

MSBI :- 30 days – 30 hrs

Introduction to Integration Services

Defining SQL Server Integration Services (SSIS)

- Exploring the need for migrating diverse data
- The role of Business Intelligence (BI)

SSIS Architecture and Tools

Managing heterogeneous data

- Leveraging the Extract, Transform and Load (ETL) capabilities of SSIS
- Running wizards for basic migrations
- Creating packages for complex tasks

Illustrating SSIS architecture

- Distinguishing between data flow pipeline and package runtime
- Executing packages on the client side or hosted in the SSIS service
- Bulletproofing a package with package environment configurations

Simplifying deployments

- Switching between project and package deployment modes
- Deploying packages to the SSISDB
- Running packages from SQL Server
- Leveraging package parameters

Implementing Tasks and Containers

Utilizing basic SSIS objects

- Configuring connection managers
- Adding data flow tasks to packages
- Reviewing progress with data viewers
- Assembling tasks to perform complex data migrations
- Migrating multiple files with FOREACH container
- Handling multiple iteration of data loading using FORE LOOP container.
- Usage of Sequence Container with real time examples.

Operating system-level tasks

- Copying, moving and deleting files
- Transferring files with the FTP task

- Communicating with external sources
- Sending messages through mail

Extending Capabilities with Scripting

Writing expressions

- Making properties dynamic with variables
- Utilizing expressions in loop iterations

Script Task

- Extending functionality with the Script Task
- Debugging, breakpoints and watches

Transforming with the Data Flow Task

Performing transforms on columns

- Converting and calculating columns
- Transforming with Character Map

Profiling, combining and splitting data

- Merge, Union and Conditional Split
- Multicasting and converting data

Manipulating row sets and BLOB data

- Aggregate, sort, audit and look up data
- Importing and exporting BLOB data
- Redirecting error rows

Performing database operations

- Executing a SQL task
- Bulk inserting data from text files

Error Handling, Logging and Transactions

Organizing package workflow

- Defining success, failure, completion and expression precedence constraints
- Handling events and event bubbling
- Usage of Event handler with various examples.

Designing robust packages

- Choosing log providers
- Adapting solutions with package configurations

- Auditing package execution results

Managing and Securing Packages

- Managing Package Storage
- Importing and Exporting Packages
- Modifying Configuration Values at Runtime
- Scheduling Package Execution
- Monitoring Package Execution
- Troubleshooting Package Execution
- Backing Up and Restoring Packages

Lab Scenario

- Every session comprises of a lab scenario with the real time examples.

Introduction to SQL Server Reporting Services- 10 hours

- Top New Features of SSRS
- The Reporting Lifecycle
- Reporting Services Architecture
- Highlights of Reporting Services
- Identifying deployment: native, integrated or single-server
- Reporting Services Scenarios

Developing Reports

Leveraging Reporting Services tools

- Web reporting using Report Builder
- Accessing the power of Visual Studio

Designing fundamental reports

- Connecting to relational and multidimensional sources
- Generating a Tablix reporting structure

Composing expressions

- Computing custom fields
- Linking expressions to properties

Arranging and sorting data

- Multiple-level grouping and categorizing the results
- Applying aggregate functions

Producing various outputs from a Tablix

- Creating parallel dynamic group report formats
- Combining dynamic and static columns

Integrating Parameters and Filters

Incorporating parameters into reports

- Yielding subsets of data with query parameters
- Constructing cascading report parameters
- Transmitting parameters to stored procedures

Applying filters to report data

- Augmenting performance with filters
- Determining filters vs. query parameters

Implementing Interactive Features

Combining multiple data regions in one report

- Applying sequential and nested regions
- Creating master/detail reports and linking sub reports

Showing robust data with relevant detail

- Drilling through report detail and drilling down
- Navigating reports with document maps

Deploying and Delivering Reports

Deploying reports to the server

- Publishing reports and configuring project properties
- Verifying results with Report Manager

Identifying delivery options

- Enhancing performance with cached instances
- Configuring snapshot history

Dispatching subscription reports

- Publishing reports via e-mail and file share
- Seamlessly delivering reports by data-driven subscriptions

Integrating reports with SharePoint

- Deploying reports to SharePoint
- Viewing results in Report Center and Data Connections

Safeguarding Reporting Services

Structuring content security

- Leveraging existing Windows authentication
- Establishing permission levels on report items

Ensuring the RS system

- Instituting varying levels of administrative roles
- Granting and revoking system-level permissions

Extended Reporting and Data Visualization

Designing reports for data visualization

- Improving data visualization with spark lines, data bars, maps and indicators
- Implementing Key Performance Indicators (KPIs)

Delivering reports to users

- Accessing and controlling reports using URLs
- Embedding reports in applications with the Report Viewer
- Delivering reports through SharePoint

Introduction to SQL Server Analysis Services – 2 hours

- Top New Features of SSAS
- The Analysis Lifecycle
- Analysis Services Architecture