

MSBI& SQL Training

SQL Server:

SQL DATA (DONE)

- Data And Database
- What is data
- Types of Data
- How Is Data Collected
- Importance Of Data
- Data Storage
- What is Data Base
- Types of Database
- What is DBMS
- What is RDBMS

INTRODUCTION TO SQL AND SQL SERVER (DONE)

- What is SQL?
- History of SQL
- Introduction to Microsoft SQL Server
- SQL Server versions And Editions
- Default Instance
- Named Instance
- Starting and Stopping SQL Server Services
- Overview SQL Server components

SQL BASICS (DONE)

- How to use SQL Server Management Studio
- Connecting to SQL Server
- Windows Authentication
- SQL Server Authentication
- System Databases
- Master database
- Msdb Database
- Model database
- Temp Database
- DDL Commands
- Create
- Alter
- Drop
- User Defined Database
- Create, Alter, Drop a database using SQL script and Tool

SYSTEM TABLES (DONE)

- What are system tables?
- Use of system tables
- User Defined Tables
- Create, Alter and Drop a table using SQL Script and Tool
- DQL command
- Introduction to Select
- DML commands
- Insert
- Update
- Delete

SQL SERVER CONSTRAINTS (DONE)

- SQL Server constraints
- NULL constraint
- Primary Key constraint
- Foreign key constraint
- Unique key constraint
- Check constraint
- Default constraint

CLAUSES (DONE)

- From clause
- WHERE clause
- Relational operators and Wild Characters
- Order By clause
- Group by clause
- Having Clause
- IN clause
- Between Clause
- Identity property

SQL JOINS (DONE)

- Introduction to joins
- Types of joins
- Inner join
- Left outer join
- Right outer join
- Full outer join
- Cross join
- Self join

INTO AND UNIONS (DONE)

- Select Into
- Union All and Union
- Intersect and Except
- Top and Distinct
- Truncate
- Sub queries
- Correlated Sub queries
- Conditional Statements
- If, case, and While loops
- MERGE Statement

INDEXES

- Introduction to Indexes
- Use of Index
- Types of Index
- Clustered Index
- Non Clustered Index
- Covering Index
- Column Store Index

Views

- Introduction to Views
- Catalog Views
- User defined Views
- Create Alter and Drop Views
- Partitioned Views
- Indexed Views
- Advantage and Disadvantage of views

SQL CURSORS

- Dynamic SQL
- Introduction to Cursors
- Types of Cursors
- Advantages of cursors

FUNCTIONS

- Introduction to functions
- Built in functions
- Aggregate functions
- String functions
- Date functions

- Ranking functions
- User defined functions
- Create Alter and Drop functions
- Scalar Functions
- Inline table valued functions
- Multi statement Table valued functions
- Uses of functions

TRIGGERS

- Introduction to triggers
- Types of triggers
- Create Alter and Drop a trigger
- DML Triggers
- DDL Triggers
- Logon Triggers
- Use of Triggers

STORED PROCEDURES (DONE)

- Declare and Set commands
- System stored procedures
- User defined stored procedures
- Create Alter and Drop Stored Procedures
- Executing Stored Procedures
- Grant and Revoke Permissions to Stored Procedures
- Input and output parameters
- Capturing the stored procedure output
- Advantages of Stored Procedures

Implementing Error Handling

- Redirecting errors with TRY/CATCH
- Creating error handling routines in a CATCH block with ERROR functions
- Using THROW to pass an error message back to a client

Implementing Transactions

- Commit
- Roll back
- Save point

Improving Query Performance

- Viewing query execution plans
- Using SET STATISTICS statements

- Viewing index usage

SQL Server 2012 new features.

SSRS:

Introducing SQL Server Reporting Services

- Tour of Features
- Reporting Services Architecture
- Reporting Services Terminology
- Reporting Services Editions

Creating Reports

- 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

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

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 Integration Services Course Content

SSIS:

Introduction to SQL Server Integration Services(DONE)

- 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 (DONE)

- The Import and Export Wizard

- Importing and Exporting Data
- Working with Packages
- Database Maintenance Plans
- Creating Database Maintenance Plans using SSMS
- Scheduling and Executing Plans · Examining Database Maintenance Plan Packages

Business Intelligence Development Studio (DONE)

- Launching BIDS
- Project templates
- The package designer
- The Toolbox
- Solution Explorer
- The Properties window
- The Variables window · The SSIS menu

Introduction to Control Flow (DONE)

- 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 on Error 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

SSIS 2012 new features

- CDC (Change data capture) control Flow & Dataflow task
- SSIS Catalog Reports (Dashboard)
- Package upgrades from legacy to SSIS 2012

SQL Server Analysis Services Course Content

SSAS:

What Is Microsoft BI?

- Core concept – BI is the cube or UDM
- Example cube as seen using Excel pivot table
- MS BI is comprehensive – more than Analysis Services on SQL Server
- Demonstration of SQL Reporting Services with cube as data source

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, writebackdimensions

- 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

MDX

- Basic syntax
- Using the MDX query editor in SQL Server Management Studio
- Adding calculated members
- Adding scripts
- Adding named sets

SSAS Administration

- Best practices – health monitoring
- XMLA scripting (SQL Mgmt Studio)
- Security – roles and permissions
- Disaster Recovery – backup / restore

Introduction to Reporting Clients

- Excel 2007/ Power pivot
- SQL RS & Report Builder
- Sharepoint Performance Point Services 2010