

SQL DBA (includes Server, T-SQL)

On-demand Video Training - Instructor Led

Complete Practical & Real-time Training Sessions



A Unit of SequelGate Innovative Technologies Pvt. Ltd.

→ ISO Certified Training Institute

→ Microsoft Certified Partner

Training Highlights

- ✓ Complete Practical and Real-time Scenarios
- ✓ Session wise Material and Practice Labs
- ✓ Session wise Notes & Doubts Clarifications
- ✓ Certification Material & Resume Preparation
- ✓ 24x7 LIVE Server Access with Real-time Databases
- ✓ Technical Support and Placements Assistance
- ✓ One Real-time Project and FAQs with Answers
- ✓ Mock Interview and Course Completion Certificate

All Training Sessions are Completely Practical & Real-time

Every Session includes Lab Work, Tasks and Study Material.

SQL School (SequelGate Innovative Technologies Pvt. Ltd.), #108/2RT, Street No 2, Road No 1,
Landmark :Beside SR Nagar Bus Stop, SR Nagar, Hyderabad - 38, India.

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MODULE 1 - SQL SERVER, T-SQL SESSIONS

All Our Training Sessions are COMPLETELY PRACTICAL & REALTIME with Hands-On Lab.

VIDEO 1: SQL Server (2016, 2014) Installation

- ✓ What is Database? Need for DB Administrators
- ✓ SQL Server Advantages, Editions, Versions
- ✓ Roles, Responsibilities, Levels - SQL DBA
- ✓ How to install SQL Server - Step by Step
- ✓ SQL Server 2016,2014,2012 Installation
- ✓ SQL Server Management Studio (SSMS)
- ✓ SSMS and SQLCMD Tool Configurations
- ✓ DBA Checklist - Routine DBA Activities
- ✓ DBA Checklist - Maintenance Activities
- ✓ DBA Checklist - Emergency Activities
- ✓ Course Plan and Takeaways from Course
- ✓ Weekly Mock Interviews, Resume
- ✓ Placement Assistance, Course Certificates
- ✓ MCSA Certification Pattern - Course Plan
- ✓ Online Lab Access (24x7 LIVE Server)

VIDEO 2, 3: BASIC DDL, DML - ARCHITECTURE

- ✓ Testing Installation, Server Connections
- ✓ Understanding SSMS Tool. Object Explorer
- ✓ Defining Sessions for Queries. Session IDs
- ✓ Basic SQL with Databases and Tables
- ✓ DDL, DML, DCL and TCL Statements
- ✓ Basic Table Creation - Column Data Types
- ✓ INSERT / Store Data into SQL Tables
- ✓ Single and Multiple Row Inserts with NULL
- ✓ SELECT Queries. Operators: IN, AND, OR
- ✓ IS, UNION, UNION ALL, NOT, BETWEEN
- ✓ UPDATE & DELETE Statements. Conditions
- ✓ DELETE Versus TRUNCATE. DROP Table
- ✓ SYSTEM DATABASES - Importance, Usage
- ✓ MSDB, TempDB, Resource and Model
- ✓ Local Temp Tables. Global Temp Tables
- ✓ Wait Times, Client Statistics @ Queries
- ✓ CLIENT - SERVER Architecture (TDS)
- ✓ SQL Native Client (SNAC), Client Statistics
- ✓ Implementing TDS @ SQL Server Queries
- ✓

VIDEO 4: DATABASE & TABLE DESIGN

- ✓ SQL Server Database Architecture
- ✓ SQL Server Database Design Concepts
- ✓ Database Properties, Storage Options
- ✓ Data Files : Purpose, Sizing, Options
- ✓ Filegroups : Placement, Usage & Options
- ✓ Log files : Sizing, Placement, Growth
- ✓ Database Creation - GUI & T-SQL Scripts
- ✓ Filegrowth, Autogrowth and MAXSIZE
- ✓ Planning, Designing Very Large Databases
- ✓ Database Structure Modifications, ALTER
- ✓ Adding New Filegroups, Files to Database
- ✓ Capacity Planning, Dedicated Log Storage
- ✓ Data File Architecture - Pages, Extents
- ✓ Log File Architecture - VLF, Mini LSN
- ✓ Routing Tables to File Groups, Advantages
- ✓ Schemas - Purpose and Usage with Tables
- ✓ CHAR versus VARCHAR Differences
- ✓ DB Log Files - Logged, NonLogged Options

VIDEO 5: CONSTRAINTS and KEYS

- ✓ Constraints and Keys - Purpose, Usage
- ✓ Normal Forms, Relational DB Design
- ✓ OLTP Database Model & BCNF - Relations
- ✓ NULLABILITY Property and Importance
- ✓ UNIQUE KEY Constraints and Importance
- ✓ PRIMARY KEY Constraints and Limitations
- ✓ FOREIGN KEY References and Relations
- ✓ FOREIGN KEY Constraints - Limitations
- ✓ Schema Level and Table Level Relations
- ✓ CHECK Constraints - Usage, Limitations
- ✓ DEFAULT Column Constraints and Usage
- ✓ Identity Property with PRIMARY KEY
- ✓ Composite Primary Keys Concept, Usage
- ✓ Constraints with Naming Conventions
- ✓ DB Design with Constraints, Schemas
- ✓ Data Types, Aliased Queries with Schemas
- ✓ Default Schema, Aliases for Table Design

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VIDEO 6: JOINS & SUB QUERIES

- ✓ Need for Joins and Use Case Scenarios
- ✓ JOIN - Types, Queries and Usage Options
- ✓ CROSS JOIN - Examples and Scenarios
- ✓ INNER JOIN - Examples and Scenarios
- ✓ OUTER JOINS - Types and Scenarios
- ✓ SELF JOINS with Self References, Types
- ✓ Joins with / without SCHEMA References
- ✓ Joining Multiple Tables and Join Types
- ✓ Joining Tables across Schemas, Filegroups
- ✓ Basic Aggregations with Joins. Aliasing
- ✓ Comparing Inner Join and Outer Joins
- ✓ Comparing Inner Join and Cross Joins
- ✓ Deciding the best Join Type, Options
- ✓ Sub Queries and Joins. Alternate Syntax
- ✓ End User Access to Queries - Interfaces
- ✓ Sub Queries and Simple Aggregations
- ✓ Sub Queries with UNION, UNION ALL

VIDEO 7,8: VIEWS, FUNCTIONS, SUB QUERIES

- ✓ Views on Tables, Security Advantages
- ✓ Views as Stored SELECT Statements
- ✓ SCHEMABINDING & ENCRYPTION Options
- ✓ Cascaded Views, WITH CHECK OPTION
- ✓ Orphan Views - Scenarios in Real world
- ✓ Common System Views, Metadata Access
- ✓ sys.databases, sys.tables, sys.views
- ✓ INFORMATION SCHEMA views, Definitions
- ✓ Views with Multi Level Tables - Joins
- ✓ Queries - GROUP BY, HAVING Conditions
- ✓ Queries with GROUPING() and HAVING
- ✓ ROLLUP Options & Column Aggregations
- ✓ CUBE on Table Data - Purpose & Usage
- ✓ HAVING Vs WHERE - Usage, Performance
- ✓ Query Execution Order @ ROLLUP, CUBE
- ✓ Functions: Types, Purpose and Usage
- ✓ Scalar Value Returning Functions - Usage

VIDEO 7,8: VIEWS, FUNCTIONS, SUB QUERIES

- ✓ Inline Table Value Returning Functions
- ✓ Multi-line Table Value Returning Functions
- ✓ RETURNS and RETURN Values. Options
- ✓ BEGIN..END and IIF Functions, CASE
- ✓ Function Arguments - Usage and Options
- ✓ Variables and Function Parameters
- ✓ Static Variables and Dynamic variables
- ✓ Table Variables, WHILE LOOP Concepts
- ✓ System Functions and Metadata Access
- ✓ Date & Time Formats, Styles, DATEDIFF
- ✓ CAST, CONVERT, RANK, ROW_NUMBER
- ✓ Views for Sub Queries and Functions
- ✓ Views for Aggregations and Calculations

Real-time Case Study: An Online Medical DB System @ Query Tuning Options

VIDEO 9: STORED PROCEDURES - Level 1

- ✓ Stored Procedures - Purpose and Usage
- ✓ Execution Options and Variants, Batch
- ✓ Variables, Parameters in Stored Procs
- ✓ Stored Procedures For Data Validations
- ✓ Stored Procedures For Dynamic Queries
- ✓ Important System Procedures, Metadata
- ✓ Extended Procedures For App. Access
- ✓ IF.. ELSE, ELSE IF, IIF, IS Conditions
- ✓ Error Handling: TRY, CATCH, THROW
- ✓ Usage of THROW - Performance Issues
- ✓ Precompilation of Stored Procedures
- ✓ Cached Plans, Compiled Plans, PC Cache
- ✓ Need for Recompilations, Outdated Plans
- ✓ Dynamic SQL Parameters and Variables
- ✓ Default Parameter Values, Usage Types
- ✓ OUTPUT Parameters and Query Options
- ✓ RECOMPILE Option & ENCRYPTION Option

VIDEO 10: STORED PROCEDURES - Level 2

- ✓ Stored Procedures for Dynamic Queries
- ✓ Recursive Queries: OUTPUT Parameters
- ✓ Common Table Expressions, In-Memory
- ✓ Stored Procedures for CTE (Sub) Queries
- ✓ Using CTE for Table Data Operations
- ✓ CTE for DML & DDL in Stored Procedures
- ✓ Using Stored Procedures with Cursors

VIDEO 11: TRIGGERS & TRANSACTIONS

- ✓ Use of Triggers - Use and Performance
- ✓ FOR / AFTER Triggers - Importance
- ✓ INSTEAD OF Triggers - Importance
- ✓ INSERTED and DELETED Memory Tables
- ✓ Triggers for DML Audits, Data Sampling
- ✓ Database Level & Server Level Triggers
- ✓ Bulk Operations & Updatable Views

<ul style="list-style-type: none"> ✓ FORWARD_ONLY and SCROLL Cursors ✓ STATIC and DYNAMIC Cursors. ABSOLUTE ✓ LOCAL and GLOBAL Cursor. Reusability ✓ KEYSET Cursor & Performance Options ✓ Embedding Cursors in Procedures ✓ Memory Limitations with Cursors, SPs 	<ul style="list-style-type: none"> ✓ ACID Properties and Transaction Types ✓ EXPLICIT Transaction Types, Advantages ✓ IMPLICIT Transactions Types, Advantages ✓ Open Transactions - Query Blocking ✓ AUTOCOMMIT Transactions - Advantages ✓ Nesting Transactions and Save Points ✓ LOCK HINTS: READPAST, NOLOCK, etc..
<p>VIDEO 12: SQL SERVER ARCHITECTURE</p> <ul style="list-style-type: none"> ✓ Architecture: Query Processor, Threads ✓ Architecture: Storage Engine, File System ✓ Architecture: Parser, Optimizer, Mini LSN ✓ Architecture: SQL Engine, MDAC, Buffers ✓ Architecture: SQLOS Schedules, CLR ✓ Write Ahead Log, Lazy Writer, Checkpoints ✓ Query Optimizer (QO) and Execution Plans ✓ SQL DB Architecture: Files and File groups ✓ Virtual Log Files & Mini LSN & DOP ✓ Query Processing and Optimizer (QO) ✓ Client - Server Architecture of SQL Server ✓ TCP / IP, Named Pipes, Shared Memory ✓ SQL Native Client (SNAC), OLE DB Drivers ✓ SQL Database Architecture - RAID Levels ✓ Log Sequence Numbers (LSN), Mapping ✓ Log File Architecture - Virtual Log Files ✓ Log File Architecture - Mini LSN, Usage ✓ DB Catalogs, CLR Integration, MDAC ✓ LSN Timestamps, Background Threads 	<p>VIDEO 13: QUERY TUNING (INDEXES)</p> <ul style="list-style-type: none"> ✓ Indexes Types - B Tree Architecture ✓ Clustered Indexes - Architecture ✓ NonClustered Indexes - Architecture ✓ Execution Plans & Query Optimization ✓ Table Scan, Index Scan, Index Seek ✓ SORT_IN_TEMPDB and Index Memory ✓ FILLFACTOR, PAD_INDEX, Fragmentation ✓ INCLUDED Indexes, HEAP Performance ✓ COLUMN STORE Indexes - Advantages ✓ FILTERED Indexes - Query Performance ✓ ONLINE Indexes and OFFLINE Indexes ✓ Indexes with Merge and Loop Joins ✓ Primary Key Index, Composite Indexes ✓ Materialized Views (Indexed Views) Usage ✓ Unique Clustered, NonClustered Indexes ✓ Common Table Expressions (CTE) & Uses ✓ Using CTE, Data Retrieval in Stored Procs ✓ CTEs for Avoiding Self Joins, Scenarios

MODULE 2 – BASIC DBA SESSIONS

All Our Training Sessions are COMPLETELY PRACTICAL & REALTIME with Hands-On Lab.

<p>VIDEO 14: BACKUPS - DB, FILEGROUP, FILE</p> <ul style="list-style-type: none"> ✓ Backups - Background Threads, MSDB ✓ Backups - Types, Importance, Options ✓ Data Backups, Checkpoints, Page Level ✓ File Backups, Filegroup Backups - Extents ✓ Log Backup Mechanism, Data Truncates ✓ Partial Backups with ReadOnly Filegroups ✓ Tuning Database Backup Operations ✓ Mirrored Backups, FORMAT, SKIP, STATS ✓ Tape Backups - LOAD, UNLOAD, ERRORS ✓ COMPRESSION, CHECKSUM, DB VERIFY ✓ CONTINUE_ON_ERROR, Backup Validation ✓ Backup History From MSDB Database 	<p>VIDEO 15: RESTORES & DATABASE RECOVERY</p> <ul style="list-style-type: none"> ✓ Data Recovery using Backups, Log Files ✓ Restore Phases - COPY, REDO, UNDO ✓ Database Restores & FILELIST Options ✓ File Restores and Filegroup Restores ✓ FILELISTONLY, VERIFYONLY, REPLACE ✓ PARTIAL & PIECEMEAL Restores - Tuning ✓ Tail Log Backups & DB Recovery Options ✓ REDO Phase with T-Log Backups, Purpose ✓ Tail Log Backup Restores, UNDO Phase ✓ Partial Backups - STATS, VERIFY Options ✓ Strategies: Piecemeal/Piecemeal Restores ✓ SQL Server 2012 to 2014,2016 Restores
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<ul style="list-style-type: none"> ✓ Backup Audits - Media Set, Media Family ✓ Remote Backups and Security Options ✓ Compatibility, Recovery Model Options ✓ COPY_ONLY Backups and Importance ✓ Important Queries for Backup Audits ✓ Backup Verification, Security KEYS ✓ Backups using GUI and T-SQL Scripts ✓ Backup Devices - Purpose, Options ✓ Real-time Errors and Solutions 	<ul style="list-style-type: none"> ✓ Choosing correct DB Recovery Model ✓ Point-In-Time Restores and Log Recovery ✓ Restores From Backup Devices & Mirrors ✓ Restores From existing Databases, Files ✓ Restores using SQL Server T-SQL Script ✓ Restores using GUI. Data & Log Options ✓ Transaction Undo Files (TUF) Purpose ✓ Restore Audits and Standby Databases ✓ Checkpoint LSN and Restore Positions ✓ Real-time Errors and Solutions
<p>VIDEO 16: JOBS, SQL SERVER AGENT, DB MAIL</p> <ul style="list-style-type: none"> ✓ SQL Server Agent Service, Agent XPs ✓ SQL Agent Jobs - GUI Options, MSDB ✓ Job Steps: T-SQL, SSIS, Replication ✓ Job Schedules and Frequency Options ✓ Job Schedules and Email Notifications ✓ Job Executions, Disable/Enable Options ✓ Job History and Job Activity Monitor ✓ Windows Event Notifications, Operators ✓ DB Mail Configurations, Database Profiles ✓ SMTP Accounts, Email Settings, Ports ✓ Default Public Profiles, DB Mail Security ✓ Import & Export (SSIS) Operations ✓ OLE-DB, SQLNCLI and MS Jet Drivers ✓ SSIS Packages for Data Import/Export ✓ SSIS Package Store - File System, MSDB ✓ SSIS Jobs - Scheduling SSIS Packages ✓ Backup Strategies For Minimal Data Loss ✓ Startup Jobs, Onetime, Recurring Jobs ✓ Job Activity Monitor, Agent Threads 	<p>VIDEO 17: PERFORMANCE TUNING - 1</p> <ul style="list-style-type: none"> ✓ Identifying Long Running Queries ✓ Dynamic Management Objects: DMV, DMF ✓ Audit Long Running Queries - DMV/DMF ✓ Audit Frequent Running Queries - DMF ✓ Query Audits and DMVs / DMFs with Joins ✓ Query Statistics & LIVE Execution Plans ✓ CROSSAPPLY with Dynamic Views ✓ Avoiding Sub Queries and Conditions ✓ Comparing Sub Queries and Query Joins ✓ Query Tuning and Resource Optimization ✓ STATISTICS - Purpose and Tuning Options ✓ Column Statistics - Usage Advantages ✓ Index Statistics - Auto Index Creations ✓ Manual Update of Column Statistics ✓ Statistics in Query Tuning Process ✓ STATISTICS in Indexes, Query Conditions ✓ LIVE Query Statistics, Table Statistics ✓ HASH JOIN Examples and Precautions ✓ MERGE JOIN Examples and Precautions ✓ LOOP JOIN Examples and Precautions ✓ OUTER APPLY and Multi - Level Joins
<p>VIDEO 18: PERFORMANCE TUNING - 2</p> <ul style="list-style-type: none"> ✓ Table Partitions and Query Tuning Options ✓ Partition Functions and Partition Schemes ✓ Partition Ranges, Values and Sort Orders ✓ Partition Un-partitioned Tables: Indexes ✓ Aligned / Indexed Partitions - Importance ✓ Data Compression - ROW & PAGE Levels ✓ Partition Numbers & Filtered Compression ✓ Managing Partitions and Tuning Options ✓ LIKE Operator - Using Wild-cards ✓ Full Text Search Service Configuration ✓ Full Text Search - Database Settings ✓ Database Catalogs (FTC) and Storage 	<p>VIDEO 19: PERFORMANCE TUNING - 3</p> <ul style="list-style-type: none"> ✓ Index Internals and Execution Plans ✓ Execution Plans, Statistics, Query Cost ✓ Index Fragmentation Issues, Performance ✓ SAMPLED and DETAILED Scans. FillFactor ✓ Index Rebuilds (Online/Offline), Tuning ✓ Index Reorganization and Advantages ✓ Page, Row Compressions with Indexes ✓ Filtered & Online Indexes, Indexes Views ✓ GAM, SGAM Pages, Metadata Info ✓ Filtered Indexes and Size Limitations ✓ Table Statistics, Query Tuning Options ✓ Heaps, Clustered, Nonclustered Indexes

- ✓ Full Text (FT) Indexes for Query Tuning
- ✓ Full Text Columns and Primary Key Index
- ✓ Full Text Index - Search Query Issues
- ✓ Full Population, Incremental Population
- ✓ CONTAINS() and FREETEXT() Functions
- ✓ Token Search and Inflectional Forms
- ✓ Performance Tuning @ Full Text Indexes
- ✓ **New Tuning Options @ SQL 2016**

- ✓ Fill Factor, Pad Index and Query Tuning
- ✓ Memory Pages and IO Performance
- ✓ MEMORY LEAKS and PAGE WAITS
- ✓ LATCH WAITS and Performance Impact

MORE PERFORMANCE TUNING: VIDEOS 34, 35

VIDEO 20: REPLICATION For HA & DR -- LEVEL 1

- ✓ Replication Architecture and Entities
- ✓ Replication Topology, Plan, Connections
- ✓ Distributor Server Configurations, Options
- ✓ Distribution DB Components and Options
- ✓ Distribution DB Configuration, Snapshots
- ✓ Publication Types - Purpose, Importance
- ✓ DB Articles, Publications, Subscriptions
- ✓ PULL Subscription Options and Types
- ✓ Snapshot Replication and Repl Agents
- ✓ Configure, Secure, Schedule Snapshots
- ✓ Snapshot Subscriptions and Replica DB
- ✓ Transactional Replication Configuration
- ✓ Log Reader Agent - Configuration, Keys
- ✓ Tracer Tokens - Latency and Ranking
- ✓ Replication Monitor - Usage and Options
- ✓ Read Only Subscribers & Load Balancing
- ✓ Replication Jobs and Verification Options
- ✓ Adding Articles to Existing (LIVE) Replica
- ✓ Adding Subscribers to Existing Replica
- ✓ Schema Level Replication, DDLs in Repl
- ✓ Stopping, Starting Replication Agents
- ✓ Scripting Replication Jobs, Publications
- ✓ Disable/Enable Replication, Agent Stops
- ✓ **Real-time Errors and Solutions**

VIDEO 21: REPLICATION For HA & DR -- LEVEL 2

- ✓ Transactional Replication, Tracer Tokens
- ✓ Merge Replication and Merge Agent Job
- ✓ Replication Conflicts and ROWGUIDCOL
- ✓ Peer-Peer Replication - Configurations
- ✓ Peer-Peer Replication Connections, Nodes
- ✓ Adding Peer Nodes, Node ID Conflicts
- ✓ Replication across Lower/Higher Versions
- ✓ Replication Conflicts: Options, sp_MSRepl
- ✓ IDENTITY Property & Schema Replication
- ✓ PUSH and PULL Subscriptions - Options
- ✓ Domain Account Security in Replication
- ✓ Merge, Snapshot Replication Limitations
- ✓ Replica Initialization with Backups, Issues
- ✓ Transactional Versus Snapshot Replication
- ✓ Peer-Peer Vs Merge Replication For HA
- ✓ Load Balancing Options with Replication
- ✓ Replica Server @ Appl Connection Strings
- ✓ Replication Conflicts, Errors and Solutions
- ✓ Replication Warnings and Agent Alerts
- ✓ Replication Errors, Events and Solutions
- ✓ Replication for HA and DR - Strategies
- ✓ Replication Limitations and Precautions
- ✓ **Replication Errors & Solutions**

VIDEO 22: LOG SHIPPING - DISASTER RECOVERY

- ✓ Log Shipping Topology, Operation Modes
- ✓ Primary and Secondary: Recovery Plan
- ✓ Log Shipping Monitor Settings, Alerts
- ✓ NORECOVERY Configuration and Usage
- ✓ STANDBY Mode Configuration, Purpose
- ✓ Log Shipping Jobs & Restore Schedules
- ✓ Copy and Restore Jobs with Secondary
- ✓ Log Shipping Monitor Status Reports
- ✓ Manual Failover Process and Recovery
- ✓ Log Shipping Topology - Limitations

- ✓ Versioning Issues, Data Traffic. Data Loss
- ✓ Log Shipping for DB Recovery Procedures
- ✓ Log Shipping Jobs - Errors and Solutions
- ✓ Log Shipping Reports and Data Recovery
- ✓ Log Shipping Standby: Delay Restores
- ✓ Scripting Log Shipping Configurations
- ✓ Standby Disconnections, Latency Options
- ✓ **Real-time Errors and Solutions**

MODULE 3 – ADVANCED DBA SESSIONS

All Our Training Sessions are COMPLETELY PRACTICAL & REALTIME with Hands-On Lab.

VIDEO 24, 25: SECURITY MANAGEMENT

- ✓ Authentication Types - WINDOWS, SQL
- ✓ Windows Logins and REGEIDT Settings
- ✓ SQL Server Logins, POLICIES, EXPIRY
- ✓ LOGINS: Server Level Security, Options
- ✓ USERS: Database Level Security, Options
- ✓ SCHEMAS: Object Level Security, Options
- ✓ System Server Roles, Database Roles
- ✓ User Server Level Roles & Permissions
- ✓ User Database Level Roles & Permissions
- ✓ Schemas and DB User Mappings - Usage
- ✓ GRANT, WITH GRANT, DENY, REVOKE
- ✓ CONTROL, OWNERSHIP, AUTHORIZATION
- ✓ Testing Security Operations, Scripting
- ✓ Common Security Functions & Queries
- ✓ DMVs for Server and DB Security Audits
- ✓ Useful Security Audit Queries (DMVs)
- ✓ KEYS, Passwords - Data Level Encryption
- ✓ CERTIFICATES & TRIPLE-DES Algorithm
- ✓ Master Passwords and Data Encryption
- ✓ SQL Server Credentials, Job Security
- ✓ Proxies - Purpose, Usage and Options
- ✓ Server Credentials for Agent Proxies
- ✓ SSIS Proxies for Job Level Subsystems
- ✓ Password Resets and Disabling Logins
- ✓ Scripting Logins, Users, Roles, Schemas
- ✓ Security Audits, Role Membership
- ✓ Containment Databases and Purpose
- ✓ Contained Database Users and Roles

VIDEO 26: DB HEALTH CHECK, AUDIT, LOCKS

- ✓ Query Resources - CPU, IO and Memory
- ✓ Activity Monitor (AM) Tool - CPU, Memory
- ✓ Database File IO, Processes, Query Stats
- ✓ SQL Profiler Tool Usage, Audit Trace Files
- ✓ SQL Profiler Templates: Standard, Tuning
- ✓ Event Extraction Settings, Filter Columns
- ✓ DB ID Filters, CPU Filters, SSID Filters
- ✓ Profile Trace File Rollover, Size Settings
- ✓ Database Health Check: DBCC Commands
- ✓ Allocation Errors and Consistency Errors
- ✓ ESTIMATEONLY, NO_INFOMSGS, Tempdb
- ✓ Log Space Audits and Tempdb Audits
- ✓ Dynamic Management Views (DMVs)
- ✓ Important Dynamic Management Functions
- ✓ Memory Usage & Disk Usage Audit DMVs
- ✓ Storage Allocation Issues (Page, Extent)
- ✓ LOCKS - Types, Impact, Monitoring
- ✓ Shared Locks, Exclusive Locks, WAITS
- ✓ Deadlock Graphs with SQL Profiler Tool
- ✓ DEADLOCKS - Avoidance, Prevention
- ✓ LIVELOCKS - Avoidance, Prevention
- ✓ Deadlock Graphs @ SQL PROFILER, XDL
- ✓ Isolation Levels For OLTP - TempDB

VIDEO 27: DB MAINTENANCE PLANS, DB REPAIRS

- ✓ Database Maintenance Plans (SSIS)
- ✓ DB Maintenance Strategies & Schedules
- ✓ MSDB History Management Options
- ✓ Backup Files and Space Management
- ✓ Reorganizing Indexes with Maint. Plans
- ✓ Stats Updates (Automatic) and Jobs
- ✓ Modifying SSIS DB Maintenance Plans
- ✓ Scheduling and Maintaining SSIS Plans
- ✓ Log File Issues & Shrinking Operations
- ✓ SQL DB Engine Properties & Guidelines
- ✓ Service Configuration Manager Options
- ✓ PAGE REPAIRS - suspect pages @ MSDB
- ✓ FILE REPAIRS, FILEGROUP REPAIRS
- ✓ DATABASE REPAIRS - DB Consistency
- ✓ DATABASE REPAIRS - Data Allocation
- ✓ DB Modes, Emergency, NOWAIT Options
- ✓ **Managed DB Backups @ SQL 2016**

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VIDEO 28: DATABASE MIGRATIONS, DMA TOOL

- ✓ Database Migration Options with SSIS
- ✓ DB Design Audits @ File System Store
- ✓ Database Detach Options and Downtime
- ✓ Database Attach Options and Scripting
- ✓ Scripting: Schemas, Object, Keys, Data
- ✓ Scripting Security Logins, Permissions
- ✓ Copy Database Wizard (SSIS) Tool Usage
- ✓ File System, SQL Server Package Store
- ✓ Migration Schedules, Jobs, Alerts, Logs
- ✓ Corrupted Logs, FORATTACH, REBUILDS
- ✓ Linked Server Security, Management
- ✓ Server Dashboard, Connection Audits
- ✓ Data Migration Assistant (DMA) Tool
- ✓ Using DMA Tool for DB Analysis, Upgrades
- ✓ DMA Tool: DB Assessment, Migration

VIDEO 29: PATCHES, SERVER UPGRADES

- ✓ Establishing Downtime For Maintenance
- ✓ Precautions for Maintenance Activities
- ✓ Service Packs and Patch/hotfix Activities
- ✓ Instance Selectivity for Updates, Cautions
- ✓ Pre & Post Patch Operations. Process
- ✓ Verifications, SmokeTest and Rollbacks
- ✓ Upgrade Advisor Tool - Analysis Reports
- ✓ Upgrade Advisor Issues and Warnings
- ✓ Server Upgrades and Precautions
- ✓ Planning for Maintenance Activities
- ✓ Rebuilding System Databases & Objects
- ✓ Pre Database Maintenance Activities
- ✓ Post Database Maintenance Activities
- ✓ Real-world Management Considerations

VIDEO 30: CLUSTERING CONFIGURATION - HA

- ✓ Understanding SQL Clustering Service
- ✓ SQL Server Clustering Architecture
- ✓ Windows and SQL Server Licensing
- ✓ Windows Server Installation Options
- ✓ Service Pack and Patch Installations
- ✓ QUORUM Options for Windows Clusters
- ✓ SQL Server Cluster Plan - Licensing
- ✓ Installing Windows MSCS Service, Tests
- ✓ Ping Tests and Heart-beat Checks, DC
- ✓ Domain Configurations, Precautions
- ✓ MSCS - Microsoft Cluster Services, Nodes
- ✓ MSCS Service Startup Options, Issues
- ✓ Verifying SQL Server Cluster Installation

VIDEO 31: CLUSTERING: ACTIVE DIRECTORY

- ✓ Need for Centralized Authentication
- ✓ Domain Controller (DC) Configuration
- ✓ Active Directory Settings and Usage
- ✓ DCPROMO Settings for Active Directory
- ✓ Server Configuration Manager, Options
- ✓ Configuration Manager - Users & Groups
- ✓ Working with Active Directory (AD) Edits
- ✓ Network Configurations and Precautions
- ✓ PING Configurations and DTC Options
- ✓ QUORUM settings and SAN Options
- ✓ SQL Server Cluster Installation
- ✓ Cluster Configurations - Active/Active
- ✓ Cluster Configurations - Active/Passive
- ✓ MS DTC Configurations (Local/Remote)

VIDEO 32: CLUSTERS NODES, ALWAYS-ON

- ✓ Install SQL Server Clusters
- ✓ Clustering Nodes : Install, Update
- ✓ Need for Always - On Availability
- ✓ Always-On Prerequisites, Node Config
- ✓ SQL Group & AD Syncup Operations
- ✓ SAN System for Shared Data Storage
- ✓ Smoke Test Procedures in Real-time
- ✓ Fail-Over Disk & RAID Implementation
- ✓ Cluster Connection Issues and Drains
- ✓ Installing Updates - SQL Server Clusters
- ✓ Add Nodes to SQL Cluster - Active/Active
- ✓ SQL Server Cluster Utilities & Quorum

VIDEO 33*: SQL CLUSTERS, ALWAYS-ON

- ✓ IP Configurations & WSFC Settings
- ✓ Node Majority, Disk & File Share Majority
- ✓ Active-Passive Cluster Configurations
- ✓ Network Security Issues with Solutions
- ✓ RAID, Storage Issues with Solutions
- ✓ Availability Replica - Readable Secondary
- ✓ Active Secondary, SYNC, ASYNC (AAG)
- ✓ Replica Recommendations for Always-On
- ✓ Routine DBA Challenges for AAG - HA/DR
- ✓ SLA/OLA Challenges, Tickets in Always-On
- ✓ **Temporal Tables - AAG : SQL 2016**
- ✓ **Stretch Databases @ SQL 2016**

- ✓ Cluster Working and Operative Modes
- ✓ Configuration Settings, SQL Monitors
- ✓ Always-On Availability Groups (AAG)
- ✓ Prerequisites for Always-On for HA/DR
- ✓ Primary & Secondary Configurations
- ✓ Synchronization Settings, HA Options
- ✓ Port Settings, Backup Strategies in AAG

VIDEO 34*: PERFORMANCE TUNING - LEVEL 4

- ✓ **Memory Optimized Tables & Usage**
- ✓ LIVE QUERY STATS Analysis in SQL 2016
- ✓ Real-world Considerations for DTA Tool
- ✓ Workload Groups & Resource Allocation
- ✓ Query Priority, CPU / Memory / IO Limits
- ✓ Windows Fibres, Priority Boost and DOP
- ✓ Processor Settings, Counters & Thresholds
- ✓ Recommended Thread Counts and Fibres
- ✓ Query Memory, Memory Leaks, Pagination
- ✓ Thread Level Architecture - CPU Nodes
- ✓ Windows Fibres, Priority Boost Options
- ✓ DOP - Degree Of Parallelism & Options
- ✓ Temporal Tables, SYSTEM_VERSIONING
- ✓ Temporal Tables @ DML Audit Performance
- ✓ In-Memory Tables Creation, Index Options
- ✓ Extended Events & Performance Impact
- ✓ LIVE Query Statistics - Monitoring Options
- ✓ LIVE Query Statistics - Baseline Creation
- ✓ LIVE Execution Statistics, Hash Plans
- ✓ Natively Compiled Procedure Performance
- ✓ System Versioned Temporal Tables
- ✓ Querying VERSIONS from Temporal Tables

VIDEO 35*: PERFORMANCE TUNING - LEVEL 5

- ✓ PERFMON Counters and PSSDIAG Tools
- ✓ Dynamic Data Masking DDM Performance
- ✓ Secured Column Access - DDM Functions
- ✓ Impersonation with Data Masking (DDM)
- ✓ Index Management Options - SQL 2016
- ✓ Distributed Replay Controller Tool, SCOM
- ✓ Data Migration Assistant (DMA) Tool
- ✓ PSSDIAG Tool - Performance Monitoring
- ✓ SQL Browser Server - TCP IP, Trace Flags
- ✓ CPU Thread Management, Windows Fibres
- ✓ Priority Boosting and Windows Kernel
- ✓ Machine Code Usage in Queries
- ✓ %%COLNAME%% Query Performance
- ✓ Index Management Options - SQL 2016
- ✓ New Tuning Options - SQL Server 2016
- ✓ Performance Tuning - Checklist Activities

VIDEO 36*: POLICY BASED MANAGEMENT, TOOLS

- ✓ Distributed Transactions & Connections
- ✓ Policy Based Management (PBM), Facets
- ✓ Database Properties and Conditions
- ✓ Policy Management, Events, Schedules
- ✓ Policy Management Options and Agent
- ✓ Facets and Conditions : On Demand
- ✓ Facets and Conditions : On Change
- ✓ Policy Based Management (PBM) Reports
- ✓ 3rd Party Tools, Server Registrations
- ✓ 3rd Party Tools : Dell Litespeed
- ✓ Multi Database Backups, Log Readers
- ✓ Reading backup Files, Recovery
- ✓ Server Aliases, Configuration Manager
- ✓ Server Dashboards, DB Management

VIDEO 37*: XML Databases, DB Encryptions

- ✓ Storing XML Data in SQL Server
- ✓ FOR XML Statement and XQuery
- ✓ Shredding XML. Determining to use XML
- ✓ Testing XML Data Storage in Variables
- ✓ Using XML Schemas; FOR XML Queries
- ✓ Recompilation Issue with TVP - LIVE DB
- ✓ Natively Compiled Stored Procedures
- ✓ SQL Injection Attacks & Vulnerables
- ✓ Enabling Encryption for LIVE Databases
- ✓ Data Encryptions and Backup Security
- ✓ Replicating Encrypted Databases

Video 38, 39: Real-time Project for SQL DBA

SLA, OLA and DBA Checklist Activites

ALL TRAINING SESSIONS ARE COMPLETELY PRACTICAL, REAL-TIME.

Pre-requisites for this **SQL DBA Course**:

This is a starter course, **no pre-requisites** required. Course includes free orientation class for starters. Course includes Study Material, Interview & Certification guidance along with one Real-time Project.

About Trainer:

Mr. Sai Phanindra Tholeti is a Database Consultant working for his own company - *SequelGate Innovative Technologies Pvt. Ltd.* With more than 11 years of expertise and passion for SQL Server, Administration (SQL DBA) and Business Intelligence (MSBI) - Mr. Sai provides Data Hosting, Business Consulting and Technical Support Services for Corporate Clients. All his training sessions are completely **practical, real-time** and highly **interactive**. Complete profile of the trainer available @ <http://www.linkedin.com/in/saiphanindra>

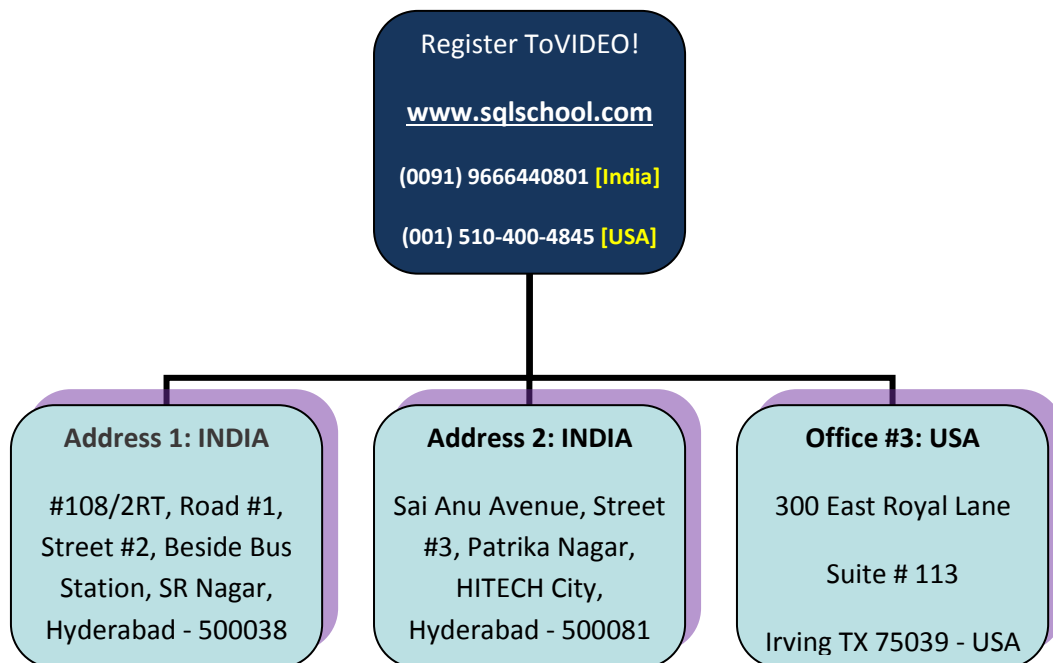
For Free Demo / Further Clarifications, please reach us.

INDIA: Country Code - 0091 0 9666440801 (Mobile) / 040 64577244 (Office)

USA: Country Code - 001 (510) 400-4845 (Office)

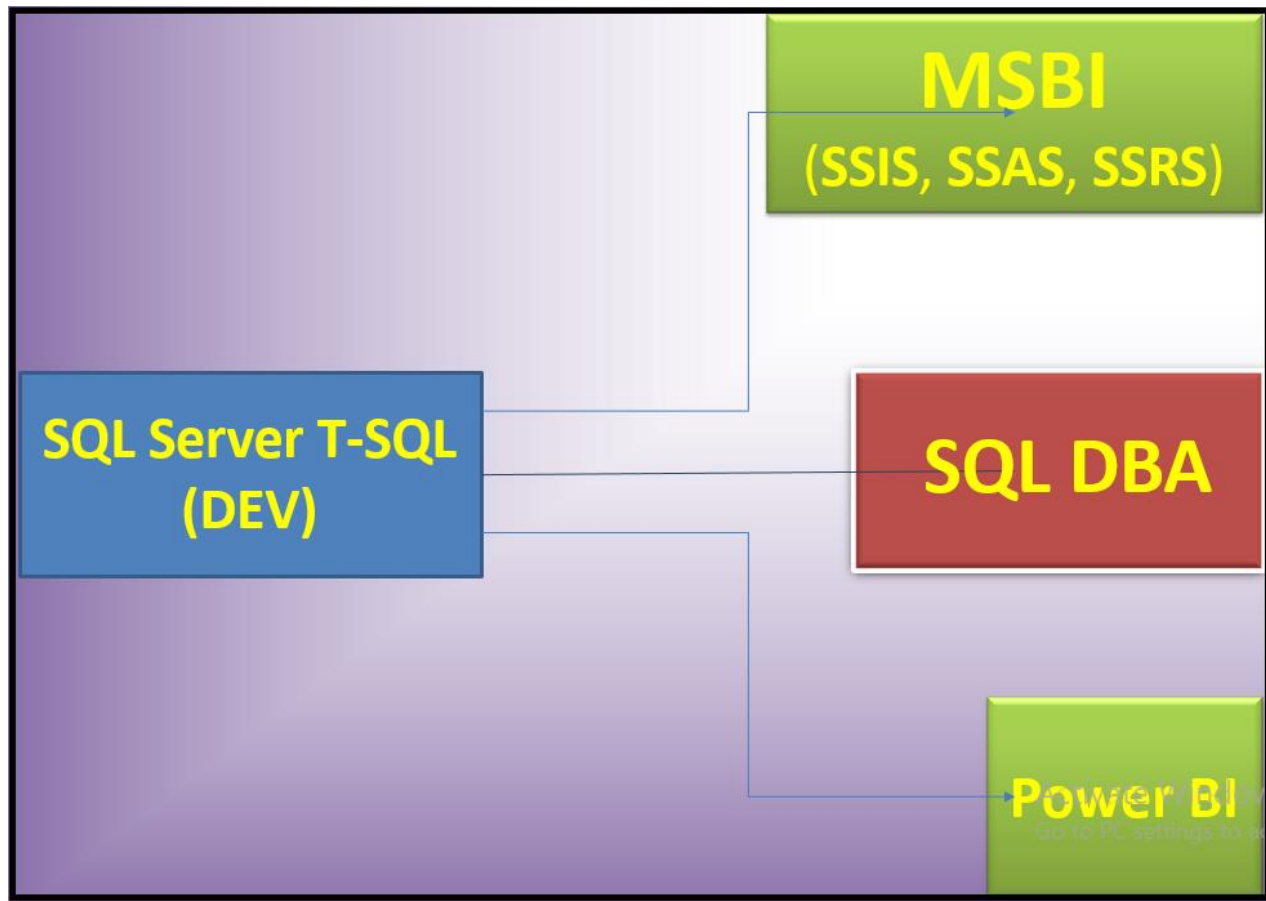
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