MS 70-764: SQL 2016 Database Administration

This course is intended for database professionals who perform installation, maintenance, and configuration tasks. Other responsibilities include setting up database systems, making sure those systems operate efficiently, and regularly storing, backing up, and securing data from unauthorized access.

Course Duration:
- 36 Hr.

Exam Preparation Duration:
- 8 Hr.

Course Material:
- Lectures (PDF)
- Lab Manual (PDF)
- Recorded Video

Abilities Validated by the Certification
- Managing Azure subscriptions and resources
- Implementing and managing Azure storage
- Deployment and management of the virtual machines (VMs)
- Configuration and management of the virtual networks
- Identity management

Detail Syllabus:

Introduction of SQL Server Architecture

- Basic SQL Architecture
- SQL DB Files
- System Databases

SQL Server Installation:

- System Requirements & suggestions
- SQL server Installation on Local System
- SQL server On Azure Cloud
- SQL server upgrade, Patching & SQL DB Migration

SQL Server Backup & Restore:
- DB structure based on Recovery Models
- Relation with Recovery Models & Backup solutions
- Types of Backups including Copy only
- Maintenance plans
- Understanding SQL LSN & Backups
- Database Restore & Recovery
- Full Database Restore
- Full DB restore & transaction logs recovery
- Restoring System DBs

Data Movement

- Data Import & Export using BCP Commands
- Data Import & Export using SQL Import & Export Wizard
- Export Data to Excel
- Import Data from Excel
- SQL Server Attach and De-attach the database

Security Concepts in SQL

- SQL Server Authentication Vs Windows Authentication
- Logins & Users of SQL Server
- Create SQL Users
- Understanding Server Level Roles
- User-Defined Server level Roles
- Contained Database Configuration
- Transparent Data Encryption (TDE)
- SQL Server Vulnerability Assessment

Performance Tuning

- Database indexes understanding
- Hardening of OS
- Define the CPU and Memory in SQL
- Checking index fragmentation & Maintenance
- Database defragmentation
- Check the performance Reports
- Database Health Check
- Understanding SQL Server Profiler
- Creating & Running Traces

SQL Server Reports

- Server Reports Dashboard
- Performance Related Reports
- Utilization Related Reports
- Server Related Reports
- Table Based Reports
- Creating & Running Traces

Advanced SQL Server Technology

- Log Shipping
- Database Mirroring
- Stretch Database
- Always Encrypt
- Clustering
- Replication
- Always-On Technology
- Column Store Index

SQL Server Standard Troubleshooting

- Event Viewer
- SQL Server Logging
- SQL Server Trace
- Understand the performance related issues
- Understand the Connectivity Related issues