

SQL Server DBA Online Training Course

SQL SERVER ADMINISTRATION

1. Introduction to Microsoft SQL Server

- What is a Database?
- Why to use database?
- What is RDBMS?
- Types of RDBMS
- Advantages of SQL Server
- Requirements and scope of SQL Server

2. Roles and Responsibilities of DBA

- What is Administration?
- Roles of DBA
- Licensing and Pricing of SQL Server

3. System Design and Architecture

- RAID Configuration
- Capacity Planning
- Installation
- Upgrades and Backward Compatibility

4. SQL Server Database Design

- Logical and Physical architecture of database
- Creating Database
- Modifying structure of Database
- Files and File Groups
- Data Placement and Audit Placement

5. SQL Server Objects

- Data Types
- Tables
- Constraints

- Views
- Indexes and performance Considerations
- Triggers
- Stored Procedures
- User Defined Functions
- Cursors
- Synonyms

6. Transactions

- ACID Properties
- Commit Modes and Rollbacks
- Savepoints
- Transaction Locks and Locking Mechanism
- Isolation Levels
- Blocking and Deadlocks

7. Database Snapshots

- What is a DB Snapshot
- Why we use Snapshots
- How to design Snapshots
- Advantages and disadvantages
- Precautions when designing Snapshots

8. SQL Server Partitions

- Partitioning Fundamentals
- Designing Partitions
- Creating Partitions
- Viewing Partition Information
- Maintaining Partitions

9. Backup Fundamentals

- System Failures and need of Backups
- Use of Transaction Log
- Microsoft SQL Server Automatic Recovery

- Recovery Models
 - i. Simple Recovery Model
 - ii. Full Recovery Model
 - iii. Bulk – Logged Recovery Model
- Types of Backups
 - i. Data (Full) Backups
 - ii. Differential Backups
 - iii. Log Backups
 - iv. Copy-Only Backups
 - v. Full-Text Catalog Backups
- Media Devices and Media Sets
- Overview of Backup History Tables
- Real world Backup Strategy

10. Restoring Data

- Restore and Recovery Concepts
- Restoring Data from Backups

- i. Complete, Differential and Log Restores
- ii. Point-In-Time Restores
- iii. File and File Group Restores
- iv. Page Restores
- v. Piecemeal and Online Restores
- vi. Reverting to Database Snapshots

11. Replication

- Replication Fundamentals
- Use of Replication
 - i. Data Warehousing
 - ii. Distributing and Consolidating Data
 - iii. Offloading Report Processing
- Replication Components
- Types of Replication
 - i. Snapshot Replication
 - ii. Transactional Replication

iii. Merge Replication

- Configuring Replication
- Configure Distributor