

# Azure SQL Database Training

Complete Practical & Real-time Trainings



*A Unit of SequelGate Innovative Technologies Pvt. Ltd.*

**AZURE SQL / DBA** Training consists of TWO Modules:

Module 1: **Azure SQL Database**

Module 2: **Azure SQL Database Administration**

## Training Highlights

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

SQL School (SequelGate Innovative Technologies Pvt. Ltd.), #108/2RT, St # 2, Road# 1, SR Nagar, Hyderabad - 38, India. **CREDITS:** ISO Certified Learning Center. Microsoft Certified Learning Partner.

[www.sqlschool.com](http://www.sqlschool.com)

# AZURE SQL DATABASE (Database Design, Dev in Azure)

## Chapter 1: AZURE CLOUD INTRODUCTION

\* Introduction to Cloud \* Introduction to Microsoft Cloud – Azure \* Need for Azure SQL & Databases  
\* Azure SQL Variants and Service Tiers \* Advantages of Azure SQL \* Built-In Intelligence and Scalability \* Advanced Security Compliance \* Easy to Use Tools with Azure SQL \* Microsoft Azure Price Tiers \* ARM and ASM Topologies \* Azure Account Registration \* Understanding Azure Portal \* Azure Market Place, OMS Env. \* SSDT, SSMS, SSDE, DMA Tools \* Azure PowerShell, Azure CLI

## Chapter 2: AZURE CLOUD CONFIGURATION

\* Azure Server and Subscription \* Azure Portal and Resources \* Azure Dashboard, Metric \* SQL Instance Creation in Azure \* SQL Database Creation in Azure \* Firewall Configurations for Tools \* Firewall Rules and Client IPs \* Virtual Networks, IP Ranges \* Azure Virtual Machines, Storage \* Azure Server & Subscriptions \* Azure Price Tiers, Resource Group \* Elastic Pools - DTU, Sizing Plans \* Azure Locations, Collation Settings

## Chapter 3: AZURE SQL DATABASE

\* eDTUs and Pool Settings \* per Database Settings \* Elastic Database Pool Settings \* EDTU Cost, eDTU max/min Limits \* Resource Groups, Resource Pools \* Dashboard Clone and Edit Options \* Azure SQL DB with SSMS \* Azure SQL DBA with SSDT \* SQL Server Data Explorer \* Visual Studio Tool in Cloud \* Creating Azure SQL DB in SSMS \* T-SQL Scripts for Azure SQL DB

## Chapter 4: USING AZURE SQL DATABASE

\* Executing T-SQL Scripts in Azure \* Remote DB Configurations \* T-SQL Scripts for Monitoring \* SP Executions, Triggers in Azure \* Excel Reporting from Azure SQL DB \* On-Premise SQL DBs to Azure \* Scripting SQL DBs using DMA Tool \* Schema, Data Migration @ DMA \* Database Assessment Options \* SSMS "Generate Script" Options \* Azure SQL Database JSON Features \* Azure SQL Database in-Memory Tables \* Temporal Tables and Retention Policy \* In-Memory OLTP Migrations \* Azure SQL Database Migrations

## Chapter 5: MONITOR AZURE SQL DATABASE

\* Activity Logs and Log Analytics \* Azure SQL Database Performance Insight \* Query Store Technology, Advantages \* Enabling Query Store - Configurations \* Retention and Capture Policy \* Identify Long Running Queries \* CPU and DTU Monitors in Azure SQL \* Sliders and Averaged Query Metrics \* Key Performance Metrics - Types \* Time Interval, Frequency and Aggregates

## Chapter 6: PERFORMANCE TUNING in AZURE SQL DATABASE

\* Manage database workload in SQL Server \* Elastic Scale for Azure SQL Database \* Service Tier and Edition Selection \* DB File, Memory Configurations \* Using DMVs and DMFs in Azure Databases \* Monitor Azure SQL Database Query Plans \* Resource Governor - Azure SQL Database \* Split and Merge Examples \* Performance Monitoring Counter \* CPU, DTU Limits. Data IO, Size \* Deadlock, In-Memory OLTP \* Azure Portal Email Configurations \* Azure SQL Database Query Batching

# AZURE SQL DBA (Database Administration in Azure)

## Chapter 1: AUTOMATED AZURE DB RECOVERY

\* Automated Backups in Azure SQL DB \* Long Term Backup Retentions \* Recovery Service Vaults, Policies \* Automated Backups - Retentions, Audits \* Restore Points and DB Recovery \* DB Scripting and Script Backups \* Instance Level Failover Groups \* Read-Write Failover Policy \* Geo Replication and Advantages \* Geo Replication Configurations \* Primary-Secondary & Read/Write Modes \* Failover Policy. Automated Failovers \* In-Memory OLTP Migrations \* Azure SQL Database Migrations \* Azure SQL DB Synchronizations \* Backup Errors, Solutions \* Synchronization Errors, Solutions \* Geo Replication - Errors and Solutions

## Chapter 2: AUDITS, THREAT DETECTION

\* Activity Logs and OMS Server Config \* OMS Workspace, Resource Groups \* Log Analytics and Operational Logs \* Instance Audits and Threat Detection \* Audit Storage Configuration, Service Tiers \* Azure Resource Manager (ARM) Scripts \* Firewall Rules \* DB Recovery from Availability Groups \* DB Recovery from Deleted Databases

## Chapter 3: AZURE SQL DATABASE SECURITY

\* Firewall and Virtual Network Config \* TDE - Transparent Data Encryption \* Service Keys and TDE for Security \* Service Managed Key, AD Authentication \* Row Level Security (RLS), Roles \* Active Directory Admin Operations \* Directory Admin, Elastic Pools \* Impacted Databases and Security \* Azure Recommendations for Security \* Azure IAM Controls, Real-time Usage \* Manage SMB Files and Shares in Azure

## Chapter 4: PERFORMANCE TUNING in AZURE SQL DB

\* Elastic Scale for Azure SQL Database \* Database File, Memory Configurations \* Using DMVs and DMFs in Azure Databases \* Monitor Azure SQL Database Query Plans \* Resource Governor - Azure SQL Database \* SHARDING and Shard Map Management \* Data Dependency Routing \*

MultiShard Elasticity - Split, Merge \* Performance Monitoring Counters \* CPU, DTU Limits. Data IO, Size \* Azure Portal Email Configurations \* Active Recommendations, Tuning History \* FORCE PLAN, CREATE / DROP INDEX \* ON / OFF INHERITS \* DB Tuning \* Lock Types and Lock History

## Chapter 5: AZURE VIRTUAL MACHINES

\*Deploy Microsoft Azure SQL DB \* Plan for IaaS, Azure VM \* Install Azure Virtual Machines \* Windows Server, Redhat, Ubuntu \* SQL Server on Azure VM \* Config Settings, Elastic Pools \* Resource Groups, Resource Pools \* CPU, Memory, Hot CPU, eDTUs \* Verify SQL Instances in Azure VM \* SSMS and sysadmin Account \* Azure SQL DB in VM to SQL Cloud \* Azure SQL Database in VM to on-Premise \* Deployment Automation Tools \* Automation Scripts for Azure VM

## Chapter 6: AZURE SQL DATABASE IN OTHER CLOUDS

\* SQL Database in AWS \* SQL Database in Google Cloud \* Real-time Considerations \* Data Tier Applications \* Backup Files and Security \* Backup Hosting, Management \* Offline/Online Synchronizations \* Choosing the best Tier \* Choosing the best Cloud \* Choosing correct Elastic Pools \* Considerations for Azure VM \* Azure HD Insight Configuration

Course includes Study Material, Interview & Certification Guidance included in this course.

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### Pre-requisites for this Azure SQL Database / Azure SQL DBA / Azure DWH Course:

Prior knowledge on T-SQL needed for this course. Participant needs to have knowledge on SQL Server Installation, Database Design, Table Design, T-SQL Data Types and Stored Procedures.

**Azure SQL Database (Module 1) is mandatory to proceed for Module 2 (Azure SQL DBA) &/ Module 3 (Azure SQL DWH).**

### About Trainer:

**Mr. Sai Phanindra Tholeti** is a Database Consultant working for his own company - *SequelGate Innovative Technologies Pvt. Ltd.* With more than 12 years of expertise and passion for SQL Server, Database Administration, Business Intelligence (MSBI) and Data Warehouse Management - 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>  
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## Why Choose Us?

- ✓ **Complete Practical and Real-time Sessions**
- ✓ Study Material and Practice Labs
- ✓ Detailed Practice Material
- ✓ Session wise notes & Doubts Clarifications
- ✓ Certification Material & Resume Preparation
- ✓ Interview Questions and Guidance
- ✓ Technical Support and Placements Assistance
- ✓ Videos for Missing Sessions and Support



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**ALL OUR TRAININGS SESSIONS ARE COMPLETELY PRACTICAL & REALTIME**