

Course Content

Data Warehousing and ETL with SSIS

Introduction to Data Warehouse

- What is Data Warehouse?
- Data Warehouse Architecture
- Leveraging DW Components
- Data Warehouse Designing

Introduction to Data Integration & SSIS

- Defining SQL Server Integration Services (SSIS)
- Exploring the need for migrating diverse data
- Managing heterogeneous data
- Leveraging the Extract, Transform and Load (ETL) capabilities of SSIS
- The role of Business Intelligence (BI)
- Need for SSIS and ETL / DWH Entities
- Understanding SSIS Tools
- SSIS Configuration and Catalog DB
- Control Flow Tasks Architecture
- Data Flow Tasks and ETL Architecture
- Data Pipelines and Data Buffers

Basic ETL Entities in SSIS

- Running wizards for basic migrations
- Creating packages for complex tasks
- SSIS Data Types and Data Conversions
- SSIS Local and Global Variables
- Dynamic Precedence Constraints
- Dynamic Connection Managers in DFT
- Data Flow Transformations and Usage
- Handling ETL Enumerations in SSIS
- ETL with Loops & Indexed Connections

SSIS Expressions & Package Debugging

- Conditional Precedence Expressions
- SSIS Parameters Usage and Variables
- Control Flow Breakpoints - Usage
- Data Flow Data Viewers and Audits
- SSIS Expressions & Debugging Options
- Debugging SSIS Packages & Limitations
- Debugging Procedures in Realtime

Data Flow Transformations and ETL

- Row and Column Transformations
- Combining and Splitting Data
- Performing SQL Database Operations
- MERGE Vs UNION ALL Transformations
- Lookup, Fuzzy Lookup and Grouping
- SORT Vs AGGREGATE Transformations
- OLE-DB Command Usage & Parameters
- Derived Columns & Data Conversions
- SSIS Parameter Mappings & Options
- Tabular Data Stream & Commit Size
- Table Locks & Batch Calculations

SSIS Customizations with .NET

- SSIS SCRIPT Task (.NET) and Coding
- Scripts for Control Flow Limitations
- Scripts for Data Flow Limitations
- ADO Connections and DataAdapters
- Custom Code Handling in SSIS
- Script Tasks & Notify Operators
- SSIS Expressions and Iterations
- Iterating Files and Scripts in SSIS
- OLE DB Command - Internal Parameters
- OLE DB Command - External Parameters