

RedBush Technologies

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SQL Server DBA Training

SQL DBA Training Course Duration

- Approx. 40 Hours, daily one and half hours

MS SQL Trainer Profile:

- SQL DBA Trainer having more than 15 yrs experience as a Sr. DBA and currently working as a Sr. DBA and Consultant in one of the top US based MNC. Previously worked with TCS, TSYS International and Motricity.

SQL DBA Training Course Overview

SQL SERVER installation and configuration

- Evaluating Installation requirements
- Features selection for Installation
- Default and Named Instance
- Enabling and disabling installed features
- Testing connectivity after installation
- Configuring SQL Server Instance Settings
- Database Configuration
- Authentication modes

Managing and Configuring Database

- Creating a new Database
- System Databases (master , model, msdb , resource , tempdb)
- Understanding Filegroups
- Data Compression: Row Level, Unicode and Page level compression
- Transparent Data Encryption (TDE)
- Concept of log file and data file

Migrating database from one instance to another

- Detach and attach database
- Copy database from one server to another
- Moving database with backup and restore
- Migrating SQL Logins
- Understanding spid

Exporting and importing data

- Import and Export Wizard
- BCP for moving large amount of data
- Import data using BULK INSERT
- Import data using OPENROWSET
- SELECT INTO
- Referring another server with Linked server
- Considerations before a bulk data movement

SQL Server Logins and Server Roles

- Creating , altering and removing SQL logins
- Deny server access to a login
- Fixed server level roles
- User defined server roles

Database User and Roles

- Creating and dropping a database user
- Orphaned users
- Fixed database level roles
- Flexible database level roles
- Users and roles catalog views
- Application roles

SQL Server Security

- Understanding securables
- Permissions : GRANT,DENY and REVOKE
- Assigning fixed and flexible database roles
- Using Schemas
- Troubleshooting security issues
- Using Security Catalog views

Auditing a SQL Server

- Creating a SQL Server Audit
- SQL Server Audit Action Groups and Actions
- Creating a Server Audit Specification
- Creating a Database Audit Specification
- Configure Login Auditing
- Using C2 Audit mode

Mirroring and Replication

- Configure mirroring with windows authentication
- Role switching and failover
- Monitoring mirrored database
- Replication architecture
- Configuring Snapshot replication
- Configuring transactional replication
- Replication monitor

Clustering and AlwaysOn

- SQL Edition prerequisites
- Using Windows Server 2008 R2 as shared storage
- Creating a Windows Server 2008 R2 Failover Cluster
- Installing a SQL Server Failover Cluster
- Performing manual failover
- AlwaysOn availability groups
- Configuring Availability Modes
- Selecting Failover Modes
- Deploying AlwaysOn Availability Groups

Performance Tuning

- Performance Monitor
- Creating Data Collector Sets with Performance Monitor

- Working with SQL Server Profiler
- Extended Events Profiler
- Monitoring activity on SQL Server using Activity Monitor
- Using DMV for performance monitoring
- Identifying bottlenecks in performance: Disk, Memory and CPU

Indexes

- Understanding B-Tree structure
- Index Types: Clustered, Non-Clustered, Covering, Filtered, ColumnStore
- Creating and modifying indexes
- Choosing fill factor
- Removing Index fragmentation
- Identifying missing Indexes
- Reviewing unused indexes

Identify and resolve Concurrency issues

- ACID Properties
- Isolation Levels
- SQL Server Lock management
- Detecting and fixing Deadlocks
- KILL command

SQL Server Agent and Jobs

- Creating and monitoring jobs
- Executing jobs using SQL Server Agent
- Configure SQL Server Agent Mail Profile
- Managing Alerts
- Managing Operators

Backup and Restore

- Backup Types: Full, Differential, Transaction log, File and Filegroup backups, Copy Only
- Backup Compression
- Recovery Models
- Using Backup devices
- View backup history
- Restoring database
- Checking database status