MICROSOFT BUSINESS INTELLIGENCE (MSBI: SSIS, SSAS, SSRS)

Module 1 - SQL Server Integration Services (SSIS)

SSIS Architecture and DW Concepts
- Need of SSIS for ETL Operations
- Data Warehouse Design and SSIS
- DW Components and SSIS Tools
- SSIS Configuration and Catalog DB
- Control Flow Tasks Architecture
- Data Flow Tasks Architecture
- Data Pipelines and Buffer Usage
- SSIS Data Types and Conversions
- SSIS Local & Global Variables
- Dynamic Precedence Constraints
- Dynamic Connection Managers
- Data Flow Transformations usage
- Handling Enumerations in SSIS
- Expressions and Iterations
- SCRIPT Task usage in SSIS

SSIS Expressions & Debugging
- Conditional Precedence Expressions
- SSIS Parameters Usage and Variable
- Control Flow Breakpoints
- Data Flow Data Viewers and Audits

Data Flow Transformations
- Row and Column Transformations
- Combining and splitting datasets
- Performing database operations
- MERGE Vs UNION ALL Transformations
- Lookup, Fuzzy Grouping, OLE-DB Command
- SORT Vs AGGREGATE Transformations
- Custom Code Handling in DW
- Event Notifications and Emails
- Data Sampling and Data Delta
- Type I and Type II SCDs
- Performing PIVOT operations
- SSIS Transactions & Isolation Levels
- CHECKSUM Transformation in DW
- Iterating XML nodes and Data
- CACHE Transformation & Performance
- Applying Configuration Options
- Parent – Child Parameters & Options

Event Logging and Event Handling
- Configurations and benefits
- System Events and Audits
- Package Event Handling
- Limitations of Event Handling
- Event Bubbling Escalations
- Benefits of SSIS Logging
- Environment Variables Usage
- Windows Event Logs and SSIS
- SQL Server Logging Limitations
- Choosing correct log providers
- Package Execution Audits

Deployment Procedures
- Deployment Versioning & Options
- SSIS Deployment Phases & Manifest Files
- Project Packaging and ISPAC Files
- Validation & Verification Techniques
- SSIS Checkpoints and Usage
- Data Analytics and Debugging
- Data Profiler & ADO Connections

Deployment Options & Utilities
- Package Execution Options
- File System Security Limitations
- SSIS Deployment & DB Engine
- SSIS Catalog Project Files
- Package Migration Utilities
- Command-Line Deployments
- TDS Sizing and Tuning Options

SSIS Package Security and Upgrades
- Encrypting SSIS Catalogs
- Package Store and SSISDB
- Security Audits and Reports
- Container and Package Logging
- DTS packages to SSIS migration
- Upgrading 2008 Packages to 2012
- MSDB and SSIS Catalog Files
- Comparing SSIS 2008 R2 & 2012
- ISPAC Files & Package Migrations

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Module 2 - SQL Server Analysis Services (SSAS)

Introduction to SSAS and DW Storage
- Need of OLAP Databases and DW Store
- Tabular & Multidimensional Modes
- Need for Cubes and Measures
- Identifying Facts and Dimensions
- Identifying Measures and Aggregates
- Identifying Attributes and Hierarchies

SSAS Design Entities & Cube Usage
- Data Source and Data Source Views
- Computed and Named Queries
- Building Entity Relationships
- Deciding Data Warehouse Schema
- Creating Dimensions and Builds
- Attributes and Member Names
- Choosing Dimension Templates
- Applying Time Based Dimensions
- Need for Hierarchies and Limitations
- Attribute Relations and Uses
- Building Levels and Hierarchies
- Need for Composite Attribute Keys

KPI Calculations and Partitioned Aggregations
- Identifying Cube Entries for FASMI Rules
- Measures and Additives (Full and Semi)
- Defining Measure Groups and Measures
- Cube Customizations and Options
- BI Enhancements and Granularity
- Building Fact Less Cube Dimensions
- Calculations and Conditional Colors
- MDX Scripting for Calculations
- Defining KPIs and Goals using MDX
- Perspectives using MDX Expressions
- SSAS Actions with MDX and XMLA
- Need for Cube Partitions and Query Binding
- Local and Remote Server Partitions
- Need for Storage Models – MOLAP and ROLAP
- Generation of Aggregations on Partitions
- Storage Modes and Proactive Caching
- Hierarchies and Relations in Tabular Mode
- TIME Dimensions in Tabular Mode

MDX Functions, FILTERS and JOINS
- MDX Language Syntax & Statements
- MDX Functions & JOINS
- Complex MDX Queries & FILTERS
- PARALLELPERIOD, TIME Functions
- Conditional FILTERED JOINS in MDX
- Cube and Dimension Write backs
- MDX Transactions & Limitations

Data Mining and Forecast
- Need for Data Mining Structures
- Data Mining Algorithms and Rules
- DMX Queries and Forecast Reports
- Data Mining Scope and Ranking
- Prediction Functions and Analysis

Deployment (Tabular & Multidimensional)
- Deployment Options and Tools
- Creating OLAP (SSAS) Databases
- Processing Options and stages
- SSAS Database and Cube Audits
- Managing SSAS Log Providers
- OLAP & Tabular Database Backups
- Restore Options and Partitions
- Scripting DB Backups and XMLA
- Scheduling Backups and Jobs
- DB Synchronizations and XMLA
- Managing Partitions & Aggregations

OLAP Management (Tabular & Multidimensional)
- Need for Optimizations and Audits
- Designing Aggregations using UBO
- OLAP Restore Options and XMLA
- SSAS Security Roles and Scope
- Object Level Access and MDX
- Drill-Through Security and MDX
- Item Level Security and DAX Filters
- Dynamic Security Implementation
- Security Audits and Cube Access Logs
- Upgrading OLAP Databases (DW)
- OLAP DB Synchronization Script

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Module 3- SQL Server Reporting Services (SSRS)

Reporting Services Architecture
- Introduction to Reporting Services
- Three-Phase Report Life Cycle
- Reporting Engine Architecture
- SSRS 2012 and Web Service URLs
- SSRS 2012 Configuration & Ports

Report Design with Data Sets & Aggregates
- Report Designer Usage and Scope
- Report Builder Usage and Scope
- Report Manager and Options
- Report Delivery & Layout Planning
- Enterprise and Ad-hoc Reports
- Working with Multiple DataSets
- Configuring Dynamic DataSets

Sub Reports – Parameters & Filters
- Designing Wizard based Reports
- Designing Custom Reports
- Using Tables and Matrix
- Chart Based Reports and Images
- Using SSRS Expressions & Global Fields
- Sub Reports and Report Options
- Report Testing and auto Refresh
- BUILD and DEPLOY Options
- Parameters and Dynamic Populations
- Report Filters in Data Sets
- Sub Reports and Nested Reports
- Gauge Reports, Indicator Reports
- Pie Charts and Data Bars
- Exporting Reporting Data

Cube Reports and Report Models
- Designing Reports using OLAP DBs
- Identifying KPIs and Measures
- MDX Queries in Cube Reports
- Report Models and parameters
- Identifying Report Entities
- Identifying different Attributes
- Aggregations Based Expressions Calculations
- Remote Data Sources & Data Sets
- Linked Reports and Graphs

Report Builder Usage & Schedules
- Using Report Builder Wizards
- Map Reports with UI and Site Settings
- Report Parts and Web Services
- Report Designer Vs Report Builder
- Report Server Configurations Tools
- Report Migrations and Precautions

Delivering SSRS Reports
- Report Delivery Options & Schedules
- Accessing and controlling reports
- Leveraging RS Web services
- Choosing between Rendering Formats

Managing Reports
- Report Manager Configurations
- Managing Data Sources Security
- Exporting and Importing Reports
- Creating Global Schedules – Site Level
- Snapshot Management & Schedules
- Regenerating Snapshots for Tuning Options
- ReportServerTempdb Usage
- Tuning Reports with Caching Options

Scheduling and Subscriptions
- Creating Standard Subscriptions
- Data-Driven Subscriptions
- Subscription & Logging Options

SSRS Report Security
- Report Data Source Security
- Report Server Security Levels
- Report Server DB Security

SSRS Configurations
- Report (RDL) Configurations
- Email Based Report Subscriptions
- Managing Configurations Files
- Choosing correct Configuration Values
- RDL Reports Upgrades & Downloads
- Scale-out Deployments in SSRS
- Execution Accounts and SSRS Schedules

Pre-requisites:
To attend for our practical MSBI Trainings, the participant needs to have basic SQL Server knowledge on Database Design, Table Design, T-SQL Data Types, Constraints, Views, Indexes, Stored Procedures and Functions.

All the concepts will be discussed practically. We provide Study Material, Interview & Certification Guidance along with one Real Time Case Study for this course. 24x7 LIVE Server access with Virtual Lab facility available.

About Trainer:
Mr. Sai Phanindra Tholeti, having 7+ years of experience exclusively on SQL Server & BI is a Database Consultant working for his own company - *SequelGate Innovative Technologies Pvt. Ltd*. He renders technical and support services for corporate clients involving Database Hosting, Business Consulting, CLOUD Storage (AZURE) and Data Support activities. All training sessions are completely **practical**, **real-time** and highly **interactive**.
Complete profiler of the trainer available @ **http://www.linkedin.com/in/saiphanindra**

Training Highlights:
- ✓ Real-time Sessions and Completely Interactive
- ✓ Complete Practical Sessions
- ✓ Study Material
- ✓ Screenshot based Practice Material
- ✓ Session wise notes & Doubts Clarifications
- ✓ Certification Material
- ✓ Resume Preparation
- ✓ Interview Questions and Guidance
- ✓ Free Workshops & Technical Support
- ✓ Videos for missing sessions
- ✓ THREE Real-time Case Studies
- ✓ 24x7 LIVE Server Access
- ✓ Virtual Lab Facility

Joining Procedure:
Participant needs to attend for a free demo. Registrations accepted after attending the demo session. Payment details to be shared after you attend free demo.

For Free demo / Further Clarifications:

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	040 66343536 (Office)	
Mail us:	**contact@sqlschool.com**	
Skype:	**SQL School**	

For Course Fee and Free Demo schedules, you may also refer to http://sqlschool.com/contact.html

Training Faqs available at http://sqlschool.com/faq.html

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