

SQL School™

Quality Training Assured

SQL DBA TRAINING

Complete Practical: Real-time Job Oriented Training

Training Plans

	PLAN A	PLAN B	PLAN C
Description	SQL DBA	SQL DBA + Azure DBA	SQL DBA + Azure DBA + Azure MI
Course Curriculum	Chapters 1 to 27	Chapters 1 to 38	Chapters 1 to 47
Completely Practical, Real-time	✓	✓	✓
SQL Server, DB, Agent Architecture	✓	✓	✓
Query Tuning, Ticketing, 3 rd Party Tools	✓	✓	✓
DB Repairs, Security Management	✓	✓	✓
Migrations, Updates, Upgrades	✓	✓	✓
Clustering & Always - On Availability	✓	✓	✓
HA - DR, Clustering, Always-On (AAG)	✓	✓	✓
New Features: SQL 2016, 2017, 2019	✓	✓	✓
SLA-OLA Reports, Incident Management	✓	✓	✓
Azure SQL Database Migration (Admin)	X	✓	✓
Azure SQL DB Security and HA-DR	X	✓	✓
Azure Power Shell and Azure CLI	X	✓	✓
LINUX and Windows Virtual Machines	X	✓	✓
DP 300 Certification Exams : Guidance	X	✓	✓
Azure Managed Instance (Azure MI)	X	X	✓
Basic to Advanced Azure MI Concepts	X	X	✓
Azure MI Clusters, Virtual Networks	X	X	✓
Azure MI Connections From Azure VM	X	X	✓
P2S Connections, On-Premise Migrations	X	X	✓
Peer Gateway, VPN, MI Pools & HA-DR	X	X	✓
TOTAL DURATION	6 Weeks	3 Weeks	11 Weeks

Trainer : Mr. Sai Phanindra T : 15+ Yrs of Real-time Exp. Profile @ [linkedin.com/in/saiphanindra](https://www.linkedin.com/in/saiphanindra)

SQL DBA Training Course Plan

Training Module		Dur	SQL DBA Plan A	SQL DBA Plan B	SQL DBA Plan C
Module 1	Core SQL DBA [HA-DR, AlwaysOn, Errors, Upgrades]	6 W	✓	✓	✓
Module 2	Azure SQL DBA [Azure SQL DB Admin, Azure SQL VM]	3 W	X	✓	✓
Module 3	Azure Managed Instance	2 W	X	X	✓
Total Duration [Including Real-time Project, Resume]			6 W	9 W	11 W

Module 1: CORE SQL DBA

Includes: Basics, Architecture, Jobs, Security, Errors, Solutions, HA-DR, Always-On, Upgrades, SLA-OLA

<p>Chapter 1: INTRODUCTION, INSTALLATIONS</p> <p>Introduction to Databases, DBMS; Microsoft SQL Server : Advantages, Use; Versions and Editions of SQL Server; SQL DBA Job Roles, Responsibilities; Routine Maintenance DBA Activities; Emergency SQL DBA Activities; SQL Server Pre-requisites : S/W, H/W; SQL Server 2019/2017/2016 Installation; Default Instance, Named Instances; Port Numbers, Instance Differences; Service and Service Account Use; Authentication Modes and Logins; Firewall Configuration in Real-time; SQLServr.exe & SQLBrowser.exe;</p>
<p>Chapter 2: SSMS TOOL, SQL BASICS - 1</p> <p>SQL Server Management Studio; Local and Remote Connections; System Databases: Master and Model; MSDB, TempDB, Resource Databases; Creating Databases : Files [MDF, LDF]; Creating Tables in GUI; Data Insertion & Storage; SQL : Real-time Usage; DDL, DML, SELECT, DCL and TCL Statements; Data Storage, Inserts - Basic Level; SELECT; Table Data Retrieval; Limitations with SSMS GUI Options;</p>
<p>Chapter 3: SQL BASICS - 2</p> <p>Creating Databases & Tables in SSMS; Single Row Inserts, Multi Row Inserts; Rules for Data Insertion Statements; SELECT Statement @ Data Retrieval; SELECT with WHERE Conditions; AND and OR; IN and NOT IN; Between, Not Between; LIKE and NOT LIKE; UPDATE Statement; DELETE & TRUNCATE; Logged and Non-Logged Operations; ADD, ALTER and DROP Statements; Aliases and Batch Statements;</p>
<p>Chapter 4: SCHEMAS, TEMPORARY TABLES</p> <p>Schemas : Group Tables in Database; Using Schemas for Table Creation; Using Schemas in Table Relations; Table Migrations across Schemas; Default Schema : "dbo"; Import and Export Wizard; Bulk Operations; Excel File Imports / Exports; SQL Server Native Client; Executing SSIS Packages, Data Loads; Local and Global Temporary Tables; # & ## Prefix; Temporary Vs Permanent Tables;</p>
<p>Chapter 5: CONSTRAINTS & INDEXES BASICS</p> <p>Constraints and Keys - Data Integrity; NULL, NOT NULL Property on Tables; UNIQUE KEY Constraint; PRIMARY KEY Constraint; FOREIGN KEY Constraint, References; CHECK Constraint; DEFAULT Constraint; Identity Property : Seed & Increment; Database Diagrams; Relationships Verification; Indexes : Basic</p>

Types and Creation; Clustered and Non Clustered Indexes; Primary Key and Unique Key Indexes;

Chapter 6: JOINS and AUDITS

JOINS - Table Comparisons; INNER JOINS For Matching Data; OUTER JOINS For (non) Match Data; Left Outer Joins; Right Outer Joins - Example Queries; FULL Outer Joins; One-way and Two Way Comparisons; "ON" Conditions; Join Unrelated Tables; NULL, IS NULL in Joins; CROSS JOIN and CROSS APPLY; Join Options: Merge, Loop and Hash Joins; Performance Advantages;

Chapter 7: VIEWS, PROCEDURES, FUNCTIONS BASICS

Views : Types, Usage in Real-time; System Predefined Views and Audits; Listing Databases, Tables, Schemas; Functions : Types, Usage in Real-time; Scalar, Inline and Multi-Line Functions; System Predefined Functions, Audits; DBId, DBName, ObjectID, ObjectName; Variables & Parameters; User & System Predefined Procedures; Parameters; Sp_help, Sp_helpdb and sp_helptext; sp_pkeys, sp_rename and sp_help; When to use Which Database Objects;

Chapter 8: TRANSACTIONS, LINKED SERVERS

Linked Servers and Real-time Usage; Creating Linked Servers in SQL Server; Security Options and Access Options; Data Access, RPC and RPC Out Settings; Linked Servers for Remote Joins; Using Aliases with Linked Servers; Table Data Replication using Triggers; Transactions : Types, ACID Properties; Transaction Types and AutoCommit; EXPLICIT & IMPLICIT Transactions; COMMIT and ROLLBACK; Open Transaction Scenarios & Cause; Query Blocking Scenarios @ Real-time; NOLOCK and READPAST Lock Hints;

Chapter 9: SERVER ARCHITECTURE, DB ARCHITECTURE

Server Architecture and Protocols; Database Engine and Query Processor; Parser, Optimizer, SQL & DB Manager; Storage Engine Components, SQL OS; Transaction Services, Buffer Manager; Lock Manager, IO Manager, MDAC; CLR, WAL, Lazy Writer, Checkpoint; Database Architecture - Data Files; Database Architecture - Log Files; Primary (mdf), Secondary Files (ndf); Filegroups; ReadOnly Filegroups; Database Files : Size, Location; Pages, Extents. Uniform, Mixed Extents; Transaction Log File [LDF], LSN, VLF;

Chapter 10: BACKUPS - DB, FILE, FILEGROUP

Database Backups; Filegroup Backups; Log File Backups; COPY_ONLY Backups; Mirror Backups; Split Backups; FORMAT; Partial Backups and Backup Media Files; UNLOAD; INIT; FORMAT; VERIFY; SKIP; Compression; Checksum; RetainDays; Stats; ContinueOnError and Backup Validations; Backup History Tables in MSDB – Joins; Backup Audits. HOT and COLD Backups; Backup Devices Usage; Database Recovery Models; **Common Errors and Solutions**

Chapter 11: RESTORES & DB RECOVERY

Restore Phases – COPY, REDO, UNDO; RECOVERY and NORECOVERY Options; STANDBY; REPLACE Options in Restores; File; File Group and Meta Data Restores; Backup Verifications using GUI; Scripts; FILELISTONLY and VERIFYONLY Options; HEADERONLY; STATS; UNLOAD; STOPAT; PARTIAL / PIECEMEAL Restores – Use; Tail Log Backups. UNDO; REDO Phases; Restores using GUI and T-SQL Scripts; MOVE Options for File Level Restores; Point-In-Time Restore; Checkpoint LSN; Standby Restores and Read-Only State; **Common Errors and Solutions**

Chapter 12: JOBS, MAINTENANCE PLANS

SQL Server Agent Service & Agent XPs; SQL Agent Jobs - GUI; Script Creations; Job Steps - Creation; Edits

and Parse; Job Executions; Disable/Enable Options; Job History Purge. Job Activity Monitor; Database Maintenance - Backup Jobs; Maintenance Plans; Backup Cleanup & History Cleanup Jobs; Backup Strategies For Minimal Data Loss; Backup Options: Block Size; Transfer Size; DB Mail Configurations and Alert System; DB Mail Profiles; SMTP Email Accounts; Operators; Job Notifications

Chapter 13: SECURITY MANAGEMENT

Authentication Types & Modifications; Windows Logins & SQL Server Logins; Logins - Users Mapping, DB Access; Server Roles & Database Roles - Usage; Object, Column and Schema Security; GRANT, WITH GRANT, DENY, REVOKE; CONTROL, OWNERSHIP, Authorization; Data Encryption: Keys and Certificates; Job Security : Credentials and Proxies; Using Proxies for SSIS Jobs, Repl Jobs; Detecting and Resolving Orphan Users; Containment Databases; Security Scripts; DMVs for Security Audits, Orphan Users;

Chapter 14: DATABASE MIGRATIONS, INCIDENT MANAGEMENT (IM)

CDW : Copy Database Wizard @ SSMS; Database Detach and Attach Options; FORATTACH, sp_single_file_attach_db; SMO Method and Database Scripting; CDW SSIS Packages, SSIS Proxies Use; Scheduling Database Migration Jobs; Database Migrations & Orphan Users; SLA and OLA Process For SQL DBAs; Ticketing Tools, Priority Tickets; Immediate, High, Normal Priorities; Impact, Urgency and SLA Metrics; Licensing and Pricing Options; Versions, Editions Comparisons;

Chapter 15: Tuning 1 - AUDITS & INDEXES

Audit Long Running Queries @ DMVs and DMFs; Activity Monitor and Query Statistics; Logical I/O, Physical I/O, Database I/O, Wait Time; Recent Expensive Queries, Active Expensive Queries; Plan Handle & Execution Time; Server Dashboards; Query Store - Settings and Advantages. Options; Indexes: Architecture; B Tree Structure, IAM [Root]; Clustered & Non Clustered; Included, Column store, Online; Filtered, Covering, Indexed Views; Fill Factor & Pad Index;

Chapter 16: Tuning 2 - PARTITIONS, INDEX MANAGEMENT

PARTITIONS Mechanism : Advantages, Performance; Partition Functions and Partition Schemes ; Partitioning Un-partitioned Tables; Partition Compression: ROW, PAGE; Statistics : Auto Creation & Updates; Index Management : Internal, External Fragmentation; Fragmentation Audits : DMFs and Thresholds; Index Reorganization and Index Rebuild Options; Database Maintenance Plans (DMP) For Index Reorg; Page Count, Last Used. Fast, Sampled / Detailed Scan; Statistics & Index Management : Degree Of Parallelism; Resumable Indexes: ONLINE, RESUME; PAUSE & RESUME in Index Rebuilds;

Chapter 17: Tuning 3 - TUNING TOOLS, LOCKS, ISOLATION LEVELS

Tuning Tools; SQL Profiler - Tuning Template; DTA Tool; Perfmon Counters; Index Scan, Index Seek, Tables Scan, Spooling; Query Costs : IO, CPU Cost, SubTree Cost, Operator Cost; NUMA Nodes, IO Affinity; Parameter Sniffing; Execution Plan; Shared (S), Intent Shared (IS); Exclusive (X), Intent Exclusive (IX); Update (U), Metadata Lock (MD); Schema Lock; SP_WHO2, SP_LOCK, sysprocesses; Isolation Levels - Read Committed, Read Uncommitted; Serializable, Snapshot, Repeatable Read; Read Committed Snapshot; Deadlock Simulation, Prevention & Avoidance;

Chapter 18: HEALTH CHECKS, REAL-TIME ISSUES & SOLUTIONS

Alerts : Creation and Notifications; DB Suspect Event Alerts (023); Perfmon Counters for Alerts; Log Space, Memory, Tempdb Alerts; Scheduling Alerts & Notifications; Allocation Errors, Consistency Errors;

DBCC ShowContig, Extent Fragmentation; Trace Flags and EstimateOnly; DBCC Page: GAM, SGAM and PFS; Consistency Errors : Cause & Solutions; Allocation Errors : Cause and Solutions; Log Space Issues and Log Rebuilds; Memory & TempDB Issues, Solutions; DBCC ShrinkDB and Page Restores;

Chapter 19: REPLICATION For HA - LEVEL 1

Replication Architecture and Topology; Publication Types - Purpose; Importance; DB Articles; Publications; Subscriptions; Distribution DB Configuration; Snapshots; Snapshot Replication and Repl Agents; Adding Articles to Existing (LIVE) Replica; PUSH; PULL Subscriptions. N/W Shares; Transactional Replication Configuration; Log Reader Agent - Configuration; Keys; Tracer Tokens Latency; Ranking Options; Replication Monitor - Usage; Replication Warnings and Agent Alerts;

Chapter 20: REPLICATION For HA - LEVEL 2

Merge Replication and Merge Agent Job; Replication Conflicts and ROWGUIDCOL; Subscription Reinitialization; Expiry Setting; Server Subscription & Client Subscription; Peer-Peer Replication Connections; Nodes; NodelD and Conflict Detection Options; Replication Options on Conflicts: sp_MSRepl; sp_changedbowner; backup initialization; Replication Conflicts and Priority; Replication Verify - Rowcount; Checksum; Disabling; Cleaning Replication; Replication Strategies for HA and DR Plan; Replication for Load Balancing; **Common Errors and Solutions**

Chapter 21: LOG SHIPPING (HA - DR)

Log Shipping Topology for HA and DR; Primary and Secondary: Recovery Plan; Log Shipping Monitor; Jobs and Alerts; NORECOVERY Mode – Configuration; STANDBY Mode Configuration & Jobs; Log Shipping Jobs and Manual Failover; Log Shipping Mode Changes – cautions; Re-Restoring Log Backups for Recovery; LSBackup; LSCopy & LSRestore Jobs; LS Job Audits; Dashboards (Reports); TUF Files & Standby Options in LS; Broken Chains & Issues; **Common Errors and Solutions**

Chapter 22: DB MIRRORING (HA - DR)

DB Mirroring Architecture For HA & DR; Log Shipping Versus Database Mirroring; TCP Endpoints; TCP Network Security; Heartbeat and Polling Concepts in DM; Automatic Fail-Over Procedures; Tests; PARTNER OFFLINE Conditions; Options; DB Mirroring Monitors and Commit Loads; SYNCHRONOUS & ASYNCHRONOUS; DB Mirroring & Port Configurations; Mirroring Monitor; Stop/Resume; Need for Always-On; DB Recovery without Witness.

Chapter 23: PATCHES, UPGRADES, CUs

Establishing Downtime For Maintenance; Precautions for Maintenance Activities; DB Backups; Scripting and Services; Service Packs and Patch/Hotfix Activities; Cumulative Updates (CU); Hotfix Process; Instance Selectivity for Updates; Cautions; Verifications; Smoke Test and Rollbacks; SERVER Upgrades; VERSION Changes; Silent Installation & Installation Repairs; Verifications; Smoke Test and Rollbacks; System Database REBUILDS @ CMD; Silent Installation & Repairs; SQLCMD Tool, Instance Connections; DAC : Dedicated Administration Console; Service Startup Issues and Solutions;

Chapter 24: Resource Governor, Licensing

SQL DBA Operations in Real-time; Licensing and Pricing Options, CALs; Server and Client Licensing Concepts; User CALs and Device CALs Concepts; Multiplexing with Server Licenses; Resource Governor Concepts; Facets, Database & Object Properties; Creating Conditions and Policies; Enabling / Scheduling Policies; Creating Resource Pools For Tuning; CPU and Memory Allocations; Creating

Workload Groups, Options; Creating Classifier Functions For RG; Resource Governor Activations; Dashboards; Adding Availability Replica; Database; Adding Availability Listeners and DNS; Automated Failovers; Manual Failovers; Always-On Availability Groups Health; AAA Hosts; Forward Lookup Zones;

Chapter 25: Clusters and Always-On [Overview]. Detailed Practice in Plan B Classes

Windows Clusters For HA and DR; Domain Controller (DC) Configuration; Active Directory (AD) Accounts, se; SAN [Storage Area Network] and LUN; Public IP Address, Private IP Address; Windows Level Clusters, MSCS Service; Active-Active, Active-Passive Clusters; Always On Availability Group [AOAG]; Synchronous and Asynchronous Modes; Synchronization, Automated Seeding; Data Synchronization for AOAG ; Backup Preferences, Location;

Chapter 26, 27: SQL DBA PROJECT WORK

Routine SQL DBA Activities: Audit Login Failures : Server Logs; Monitor Connectivity Issues; Auditing Long Running Queries; Memory Issues; PLE (Page Life Expectancy) Issues; MSDTC; Job Monitoring; Monitoring HA & DR Mechanisms; DB Refresh; Schema Refresh; Dump Files; Idle Sessions and Precautions; Index Management; Deadlock : Prevention; Monitor Server Health;

Emergency SQL DBA Activities: Server Down : Issues; Solutions; Database Down : Issues; Solutions; Data Synchronization : Issues; Solutions; Slow Running Queries : Issues; Solutions; Database Response : Issues; Solutions; Slow Replication : Issues; Solutions; Important Events and Errors; Hot CPU & Processor Node; Priority; CPU Thread Counts, Windows Fibers; Orphan Users; Service Startup Issues; Trace Flags; Always-On (AAG): Issues and Solutions;

Module 2: AZURE SQL DBA

Includes: Azure SQL DB Architecture, Migrations, HA - DR, Security, LINUX, PowerShell, Virtual Machines

Chapter 28: AZURE CLOUD INTRO, CONFIGURATION

Cloud Architecture Basics - IaaS, PaaS and SaaS; Advantages of Microsoft Cloud - Azure Platform; Azure Products and Azure Services - Marketplace; SQL Database Implementations in Azure Platform; Logical Servers, Virtual Machines, Managed Instance; Installing SSMS and Azure Data Studio (ADS) Tools; Azure Account and Free Subscriptions; Azure SQL Server (Logical Server); Firewall Settings; IP for Remote Access; Password Resets; Pricing Tiers, Access from SSMS Tool;

Chapter 29: DATABASE MIGRATIONS, DTU, ELASTIC QUERIES

Data Migration and Database Migration in Azure; Azure Storage : Creation & Containers; LRS, GRS and RA-GRS Azure Storage Accounts; Storage Containers, Storage Explorer Tool; Data Migration Assistant (DMA), Assessment; Migrations To Azure SQL; DB Exports & Imports with bacpac; Schema Generation & Compatibility; DTU : Data Transaction Unit, Resource Allocations; Basic, Standard & Premium Plans For SQL DB; vCore Based Purchasing : Gen 4 and Gen 5 Types; General Purpose & Business Critical Plans; Compute Tier : Provisioned and Server less; Bounding Box Model, Elastic Pools & Queries; eDTUs and Elastic Pool, per DB Settings; Elastic Scaling with Azure SQL Databases;

Chapter 30: AZURE SQL DATABASE TUNING

Azure SQL Server Level Tuning Options; Azure SQL Database Level Tuning Options; Automated Tuning Options and Peak-Loads; Force Plan, Create Index and Drop Index; Query Performance Insight, Recommendations; IO Metrics, CPU Metrics & Query Statistics; Data File IO, Log File IO, Custom Reports; Query Level Recommendations; Azure Search Service; Azure Search; Suggester and Analyzer Index Modes for Tuning; Retrievable, Facetable, Filterable Indexes; Facetable and Searchable Indexes for Tuning; Change Tracking Options, Watermark Columns;

Chapter 31: XEL GRAPHS, STRETCH DATABASES

SQL Traces : Creation; SQL Traces : Event Class, Category, Filter, Conditions; Extended Events Package, Target, Action, Session; TSQL and SP Debug Events with Global Fields; XE Objects : Catalog & Dynamic Management Views; XE Profiler - Templates for Event Profiling; Comparing XE Profiler with SQL Profiler Tool; Stretch Databases in Azure SQL Databases; Stretch Databases; Table Level Migrations; Performance Levels and DSU Pricing; Data Storage and Snapshots; Geo Backup Of Tables and Hybrid Cloud Settings; Remote Data Archive Configuration in Azure; Database Master Key [DMK], Cold Data Migration; Real-time Advantages of Stretch Databases;

Chapter 32: ALERTS, AZURE BACKUPS & RESTORES

Azure SQL Server Activity Log and Options; Events, Operations and Event Categories; Quick Insights from Events and Filters; Events Exports to Event Hub, Log Analytics; Log Analytics Workspace, Alert Rules; Email / SMS Notifications and Schedules; Log Analytics Settings and Azure Storage; Activity Logs and Audit Reports, Insights; Automated Backups; Long Term & Automated Backup Retentions (bacpac); Backups - Retentions, Audits. LTR Policy; Restore Points, Database Recovery; Geo-Redundant Backups in Azure; Azure Storage Explorer For Backups; Disaster Recovery (DR) Advantages in Azure;

Chapter 33: AZURE HA-DR

Failover Groups and Active Geo-Replication; Read-Write Failover Policy, Automated Failover; Geo Replication Configurations - Azure Locations; Primary-Secondary and Read / Write Modes; Geo Replication : Monitoring and Forced Failover; Azure Server Failover Process, Strategies; Automated SQL Data Sync Service and Sync Groups; HUB, MEMBER and SYNC DATABASE; Sync Direction, Sync Schema and Sync Interval; bi-directional Load Balancing and Failover; Conflict Resolution Policy;

Chapter 34: SECURITY MANAGEMENT, RLS

Firewall and Virtual Network Configurations; Server-level Firewall & Database Firewall Rules; System Stored Procedures for Firewall Settings; Logins, Users, Roles and Permissions using T-SQL; Creating Logins without Logins. Containment Users; GRANT, DENY, REVOKE, WITH GRANT Permissions; Threat Detection, Transparent Database Encryption; Vulnerability Assessment, Dynamic Data Masking; Implementing RLS - Row Level Security; Creating Users with & without Logins; Using SECURITY Schema for RLS Functions; Creating Security Predicates and Filters; Security Policies for Row Level Security; EXECUTE AS options for RLS. STATE ON/OFF;

Chapter 35: POWERSHELL, AZURE VIRTUAL MACHINE (VM)

Plan for IaaS, Azure VM. Install Azure Virtual Machines; Install/Configure Windows Server, Redhat, Ubuntu; SQL Server on Azure VM - Config Settings, Elastic Pools; Resource Groups, Resource Pools and eDTUs; Verify SQL Instances in Azure VM. sysadmin Account; Azure Storage Pricing Options; DB

Creation in Azure VM; Azure Virtual Machines ; Security Options; Azure SQL Database in VM to SQL Cloud; Azure SQL Database in VM to on-Prem; Deployment Automation Process, Automation; Azure Cloud Shell - PowerShellGet, Versions; Power Shell Scripts for Configurations; Power Shell Scripts for Job Schedules; Power Shell Scripts for Firewall, ARM; Azure CLI - Purpose, Real-time Use;

Chapter 36: Windows Clusters with Azure VM

Windows Clusters For HA and DR; Virtual Networks, Subnets and IPs; Availability Sets and Availability Zones; Fault Domains and Update Domains; DC Deployment & Configurations; Active Directory Domain Services; SAN [Storage Area Network] and LUN; DNS Server, DSRM and Private IP; Windows Level Clusters, MSCS Service; Active-Active, Active-Passive Clusters; DNS Tools, Actions & Adding AA Hosts; SQL Clustering Service & RAID Levels; SQL Cluster Groups, Domain Accounts; Quorum and MSDTC Disks. LUN Grows; MSCS Service : Startup, DNS; DSRM Passwords, Component Services;

Chapter 37 : Always-On with SQL Server Clusters

SQL Server VMs and File Share Witness (FSW); Joining Machines to Domain Network (AD); Adding Install Accounts to Active Directory; Install Failover Cluster (FCI) Features; Firewall Configurations and Port Exceptions; FSW File Shares and Usability Options; Need for Always - On Availability (AAG); Always On Availability Group [AOAG]; Multi-Database Replication Options; Backup Preferences, Location Options; Synchronous and Asynchronous Modes; Synchronization, Automated Seeding; Data Synchronization for AOAG; AOAG Dashboards & Automated Failover; Failover Connection Tests;

Chapter 38: MCSA 70-765 Guidance, Material and Sample Questions

Real-time Project For your Resume, MCSA Certification Guidance

Module 3: Azure Managed Instance {For SQL DBA Plan C}

Chapter 39: Azure Managed Instance Intro

SQL Server Hosting Options & Cloud; PaaS Implementation, IaaS Implementation; Logical Server with PaaS - Advantages; Managed Instance with PaaS - Advantages; Azure Managed Instance: PaaS Implementation; Benefits of PaaS For SQL Server Hosting; Friction Less Migration and SQL Apps; Easy Lift and Shift Benefits with Azure MI; Fully Managed PaaS Environment in Azure; Managed Instance and Instance Pools; Technical Features: Scaling Up / Down; Connectivity, V-Core Purchasing Options; Gen 4, Gen 5 Pricing Options; Logical CPUs; Service Tiers: General Purpose, Business Critical; Management, SQL Features in Azure MI;

Chapter 40: Azure MI Configurations

Azure Managed Instance : Architecture; Compatibility and Networking Advantages; Network Environment, Virtual Nets, Subnet; IaaS Hosted Apps, App Service Environments; Managed Instance Subnets and Connections; Peering and VPN Channel For Connections; Vnet Integrated Webapp and App Subnet; Express Route, VPN Gateway, OnPremise Apps; Capacity and Compute Options with Azure MI; Proxy, Redirect and Default Connections; Azure MI Connections within and Outside Azure; Routing Table and Network Security Groups; TLS Versions and Azure MI Key Features; Azure MI : Configurations and Deployment Progress; Azure MI Connection Details, Router Tables & NSG;

Chapter 41: Azure MI Connections From Azure VM

Configuring Azure VM using PowerShell Scripts; Window Power Shell and Azure Power Shell; Installing and Using Az Power Shell Modules; Configuring Azure VM with ARM Templates; Environment, Subnet & Virtual Network; Subscription ID, VM Configuration Settings; Configuring Azure SQL Virtual Machines; SQL Server Configurations and Sizing Options; Reusing Virtual Network & Subnet Resources; Port Configurations, Disk Settings, Resources; RDP Connections with Azure SQL VM; Connecting to Azure Managed Instances; Azure MI with SSMS From Azure SQL VM; Connection Tests & MI Server Configurations; Database Creations in Azure Portal, SSMS Tool;

Chapter 42: Azure MI Migrations From Azure VM

Azure MI Migration Options and Precautions; Database Exports (bacpac) fro Azure VM; Database Imports to Azure Managed Instances; Using Backup and Restore Options with MI; Using Azure Storage Account & Container; Service Credential Generation with SSMS Tool; Azure MI Database Migration Checks; Azure MI Versus Azure SQL Virtual Machines; Server Architecture Comparisons; Database Architecture and File System; Server Objects, Server Manager Operations; Database Migrations, Data Storage, Agent; High Availability and Disaster Recovery; Security Management Objects and Credentials;

Chapter 43: Azure MI Migrations From On-Premise

Point to Site (P2S) Gateway Connection Config; Power Shell Scripts for VPN Configurations; P2S Protocol : Open Options, OSX, SSTP Options; Client Authentication with P2S in Azure MI; Authenticate using Native Azure Certifications; Authenticate using Native Azure Active Directory; ADDS: Active Directory Domain Server Options; RADIUS Server, Enterprise Certificate Deployments; OpenVPN Protocol, SSLS / TLS Based VPN Protocol; Remote Access for Azure MI Virtual Network; Attach VPN Gateway to Azure Virtual Network; Azure PowerShell Modules for VPN Configuration; Script block Command & Parameters in PowerShell; Gateway Connection Verification Tests;

Chapter 44: Azure MI Migrations, HA - DR Concepts

Migrating On-Premise SQL Servers; Migrating Azure SQL Databases; Migrating Azure VM SQL Servers; Issues, Solutions with DML Tool; Offline and Online Migrations; Monitoring and Connection Tests; Managed Instance and Instance Pools; Azure MI Replication Topology; Replication between Managed Instances; Publisher, Distributor, Subscribers; Transactional Replication Options; Replication Agents and Monitoring; Modifying Agent Properties in Azure MI; Testing Resources and CleanUp Options;

Chapter 45: Azure MI Administration - 1

Azure Managed Instance Security; Creating Azure AD Service Principals; Creating Logns with External Providers; SQL and Azure AD Authentication; Adding Member Roles, MFA Support; Universal with MFA Support : SSMS Tool; Database Users, Roles and Permissions; Primary and Secondary Managed Instances; Creating Azure AD Accounts for Migration; Test Database Creation for Migration; Backups and Restores for Migrations; Authentication with Azure MI; Public Endpoints & Access Configuration;

Chapter 46: Azure MI Administration - 2

Azure Managed Instance Backups; Long Term Backups and Retentions; Point In Time Recovery, Partial Restores; Management operations & Workspaces; Monitor Operations with Azure MI; Firewall Protection and Threat Detection; Configuring Azure MI Failover Groups; Primary and Secondary

Gateways; Linked Services and Azure Power Shell; Proxy Connection Type and Defaults; Configure Existing Virtual Nets for MI; DB Mail Configuration; TDE Certification Migrations in Azure MI;

Chapter 47: Azure Managed Instance Pools

Express Route, VPN Gateway for Pools; Capacity and Compute Options with Azure MI; Proxy, Redirect and Default Connections; Azure MI Connections within and Outside Azure; Routing Table and Network Security Groups; TLS Versions and Azure MI Key Features; Azure MI : Configurations and Deployment Progress; Python Notebooks with Azure MI; Run Python scripts with Azure MI; Data Structures and objects; Python Functions and ETL Implementation; Data Analytics; Common Issues and Solutions;

Resume, Project Oriented FAQs and Solutions

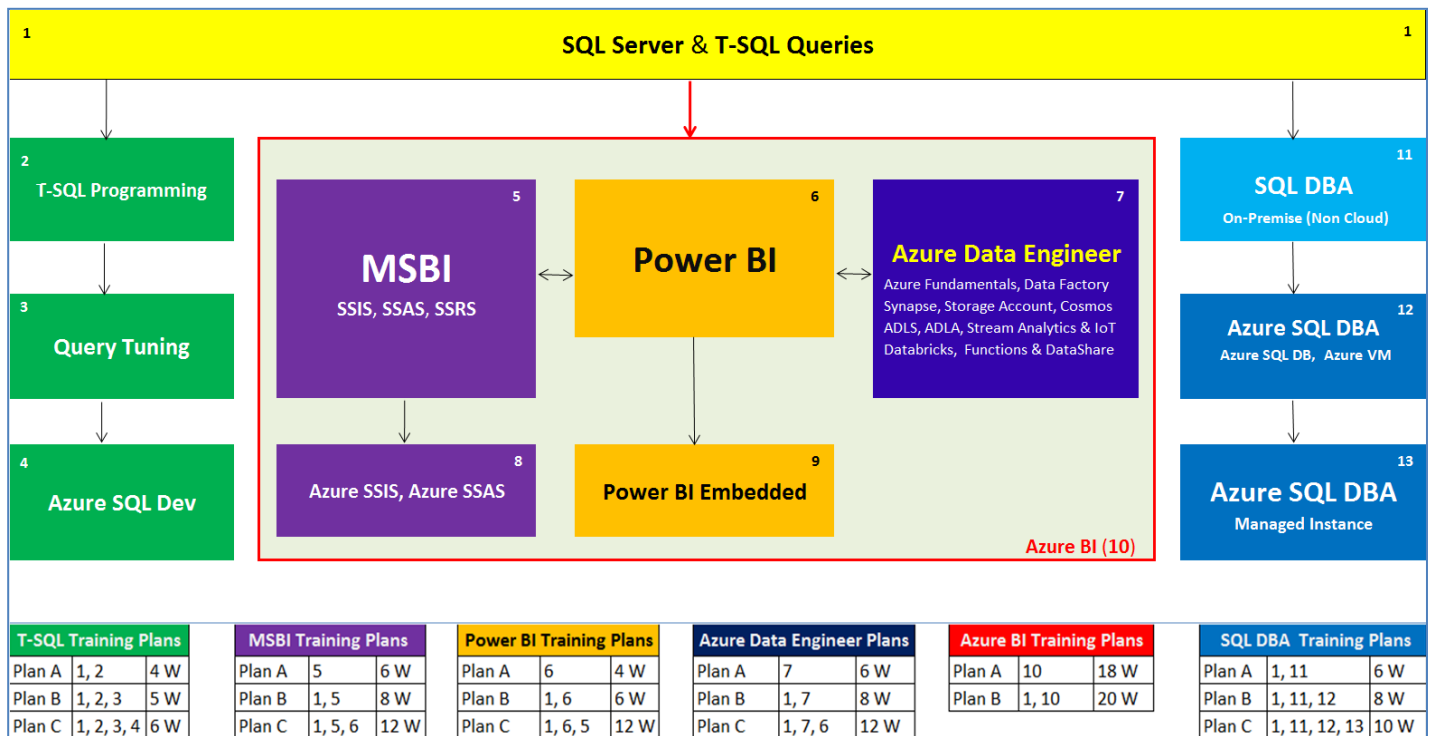
Email : contact@sqlschool.com
Skype: SQL School Training Institute
Website: www.sqlschool.com

Call Us (India) : 24 x 7
 +91 9666 44 0801
 +91 9666 64 0801

Trainer Contact:
 saiphanindrait@gmail.com
 +91 9030040801

Call Us (USA / Canada) : 24 x 7
 +1 956.825.0401

Courses From SQL School :



Training Modes:

LIVE Online Training

Classroom Training
Hyderabad, India

On-Demand Videos

Trainer Profile :

<http://linkedin.com/in/saiphanindra>

Register today for free demo at :

<https://sqlschool.com/Register.html>

Website:

<https://sqlschool.com/>