package Designer - Control Flow, Connection Managers, Variables, Data Flow, Parameters, Event Handlers, Package Explorer, Executing a Package
- Creating Your First Package

2. Control Flow

- What is Control Flow
- Using Precedence Constraints
- Manipulating Files with the File System Task
- Coding Custom Script Tasks
- Using the Execute SQL Task
- Using the Execute Process Task
- Using the Expression Task
- Using the Send Mail Task
- Using the FTP Task
- Creating a Data Flow

3. Data Flow lesson

- Extracting Data from Sources
- Loading Data to a Destination
- Changing Data Types with the Data Conversion Transform
- Creating and Replacing Columns with the Derived Column Transform
- Rolling Up Data with the Aggregate Transform
- Ordering Data with the Sort Transform
- Joining Data with the Lookup Transform
- Auditing Data with the Row Count Transform
- Combining Multiple Inputs with the Union All Transform
- Cleansing Data with the Script Component
- Separating Data with the Conditional Split Transform
- Altering Rows with the OLE DB Command Transform
- Handling Bad Data with the Fuzzy Lookup
- Removing Duplicates with the Fuzzy Grouping Transform

4. Containers

- Sequence Containers
- For Loop Containers
- For each Loop Container

5. Making Packages Dynamic

- Making a Package Dynamic with Variables
- Making a Package Dynamic with Parameters
- Making a Connection Dynamic with Expressions
- Making a Task Dynamic with Expressions

6. Configuring Packages

- Using Configuration Tables to deploy SSIS package
- Using Configuration Files to deploy SSIS package

7. Troubleshooting SSIS Package

- Logging Package Data
- Using Event Handlers
- Troubleshooting Errors
- Using Data Viewers
- Using Breakpoints

8. Administering SSIS

- Creating and Configuring the SSIS Catalog
- Deploying Packages to the Package Catalog
- Configuring the Packages
- Configuring the Service
- Securing SSIS Packages
- Running SSIS Packages
- Scheduling Packages

9. Loading a Warehouse

- Dimension Load
- Fact Table Load

SQL Server Analysis Services

- Definition of Cube
- Advantage of Cube
- Star and snowflake schema
- Dimensions and Dimension Types
- Measures and Measure Types
- Fact Table and Types
- Data Source
- DSV(Data Source View)
- Hierarchy and Types
- Cube Structure
- Dimension Usage and Relationships
- Calculations
- Partitions
- KPIs
- Actions
- Aggregations
- Perspectives
- Translations

- Browser
- Storage Models (ROLAP, MOLAP and HOLAP)

SQL Server Programming (T-SQL)

- SQL Intro
- Constrains
- DDL commands
- DML Commands
- Joins
- String Functions
- Date Functions
- Aggregate Functions
- Temp Table, Table Variable
- CTE(Common Table Expression)
- Sub Queries
- Operators
- Case Statements
- While Loop and If else Statements
- Views
- Stored procedures
- Functions
- Cursor
- Triggers
- Indexes
- Identity
- Exception Handling